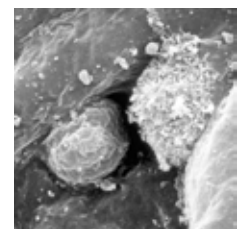
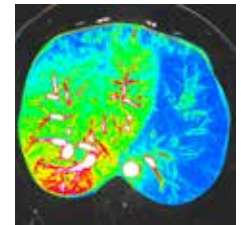
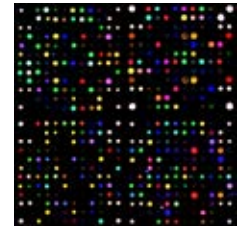
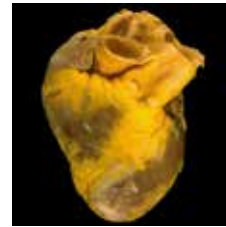
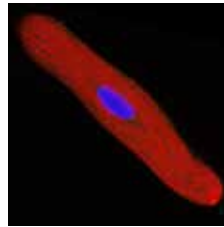




# Centre for Heart Lung Innovation UBC and St. Paul's Hospital



## 2017 Annual Report

# AT A GLANCE

Established in **1977** by Drs. James Hogg and Peter Paré

<b>Director:</b>	<b>Dr. Keith Walley</b>
<b>Associate Directors:</b>	<b>Dr. Gordon Francis</b> <b>Dr. Tillie-Louise Hackett</b>
<b>Principal Investigators:</b>	<b>33</b>
<b>Early Career Investigators:</b>	<b>6</b>
<b>Investigators:</b>	<b>19</b>
<b>Research Associates:</b>	<b>6</b>
<b>Technicians:</b>	<b>25</b>
<b>Visiting Scientists:</b>	<b>10</b>
<b>Post-Doctoral Fellows:</b>	<b>23</b>
<b>Graduate Students:</b>	<b>42</b>
<b>Other Students:</b>	<b>40</b>
<b>Core/Operations Staff:</b>	<b>31</b>
<b>TOTAL:</b>	<b>234</b>
<b>Funding in FY 2016-17:</b>	<b>\$9.05 Million (as of March 31, 2018)</b>
<b>Space:</b>	<b>over 50,000 square feet</b>
<b>Hosted Biotech / Spin-off companies:</b>	<b>5</b>

## **CORE Facilities:**

Cardiovascular Registry  
Lung Tissue Registry  
Cellular Imaging and Biophysics  
Imaging Services  
Histology  
Molecular Phenotyping  
Preclinical Services  
Clinical Research  
Information Technology

# TABLE OF CONTENTS

4	MESSAGE FROM THE DIRECTOR
5	About the Centre for Heart Lung Innovation
7	RESEARCH SPOTLIGHT
11	Research Funding
12	HLI INVESTIGATORS
14	New Investigators
16	<b>Principal and Early Career Investigator Profiles</b>
25	Recognizing Research Excellence
27	Peer Reviewed Publications
29	High Impact Papers By HLI Investigators in 2017
37	KNOWLEDGE TRANSLATION
38	HLI In The News
44	Spin-off Companies
45	TRAINING THE NEXT GENERATION
47	HLI Summer Student Research Program
47	Summer Student Research Day
48	Heart + Lung FEST
48	HLI Inaugural Trainee Research Day
49	HLI Career Day
49	High School Science Week
50	HLI Weekly Seminars
51	Trainee Awards
53	Postdoctoral Research Grants
54	Trainee Career Paths
55	HLI OPERATIONS
56	Centre Operational Highlights
59	Events at the HLI
60	PARTNERSHIPS AND ACKNOWLEDGEMENTS
62	Supporting our Fight against Heart and Lung Diseases
63	APPENDICES
64	Appendix A: HLI Grants, Contracts, Clinical Trials* and Agreements
74	Appendix B: Publications by HLI PIs in 2017
99	Appendix C: HLI 2017 Seminar Series
102	Appendix D: HLI 2017 Research in Progress Seminars

## MESSAGE FROM THE DIRECTOR

Dear Colleagues,

This Annual Report highlights the achievements of the Centre for Heart Lung Innovation's (HLI) Investigators, trainees, and staff in 2017.

Our success as a world-class research facility continues with the release of 323 publications for the calendar year 2017 and the receipt of \$ 9.05 Million in funding for fiscal year 2017/2018. In 2017, we continued to gain exceptional researchers by adding Dr. Stacey Skoretz as an Investigator as well as two new Early Career Investigators, Dr. Ma'en Obeidat and Dr. Andrew Thamboo.

This past year, HLI researchers had phenomenal success in attracting prestigious and diverse research funding and awards, including a new multi-million dollar Canada Foundation for Innovation grant and numerous grants from the Canadian Institutes for Health Research, Genome BC, and the BC Lung Association.

The scientists, trainees and staff at the HLI would like to thank our funding partners: Canadian Institutes for Health Research, Canada Foundation for Innovation, BC Knowledge Development Fund, Providence Health Care, University of British Columbia, Heart and Stroke Foundation of BC and Yukon, BC Lung Association, the St Paul's Foundation, the National Institutes of Health, and many vendors and industrial collaborators, for their crucial support of our ongoing programs for the race against cardiovascular, pulmonary, and critical care disease.



As this was my final year as Director, I would like to thank all of the investigators, trainees, and staff at the HLI for their outstanding contributions over the last 5 years that have resulted in tremendous productivity and achievements. Our success in publications, funding, and awards speaks for itself and highlights the tremendous impact we have on the UBC and Providence Health Care communities and our larger impact on the international research community. I am proud of our achievements and look forward to the continued success of the HLI under the new interim co-Directors, Dr. Tillie Hackett and Dr. Gordon Francis.

With kind regards,

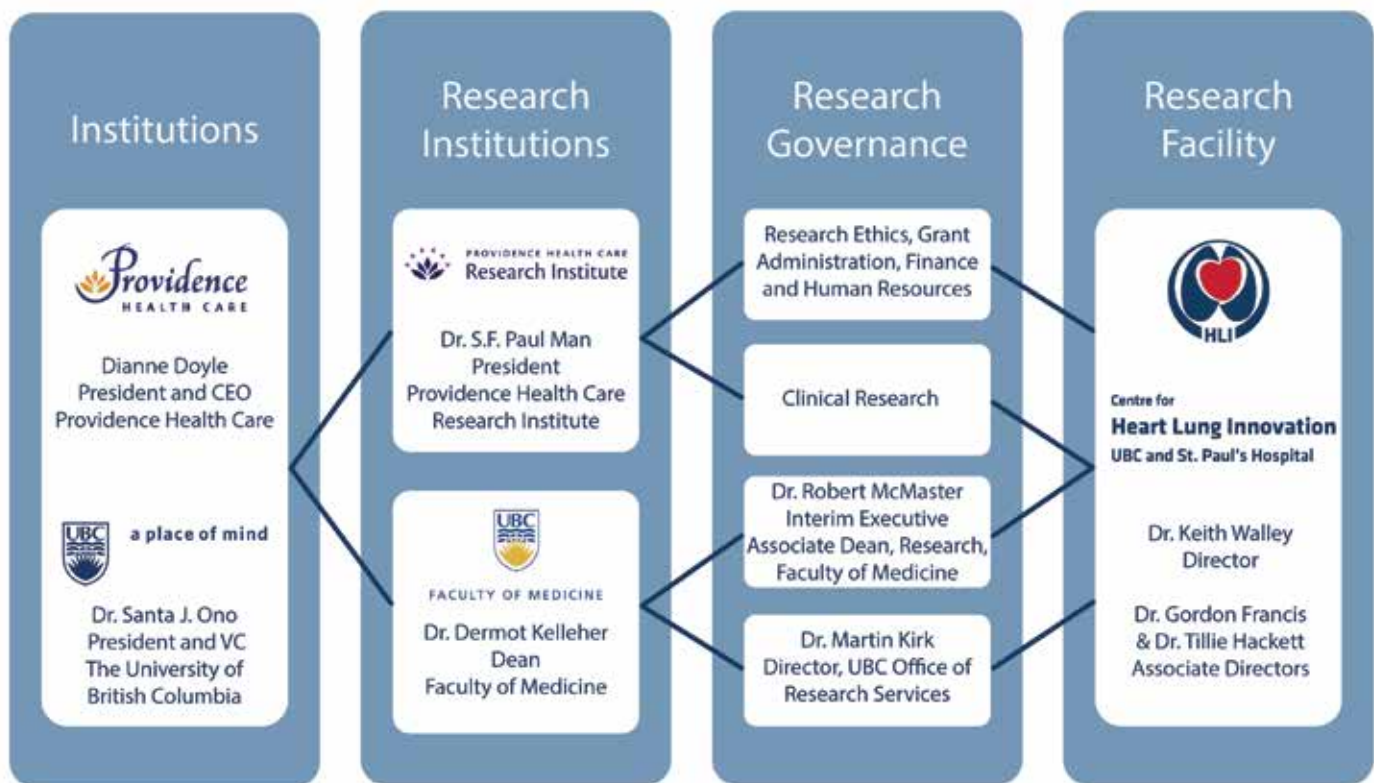
A handwritten signature in black ink that reads "Keith Walley". The signature is written in a cursive, flowing style.

Keith R. Walley, MD  
Director, Centre for Heart Lung  
Innovation  
Professor of Medicine, UBC  
Associate Director ICU, St. Paul's  
Hospital

# About the Centre for Heart Lung Innovation

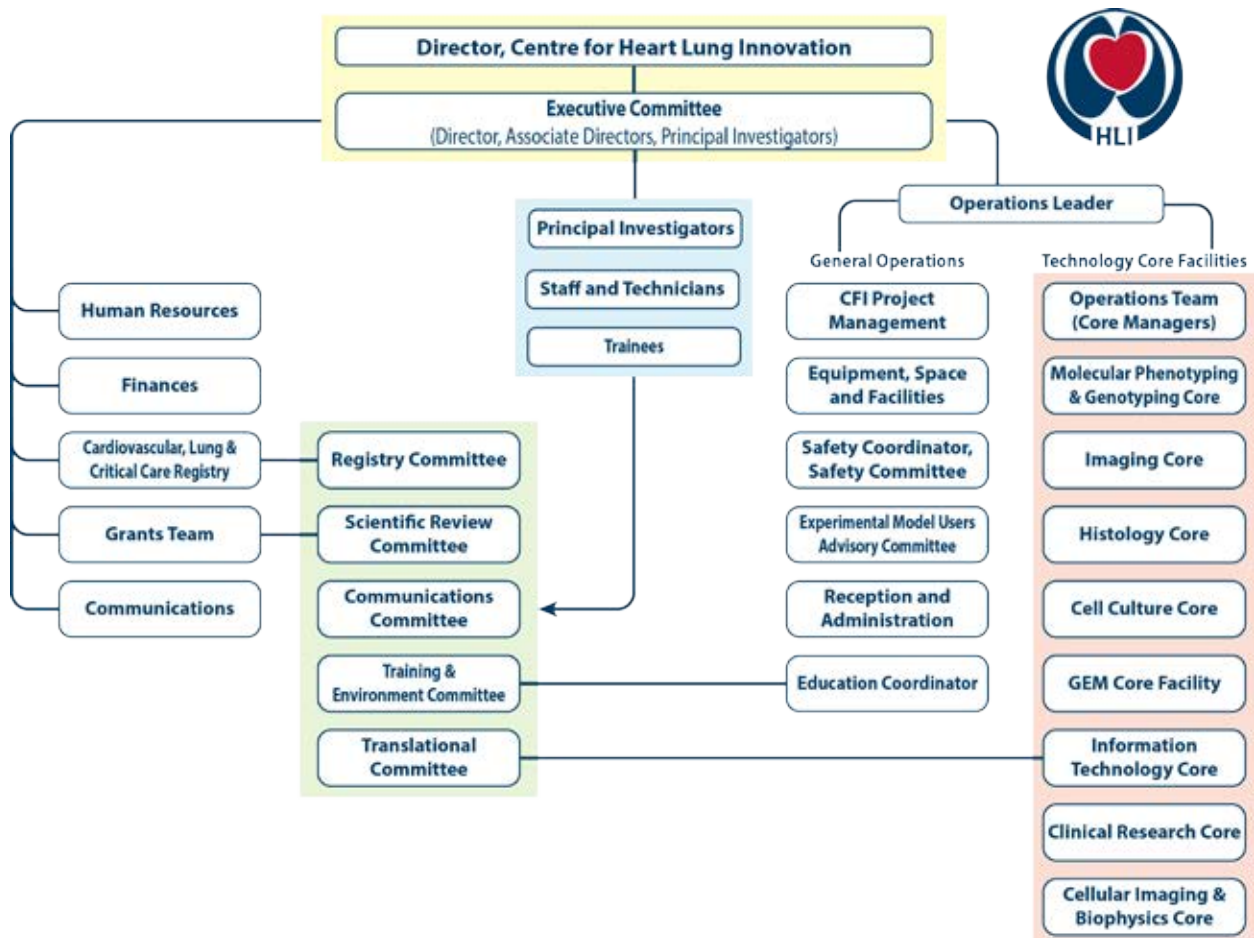
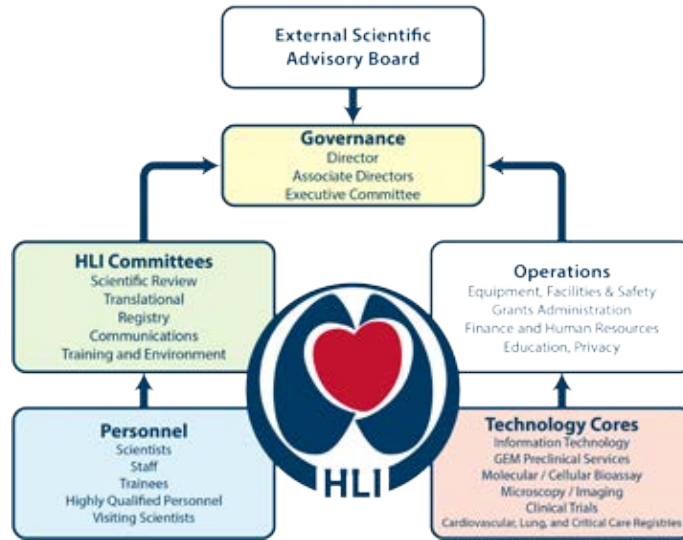
The Centre for Heart Lung Innovation (HLI; previously known as the iCapture and James Hogg Research Centre) is a University of British Columbia (UBC) Senate-approved Centre of Cardiovascular, Pulmonary, and Critical Care expertise, housed within Providence Health Care at St Paul's Hospital. The HLI's dual reporting structure is shown below in Figure 1. This ensures that the research conducted within the HLI adheres to the UBC Strategic Research Plan and is focused on the Providence Health Care "populations of emphasis" that include people with heart and lung disease.

Figure 1. Governance structure of the Centre for Heart Lung Innovation. 2017



The management structure under the HLI Executive involves a team approach led by Principal Investigators, Operations staff, and the Technology Cores.

Figure 2. Management structure of the Centre for Heart Lung Innovation.



# RESEARCH SPOTLIGHT

## Dr. Denise Daley and Dr. Andrew Sandford discover peanut allergy gene

HLI Researchers Dr. Denise Daley and Dr. Andrew Sandford have made a discovery that could help parents prevent potentially deadly peanut reactions in their children.

*"We've identified genes that predispose to the development of peanut allergy and to food allergy in general."*

The gene is called c11orf30 or EMSY for short. It's already known to play a role in other allergic conditions such as eczema, asthma or hay fever, but this is the first time EMSY has been connected to a food allergy.



"Food allergy is the result of both genetic and environmental factors, but there are surprisingly few data regarding the genetic basis of this condition," says Dr. Daley. This research could lead to new diagnostic methods and better treatment options.

Asai Y, Eslami A, van Ginkel CD, Akhabir L, Wan M, Ellis G, Ben-Shoshan M, Martino D, Ferreira MA, Allen K, Mazer B, de Groot H, de Jong NW, Gerth van Wijk RN, Dubois AEJ, Chin R, Cheuk S, Hoffman J, Jorgensen E, Witte JS, Melles RB, Hong X, Wang X, Hui J, Musk AW, Hunter M, James AL, Koppelman GH, **Sandford AJ**, Clarke AE, **Daley D**. Genome-wide association study and meta-analysis in multiple populations identifies new loci for peanut allergy and establishes C11orf30/EMSY as a genetic risk factor for food allergy. *J Allergy Clin Immunol*. 2018 Mar;141(3):991-1001. doi: 10.1016/j.jaci.2017.09.015

For more: <https://globalnews.ca/news/3798670/peanut-allergy-genetics/>

<http://vancouver.sun.com/news/local-news/peanut-allergy-gene-discovery-could-lead-to-early-diagnosis>

<http://www.metronews.ca/news/vancouver/2017/10/11/peanut-allergy-linked-to-genes.html>

<http://www.btvancouver.ca/videos/canadian-researchers-find-new-gene-associated-with-peanut-allergies/>

## Dr. Scott Tebbutt and Dr. Chris Carlsten develop a blood-based biomarker panel for Western Red Cedar Asthma

Western red cedar asthma (WRCA) is the most common form of occupational asthma in the Pacific Northwest. WRCA is caused by sensitivity to plicatic acid, which is found in western red cedar dust. Until now, diagnosis of WRCA was costly, time-consuming and logistically challenging, involving multiple bronchial challenges.

HLI investigators Drs. Scott Tebbutt and Chris Carlsten, along with several trainees in their labs, developed a blood-based biomarker panel to classify, at baseline (before allergen challenge), allergen-positive from allergen-negative subjects. In addition to diagnosing WRCA, transcriptional changes observed in the blood may help elucidate the disease mechanisms of WRCA. Further validation of the blood biomarker panel with a larger cohort will confirm its robustness.

Yang CX, Singh A, Kim YW, Conway EM, **Carlsten C**, **Tebbutt SJ**. Diagnosis of Western Red Cedar Asthma Using a Blood-based Gene Expression Biomarker Panel. *Am J Respir Crit Care Med*. 2017 Dec 15;196(12):1615-1617. doi: 10.1164/rccm.201608-1740LE. No abstract available.

## HLI Investigators discover link between IgG deficiency and COPD

Reduced levels of immunoglobulin G (IgG) in the blood are associated with respiratory tract infections, which in turn are the major trigger of exacerbations in Chronic Obstructive Pulmonary Disease (COPD).

Using data from two large COPD trials (MACRO and STATCOPE), HLI investigators Drs. Don Sin and Paul Man, along with Early Career Investigator Janice Leung and trainee Fernando Sergio Leitao Fihlo, found that reduced total IgG levels, in a dose dependent manner, are significantly and independently related to COPD exacerbations and hospitalizations.



Because patients with selective IgG deficiency are at increased risk of respiratory infections and because respiratory infections are the leading cause of COPD exacerbations and hospitalizations, these data raise the possibility that selective IgG deficiency may be a common (modifiable) contributor of exacerbations in COPD. Further studies will investigate whether IgG replacement therapy may decrease the risk of COPD hospitalization and exacerbations.

Leitao Filho FS, Won Ra S, Mattman A, **Schellenberg RS**, Fishbane N, Criner GJ, Woodruff PG, Lazarus SC, Albert R, Connett JE, Han MK, Martinez FJ, **Leung JM**, **Man SFP**, Aaron SD, Reed RM, **Sin DD**. Serum IgG and risk of exacerbations and hospitalizations in chronic obstructive pulmonary disease. *J Allergy Clin Immunol*. 2017 Oct;140(4):1164-1167.e6. doi: 10.1016/j.jaci.2017.01.046.

## Cardiovascular researchers at the HLI developed a new transplantation model and identified new biomarkers of cardiac viability

Over the last decade, the number of adults awaiting a heart transplant has increased by ~25%, yet the number of transplants performed annually has remained static creating a critical shortage of donor hearts. One potential solution to this problem is organ donation after circulatory death (DCD). However, there is reluctance to use DCD hearts, due to an inability to precisely identify hearts that have suffered irreversible injury.

In this study, Drs. Kearns and Boyd, along with other HLI investigators, investigated novel biomarkers and clinically relevant endpoints to identify features that are associated with hearts that are irreversibly damaged and thus not suitable for transplant. Using a rat model, they discovered a novel gene expression signature that was associated with severely injured hearts during ex vivo heart perfusion. These authors concluded that ex vivo heart perfusion appears to be necessary in order to unmask the distinguishing features of severely injured DCD hearts and that mRNA signatures may be useful for detecting injury in potential donor hearts.

Kearns MJ, Miller SD, Cheung A, Bashir J, Wong S, **Seidman MA**, **Boyd JH**. A Rodent Model of Cardiac Donation after Circulatory Death and Novel Biomarkers of Cardiac Viability during Ex Vivo Heart Perfusion. *Transplantation*. 2017 Aug;101(8):e231-e239. doi: 10.1097/TP.0000000000001815.





## Dr. Scott Lear: Lancet study shows that all physical activity lowers mortality and heart disease risks



Physical activity is known to have a protective effect against cardiovascular disease in high-income countries, where such activity is mainly recreational. But does non-recreational physical activity (the main form of exercise in lower-income countries) also decrease cardiovascular disease and mortality?

In one of the largest studies ever published on the heart health benefits of physical activity, Dr. Scott Lear and his collaborators found that a mere 150 minutes spent exercising per week – regardless of the type of physical activity – could cut a person’s risk of cardiovascular disease and death.

*“Our findings indicate that non-recreational activity – work, housework, active transportation – is just as beneficial in reducing the risk for premature death and heart disease.”*

The researchers tracked exercise levels – as well as the rate of cardiovascular disease (including heart attacks, stroke, and heart failure) and all-cause mortality – of more than 130,000 adults living in 17 high (Canada, Sweden, United Arab Emirates), middle (Argentina, Brazil, Chile, Poland, Turkey, Malaysia, South Africa) and low-income countries (Bangladesh, India, Pakistan, Zimbabwe).

Following the study participants for an average of seven years, they found that the people who reported at least 150 minutes of physical activity per week were much healthier than their sedentary counterparts. Physically active participants were less likely to have heart attacks, strokes and cardiovascular disease, and less likely to die from any cause. Getting only two and a half hours of weekly exercise was associated with a 28 percent reduction in premature death, and a 20 percent reduction in heart disease.

All forms of exercise appeared to reduce a person’s risk of death and disease, whether people were sweating away in a gym class, cleaning their house, or simply walking to work.

**Lear SA**, Hu W, Rangarajan S, Gasevic D, Leong D, Iqbal R, Casanova A, Swaminathan S, Anjana RM, Kumar R, Rosengren A, Wei L, Yang W, Chuangshi W, Huaxing L, Nair S, Diaz R, Swidon H, Gupta R, Mohammadifard N, Lopez-Jaramillo P, Oguz A, Zatonska K, Seron P, Avezum A, Poirier P, Teo K, Yusuf S. The effect of physical activity on mortality and cardiovascular disease in 130 000 people from 17 high-income, middle-income, and low-income countries: the PURE study. *Lancet*. 2017 Dec 16;390(10113):2643-2654. doi: 10.1016/S0140-6736(17)31634-3. Epub 2017 Sep 21. Erratum in: *Lancet*. 2017 Dec 16;390(10113):2626.

For more: <http://www.cbc.ca/news/health/physical-activity-pure-1.4301443>

<https://www.reuters.com/article/us-health-activity/a-daily-half-hours-exercise-could-prevent-1-in-12-early-deaths-study-shows-idUSKCN1BW34M>

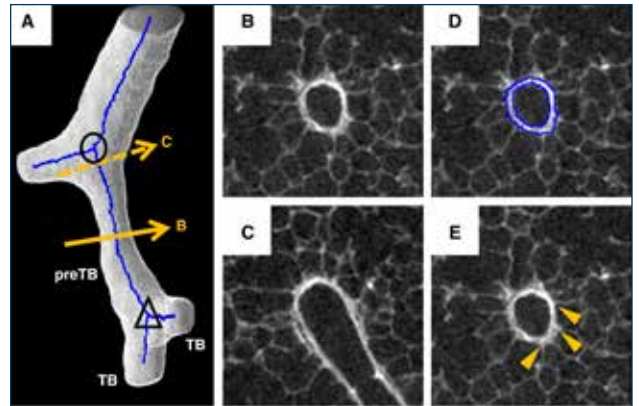
<http://vancouversun.com/news/local-news/eneed-more-exercise-housework-counts-study-finds>

## HLI Investigators use micro-CT to evaluate emphysema phenotypes

Disease in the small conducting airways (those that are less than 2 mm in diameter) and emphysematous destruction are major pathologic features of Chronic Obstructive Pulmonary Disease (COPD).

Emphysematous destruction takes many forms (such as centrilobular, or panlobular), and can be categorized based on its morphology, but current computed tomography imaging cannot resolve the small conducting airways down to the level of the terminal bronchioles.

A team of HLI researchers including Drs. James Hogg, Peter Paré, Naoya Tanabe, Dragos Vasilescu and others, used micro-computed tomography (microCT) to investigate the microstructure of the bronchioles immediately proximal to the terminal bronchioles. In this way, they were able to quantitatively evaluate emphysematous phenotypes. In the future, this methodology can be extended to image all of the lobular airways, and then to link small airways CT imaging with the molecular determinants associated with different pathologic phenotypes of COPD.



Tanabe N, Vasilescu DM, McDonough JE, Kinose D, Suzuki M, Cooper JD, **Paré PD, Hogg JC**. Micro-Computed Tomography Comparison of Preterminal Bronchioles in Centrilobular and Panlobular Emphysema. *Am J Respir Crit Care Med*. 2017 Mar 1;195(5):630-638. doi: 10.1164/rccm.201602-0278OC.

## Researchers at the HLI investigated the role of surfactant protein-D in atherosclerosis

Surfactant protein-D (SP-D) is a pneumoprotein that is predominantly synthesized by epithelial cells in the lung; however individuals with higher circulating levels of SP-D are at an elevated risk of mortality from ischemic heart disease. Whether SP-D contributes directly to atherosclerosis is unknown.

In this study, Drs. Francis, Bernatchez, Man, and Sin, along with researchers in their labs, determined the effects of deleting the SP-D gene on atherosclerosis using a mouse model. They found that mice deficient in SP-D were less likely to develop atherosclerosis when fed a high fat diet, in part due to decreased accumulation and proliferation of macrophages and reduced systemic levels of interleukin-6. Interestingly, mice deficient in SP-D were also more likely to develop hypercholesterolemia and obesity. Combined, these results suggest that SP-D may be a promising target for COPD patients with cachexia (excessive loss of weight) who have elevated circulating SP-D levels and are therefore at increased risk of cardiovascular morbidity and mortality.



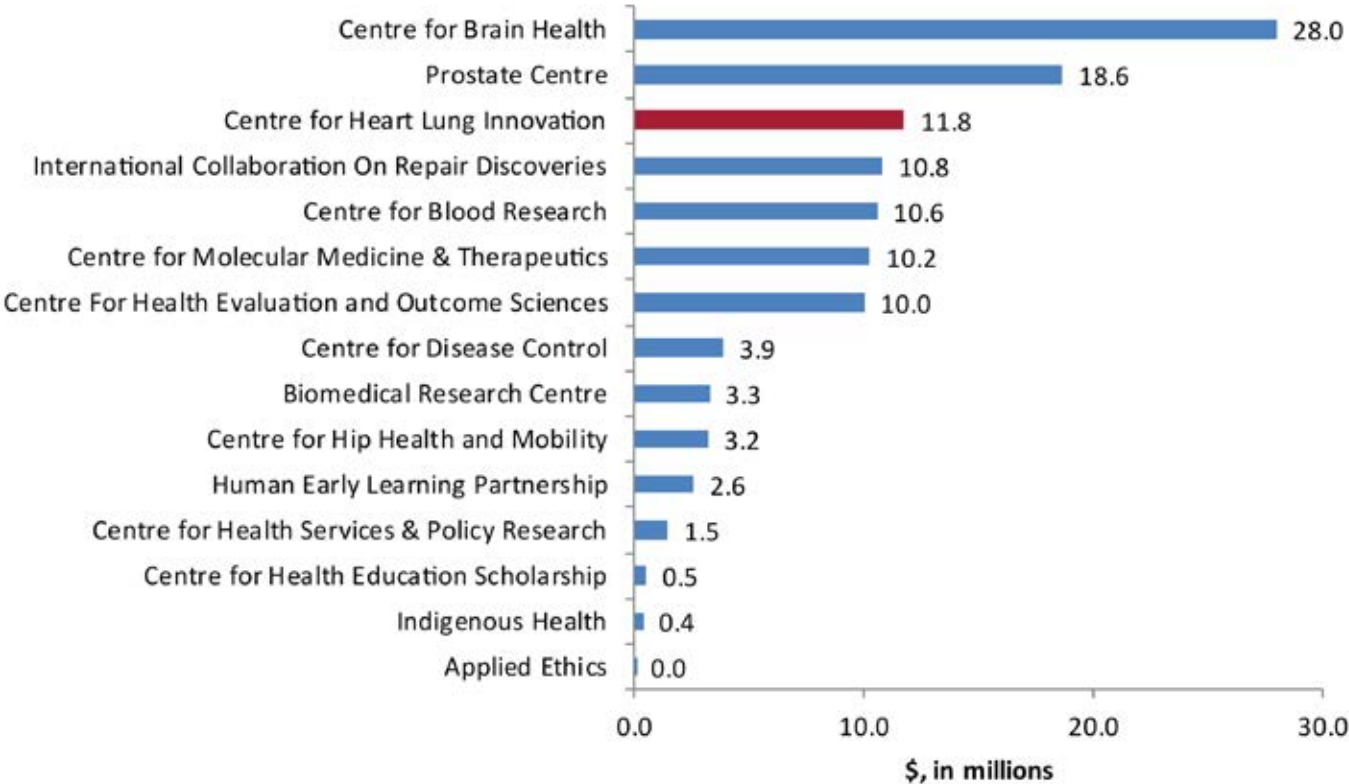
Hirano Y, Choi A, Tsuruta M, Jaw JE, Oh Y, Ngan D, Moritani K, Chen YR, Tam S, Li Y, Vasilescu DM, **Hogg JC, Francis G, Bernatchez P, Man SP, Sin DD**. Surfactant protein-D deficiency suppresses systemic inflammation and reduces atherosclerosis in ApoE knockout mice. *Cardiovasc Res*. 2017 Aug 1;113(10):1208-1218. doi: 10.1093/cvr/cvx067.

# Research Funding

The Centre for Heart Lung Innovation was successful in attracting **\$11.8 million** in research funding for the previous fiscal year, 2016-17, which equates to **10.2%** of all of the UBC Faculty of Medicine.

Available data for the fiscal year 2016–2017 indicates that the HLI Investigators were successful in attracting **\$8.1 million** (as of March 31, 2018) in external research grants and contracts.

Details about the HLI’s funding for fiscal year 2016 – 2017 can be found in [Appendix A](#).



**Total 2016-17 Faculty of Medicine Research Centre Funding: \$115,278,056**

# HLI Investigators

## 33

### PRINCIPAL INVESTIGATORS

Michael Allard  
Pascal Bernatchez  
John Boyd  
Liam Brunham  
Pat Camp  
Chris Carlsten  
Harvey Coxson  
Denise Daley  
Del Dorscheid  
Gordon Francis  
David Granville  
Jordan Guenette  
Tillie Hackett  
James Hogg  
Andrew Krahn  
Scott Lear  
Jonathon Leipsic

Honglin Luo  
Paul Man  
Bruce McManus  
Raymond Ng  
Peter Paré  
Brad Quon  
James Russell  
Chris Ryerson  
Andrew Sandford  
Chun Seow  
Don Sin  
Wan Tan-Hogg  
Scott Tebbutt  
Stephan van Eeden  
Keith Walley  
Decheng Yang

## 6

### EARLY CAREER INVESTIGATORS

Mari DeMarco  
Zachary Laksman  
Janice Leung

Ma'en Obeidat  
Michael Seidman  
Andrew Thamboo

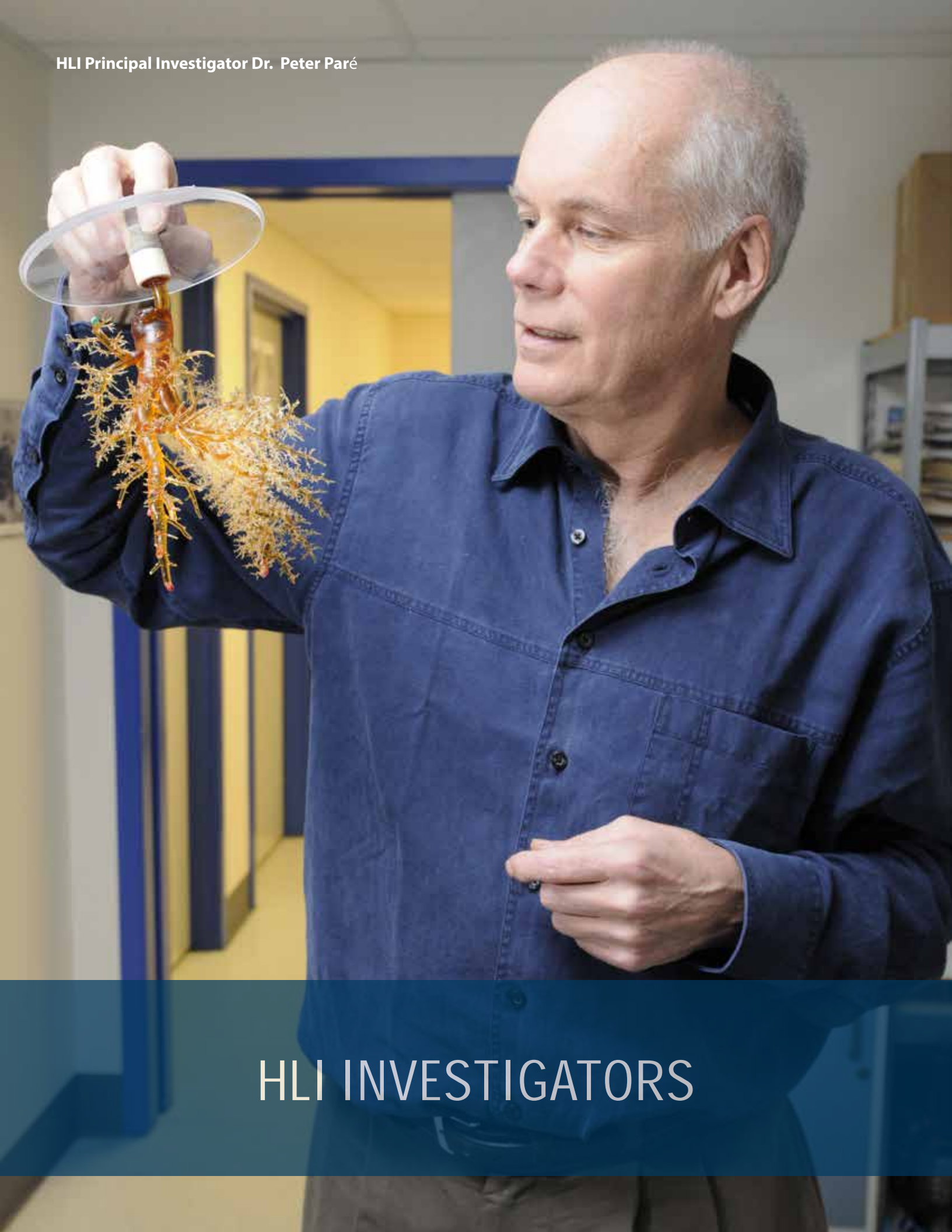
## 19

### INVESTIGATORS

Tony Bai  
Jamil Bashir  
Sammy Chan  
Ed Conway  
Mark Fitzgerald  
Jiri Frohlich  
Andy Ignazewski  
Ismail Laher  
Samuel Lichtenstein  
John Mancini

Ed Moore  
Simon Pimstone  
Fabio Rossi  
Robert Schellenberg  
Peter Skarsgard  
Stacy Skoretz  
David Walker  
Pearce Wilcox  
Jian Ye

HLI Principal Investigator Dr. Peter Paré



HLI INVESTIGATORS

# NEW INVESTIGATORS

## NEW EARLY CAREER INVESTIGATOR

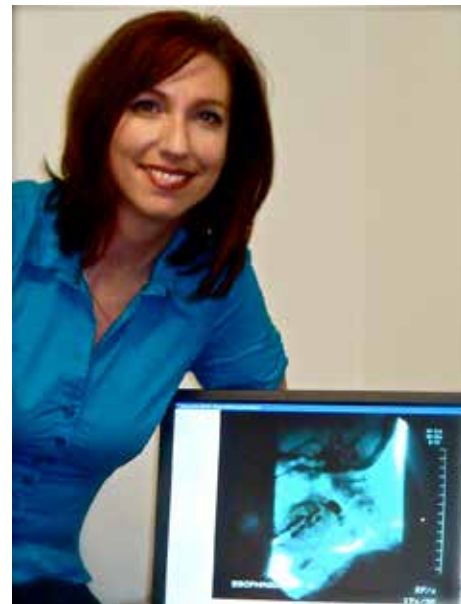


### **Andrew Thamboo, MD**

Clinical Assistant Professor, UBC  
Research Director, Sinus Centre, St. Paul's Hospital

Dr. Andrew Thamboo medically and surgically manages chronic sinusitis and sinonasal tumours at St. Paul's Sinus Centre and at Surrey Memorial Hospital. He also has a cross appointment with Vancouver General Hospital and Royal Columbian Hospital performing skull base procedures with the Neurosurgery team. He is the Research Director of the St. Paul's Sinus Centre. In collaboration with Respiriologists, he has a lab associated with the Heart and Lung Institute. Dr. Thamboo has an interest in areas of unified airway hypothesis, upper airway physiology, office based rhinology and outcomes research. He is a recent recipient of the Michael Smith Foundation Health Investigator Award.

## NEW INVESTIGATOR



### **Stacey Skoretz, PhD, CCC-SLP, R.SLP**

Assistant Professor, School of Audiology & Speech Sciences, Faculty of Medicine, UBC  
Assistant Clinical Professor, Department of Clinical Care Medicine, Faculty of Medicine and Dentistry, U of A

Dr. Skoretz is a medical Speech-Language Pathologist, Principal Investigator for the Swallowing Sciences Research Laboratory (SSRL) and Assistant Professor (tenure-track) with the School of Audiology and Speech Sciences in the Faculty of Medicine at the University of British Columbia (UBC) in Vancouver. She is also Assistant Clinical Professor with the Department of Critical Care in the Faculty of Medicine and Dentistry at the University of Alberta in Edmonton. According to Dr. Skoretz, "*the SSRL utilizes a clinical-research framework where we aim to improve health outcomes following dysphagia through evidence-based assessment and management. Our goals include: understanding the physiological processes underlying cross-system involvement in swallowing following critical illness, engaging patients to ensure patient-centered and individualized therapeutic approaches, and linking research to practice through knowledge synthesis and translation endeavours.*" Dr. Skoretz was awarded the Dysphagia Research Society New Investigator Award in 2012. In addition to conducting research in both British Columbia and Alberta, she teaches graduate-level courses in the areas of swallowing and motor speech at UBC-Vancouver.

# NEW INVESTIGATORS

## NEW EARLY CAREER INVESTIGATOR



### **Ma'en Obeidat, BScPharm, PhD**

Assistant Professor, Medicine, UBC

Dr. Ma'en Obeidat is the Computational Genomics Lead at the Providence Airway Centre and has been recently appointed Assistant Professor in the UBC Department of Medicine, Division of Respiratory Medicine. His research focuses on the use of integrative omics and big data to discover novel therapeutic and biomarker solutions and to enable precision medicine for respiratory diseases. In particular, Dr. Obeidat has pioneered the use of integrative genomics in lung tissue, blood and airway epithelium to map the causal genes and proteins underlying the risk for respiratory diseases. To date, he has identified over 100 novel genetic loci associated with variation in lung function measures, and his work has resulted in 50 publications. Dr. Obeidat received fellowship awards from CIHR, Michael Smith Foundation for Health Research and recently is the only Canadian in the last 5 years to receive the prestigious Parker B. Francis Fellowship award. He has recently been awarded funding from the BC Lung Association and Canadian Lung Association. He supervises a team of data scientists and statisticians and works closely with a large team including clinicians (lead by Dr. Don Sin), cell biologists and graduate students.

# PRINCIPAL AND EARLY CAREER INVESTIGATOR PROFILES



**Michael Allard**

*UBC Department of Pathology and  
Laboratory Medicine*

Dr. Allard's research program focuses on adaptation of the heart to physiological states, such as endurance exercise, and pathological processes, such as hypertension, that result in cardiac hypertrophy. He is particularly interested in how these conditions alter substrate use by the heart and how changes in substrate use influence heart function. A major recent focus of his research has been delineation of the cellular and molecular mechanisms that account for the alterations in substrate use by the hypertrophied heart.



**Pascal Bernatchez**

*UBC Department of Anesthesiology,  
Pharmacology, and Therapeutics*

Dr. Bernatchez's research program is aimed at the dynamic interplay between blood vessel homeostasis and chronic diseases, such as hypertension, atherosclerosis, rare muscular dystrophies and aortic aneurysm associated with Marfan syndrome, as well as exploring novel pharmacological approaches to treat and prevent endothelial dysfunction and its consequences. Dr. Bernatchez's most recent work focuses on the novel regulation mechanism of nitric oxide bioavailability and its role in vascular disease, and how plasma lipid levels influence the loss of muscle function in dystrophic patients.



**John Boyd**

*UBC Department of Medicine*

Dr. Boyd's clinical research program is focused on defining and reversing the elements of the host response that causes sudden organ failure during severe infection. In collaboration with Dr. Robert Hancock, he recently identified a 31 gene endotoxin tolerance profile which predicts subsequent organ failure. Following the recent discovery of the role of the PCSK9 enzyme in the clearance of pathogenic bacterial and fungal lipids from the bloodstream, he collaborates with Drs. Keith Walley and James Russell to develop an anti-PCSK9 therapy as a novel treatment for sepsis.



**Liam Brunham**

*UBC Department of Medicine*

Dr. Brunham's research focuses on understanding how changes in specific genes contribute to differences in drug response as well as to alterations in plasma lipid levels and their relationship to metabolic and cardiovascular disease. His laboratory uses cutting-edge approaches in human genetics including genome-wide association studies and next-generation sequencing to investigate the role of genetic variation in these phenotypes. In December 2015, Dr. Brunham started a collaboration with Dr. Simon Pimstone to launch the SAVE BC study, aiming to identify risk factors and develop new approaches for diagnosis and treatment of BC families affected by early-onset atherosclerotic heart disease.





**Pat Camp**  
*UBC Department of Physical Therapy*

Dr. Camp's research interests focus on improving the physical activity of individuals with chronic lung disease. Currently, she has three main pillars of research: 1) rehabilitation for hospitalized patients with an acute exacerbation of COPD; 2) Indigenous lung health, including epidemiological studies of COPD in remote and rural First Nations communities in BC, and developing an Indigenous pulmonary rehabilitation program; and 3) health service delivery and quality indicators for pulmonary rehabilitation programs in Canada. Her research utilizes methodologies based in implementation sciences, health services delivery, community-based research and knowledge translation. Ultimately, Dr. Camp's research will lead to improved quality of life and physical activity for individuals with chronic lung disease.



**Harvey Coxson**  
*UBC Department of Radiology*

Dr. Coxson specializes in quantitative imaging of the lung, particularly computed tomography, with correlations to quantitative pathology and pulmonary function. Dr. Coxson's laboratory is the core imaging site for the Canadian Cohort of Obstructive Lung Disease (CanCOLD) study, a population based study of COPD, and was the core imaging analysis site for the international COPD study ECLIPSE. Dr. Coxson also works with investigators across Canada as part of the Thoracic Imaging Network of Canada and the Canadian Respiratory Research Network.



**Christopher Carlsten**  
*UBC Department of Medicine*

Dr. Carlsten's clinical and research interests centre on occupational airways disease, including the effects of inhaled exposures on asthma induction and exacerbation. His laboratory investigates the pulmonary-immunological health effects of inhaled environmental and occupational exposures, using diesel exhaust, western red cedar, and phthalates as model inhalants. His research addresses the fundamental question of the synergism of inhaled particles and allergens in mediating health effects. Dr. Carlsten's lab uses an interdisciplinary, team-focused approach to ask related questions on genetic, cellular, functional, and epidemiologic levels.



**Denise Daley**  
*UBC Department of Medicine*

Dr. Daley is utilizing cutting-edge statistical, epigenetic, and bioinformatics techniques to obtain a better understanding of how inherited genetic variants and environmental exposures interact to modify the risk for developing disease. Her lab has recently completed several genome-wide association and sequencing studies to identify genetic susceptibility to common complex diseases such as asthma and COPD, and initiated new studies focused on the evaluation of the "epigenome", or the genome's response to environmental exposures. Dr. Daley's overall research goal is to better understand the etiology of disease and the modifiable environmental risk factors to identify individuals at greatest risk and develop biomarkers and public health interventions.



**Mari DeMarco**

*UBC Department of Pathology and Laboratory Medicine*

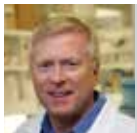
With a strong interest in bridging basic biomedical science, analytical chemistry, and laboratory medicine, Dr. DeMarco's research group specializes in new methodological approaches for identification and quantitation of protein biomarkers of health and disease. A particular focus is advancing clinical diagnostics for neurodegenerative disorders, such as Alzheimer's disease and frontotemporal dementia. This work to translate new biomedical discoveries into patient care is accomplished in collaboration with clinicians and scientists at HLI, the UBC Centre for Brain Health and the provincial Clinic for Alzheimer's Disease and Related Disorders.



**Delbert Dorscheid**

*UBC Department of Medicine*

Dr. Dorscheid leads an active research group investigating the role of the airway epithelium in the genesis of inflammatory airways diseases. The research program studies the role for inappropriate injury-repair cycles in the development of both chronic diseases such as asthma and acute illnesses like ALI/ARDS. Specific projects include the role of glucocorticoid-induced airway epithelial cell apoptosis, novel glycoproteins and the glycomics involved in the repair of an injured epithelium, and the expression of FasL as an immune barrier for the airway.



**Gordon Francis**

*UBC Department of Medicine*

Dr. Francis's research involves understanding the mechanisms of accumulation of cholesterol in arteries in atherosclerosis, and how to remove this cholesterol to prevent coronary heart disease and stroke. Current major projects in his lab include: understanding the role of cholesterol derived from lysosomes in regulating gene expression required for cholesterol removal from cells, and whether accumulation of excess cholesterol in lysosomes is a feature of atherosclerosis; understanding the reason arterial smooth muscle cells appear to accumulate more cholesterol than arterial macrophages; and developing synthetic peptides that turn on production of the beneficial cholesterol particles, high density lipoproteins (HDL), to help remove excess cholesterol from the artery wall and thereby reduce atherosclerosis. His lab recently demonstrated that smooth muscle cells, rather than monocyte-derived macrophages, are the primary site of cholesterol overaccumulation in human and mouse atherosclerotic plaque, which may lead to a major paradigm shift in the understanding of the pathogenesis and treatment of ischemic vascular disease.



**David Granville**

*UBC Department of Pathology and Laboratory Medicine*

Dr. Granville's research group has identified a pathogenic role for granzyme serine proteases in inflammation, impaired tissue healing and remodeling. It is now recognized that apoptosis is not the only function of granzymes and that granzymes also promote inflammation, activate protease-activated receptors, and cleave extracellular proteins. Dr. Granville's recent publication defined a mechanism by which UV light induces GzmB in the skin, leading to collagen degradation and disrupted remodeling. In collaboration with viDA Therapeutics, Dr. Granville's laboratory is developing a novel, small molecule inhibitor of GzmB that can be applied topically to the skin to treat UV-induced skin injury and scarring.



**Jordan Guenette**  
*UBC Department of Physical Therapy*

The primary aim of Dr. Guenette’s research program is to better understand the physiological factors that limit exercise tolerance across the spectrum of health and chronic lung disease. His lab uses a number of novel measurement techniques to simultaneously assess the respiratory, cardiovascular, muscular and neuro-physiological responses to exercise. His current project aims to identify the causes of shortness of breath in patients with interstitial lung disease (ILD) and chronic obstructive pulmonary disease (COPD). Ultimately, this research will lead to the development of more effective treatments to better manage breathlessness and improve exercise tolerance and quality of life for individuals with chronic respiratory diseases.



**Tillie Hackett**  
*UBC Department of Anesthesiology,  
 Pharmacology, and Therapeutics*

Dr. Hackett’s research program is focused on understanding the disruption of normal repair processes within the epithelial-mesenchymal trophic unit (EMTU) of the lung and how this propagates inflammation and tissue remodeling in patients with obstructive lung disease. Her laboratory uses an innovative and targeted approach to isolate cells from donor lungs guided by Computed Tomography imaging. The goal of this research program is to further understand the airway microenvironment to determine therapeutic targets in order to prevent the initiation and perpetuation of pathological processes which contribute to obstructive airway diseases like asthma and chronic obstructive pulmonary disease.



**James Hogg**  
*UBC Department of Pathology and Laboratory  
 Medicine*

Dr. Hogg has been on the staff of the University of British Columbia at St. Paul’s Hospital since 1977 and is currently an Emeritus Professor of Pathology at UBC. He maintains an active research program focused on the inflammatory process in the lung with particular reference to the structure and function of the lungs in COPD. Very recently he and his colleagues used microCT to show that terminal and respiratory bronchioles are sequentially destroyed in COPD. Dr. Hogg collaborated with Dr. Avrum Spira’s group at Boston University to demonstrate a 127 gene expression signature for emphysematous destruction that showed this signature could be reversed toward control levels by the tripeptide GHK. He began to study the lung microbiome in COPD and is currently examining the host response to this microbiome in human lung.



**Andrew Krahn**  
*UBC Department of Medicine*

Dr. Krahn’s current research interests include investigating the genetic causes of arrhythmias, causes of loss of consciousness, and implantable arrhythmia device monitoring. Dr. Krahn is working on creating a province-wide network that would refer individuals with inherited arrhythmia and their relatives to a clinic at St. Paul’s Hospital or Royal Jubilee Hospital in Victoria, or use telemedicine technologies to provide remote examinations and counselling.



**Zachary Laksman**

*UBC Division of Cardiology, SFU Department of Biomedical Physiology and Kinesiology*

Dr. Laksman’s research focus is on the genetic basis for diseases of the heart muscle, heart rhythm, and sudden cardiac death. An element of Dr. Laksman’s work involves using a stem cell model and growing heart cells in a dish. In doing so, Dr. Laksman’s laboratory can model an individual patient’s specific disease, apply medicines to it, and study the cause of the disease and the effect of treatment.



**Scott Lear**

*Simon Fraser University Faculty of Health Sciences*

Dr. Lear’s research focuses on effective prevention and management policies and programs for cardiovascular and other chronic diseases. His research uses a population and health services approach to prevent and manage disease ([www.CoHeaRT.ca](http://www.CoHeaRT.ca)). This work includes investigating how the “built” environment in which we live acts as either a barrier or facilitator of healthy behaviours. His Multi-cultural Community Health Assessment Trial (M-CHAT) is an ongoing investigation to identify the role of ethnic background in risk for obesity, diabetes and cardiovascular disease. For people with disease, Dr. Lear looks at how technology can support patients in managing their chronic diseases under the umbrella of the British Columbia Alliance for Telehealth Policy and Research ([www.BCATPR.ca](http://www.BCATPR.ca)).



**Jonathon Leipsic**

*UBC Department of Radiology*

Dr. Leipsic’s research program is at the forefront of advanced imaging for structural heart disease and has helped guide the use of computed tomography in these procedures on a global scale. His team has published extensively in this realm as well as more broadly in the realm of coronary artery atherosclerosis, prognosis, and the interplay between ischemic heart and chronic obstructive pulmonary disease. Some of his work has informed and modified clinical practice on a global scale. He is extremely excited about the opportunity to continue to learn about how advanced imaging can help improve clinical practice at present, as well as allow for the potential for deeper understanding of the mechanisms and drivers of acute myocardial infarction, sudden cardiac death, and chronic pulmonary obstructive disease exacerbations.



**Janice Leung**

*UBC Department of Medicine*

Dr. Leung is studying the clinical outcomes, manifestations, and underlying mechanisms of HIV-associated chronic obstructive pulmonary disease. In particular, she is interested in the pathogenesis of accelerated aging in the lung and has detected signs of accelerated aging using the blood and airway epithelial cells from HIV-infected patients. Platforms for this research include next generation sequencing methylomics and transcriptomics as well as the microbiome.



**Honglin Luo**

*UBC Department of Pathology and Laboratory Medicine*

The focus of Dr. Luo's research is to define the pathogenetic determinants of virus-host interactions in enterovirus-induced heart disease. She is currently working on: (1) Protein degradation pathways, including the ubiquitin/proteasome pathway and the autophagy pathway, in virus-induced myocarditis and dilated cardiomyopathy; and (2) The molecular mechanisms of impaired cardiac function in viral myocarditis.



**Bruce McManus**

*UBC Department of Pathology and Laboratory Medicine*

Dr. McManus is the CEO of the Centre of Excellence for Prevention of Organ Failure (PROOF) and the Co-Director of the Institute for Heart + Lung Health. His research program is focused on mechanisms, consequences, detection and prevention of injury and aberrant repair involved in inflammatory diseases of the heart and blood vessels. Dr. McManus works in a cross-disciplinary fashion on translational research questions for which answers are critically enabled by computational sciences including molecular biomarker discovery and validation, information acquisition, annotation, and use, and registry development to support heart and lung research.



**Peter Paré**

*UBC Department of Medicine*

Dr. Paré is an Emeritus Professor of Respiratory Medicine and Pathology. Dr. Paré's research expertise is in the pathophysiology and genetics of asthma and COPD. Dr. Paré and colleague Dr. Chun Seow are investigating the molecular and bio-mechanical events which relate broncho-constricting stimuli to the ultimate airway narrowing in asthma and other obstructive airway diseases. They are examining isotonic and isometric length-tension properties, and the plastic behaviour of smooth muscle using physiologic, morphologic and biochemical approaches. With colleagues Drs. Don Sin and Ma'en Obeidat, he is studying the genetic control of gene expression in the lung and blood of COPD patients.



**S.F. Paul Man**

*UBC Department of Medicine*

Dr. Man's research expertise is in clinical trials and translational research, particularly in chronic obstructive lung disease. The clinical outcomes in COPD are unexpectedly influenced by the premature development of atherosclerosis. In close collaboration with Dr. Don Sin, he has been trying to understand epidemiological observations in clinical context, and to design and execute clinical studies and trials to test specific hypotheses.



**Raymond Ng**

*UBC Department of Computer Sciences*

Dr. Ng's research focuses on data mining, which can be broadly viewed as large scale data analysis. With the advancement of computer technologies and biotechnologies, data are collected and accumulated at a phenomenal rate, however our ability to collect data far exceeds the ability to analyze them. The general focus of Dr. Ng's research is to develop tools that can help domain experts analyze their data in ways that are feasible, efficient to deal with the volume of the data, and statistically sound. One focus is to perform gene expression profiling for various heart and blood vessel diseases. A specific goal is to identify genes and pathways that are critical to the development, and hence cure, of those diseases.



**Bradley Quon**

*UBC Department of Medicine*

Dr. Quon is an Adult Respiriologist with a primary clinical and research interest in cystic fibrosis (CF). His research focuses on bridging discoveries in the basic laboratory into the clinic to improve patient outcomes. He is currently searching for novel biomarkers of inflammation and infection to improve disease monitoring in CF. He is co-Investigator of an international collaboration examining health outcomes for individuals with CF living in Canada and the United States. He is also actively involved in several quality improvement initiatives within the St. Paul's Hospital Adult CF clinic and several clinical trials investigating new therapies in CF.



**James Russell**  
*UBC Department of Medicine*

Dr. Russell has published over 225 peer-reviewed articles and editorials as well as 43 book chapters; he serves on the editorial boards of five journals. Dr. Russell has had an active research program focused on sepsis, particularly on: (1) novel, innovative therapies for sepsis; (2) genomics and pharmacogenomics of sepsis; (3) vasopressin treatment of septic shock; and (4) novel outcomes in trials in sepsis as well as the nature and mechanisms of impaired long-term outcomes of sepsis. Dr. Russell has worked closely with Drs. Walley and Boyd to discover that inhibition of the enzyme PCSK9 could improve the outcome of sepsis. They have spun off a new biotechnology company (Cyon Therapeutics) focused on development of PCSK9 inhibitors to treat sepsis.



**Andrew Sandford**  
*UBC Department of Medicine*

The focus of Dr. Sandford's research is the genetic basis of obstructive lung disease. His current work includes identification of genetic risk factors for the development of asthma and chronic obstructive pulmonary disease as well as genetic modifiers of disease severity in cystic fibrosis. He is also investigating the functional impact of genetic variants that have been associated with respiratory disease.



**Chun Seow**  
*UBC Department of Pathology and Laboratory Medicine*

Dr. Seow specializes in smooth and skeletal muscle cell biology/physiology. His current research focus is on the mechanical function, ultrastructure and biochemistry of airway smooth muscle in health and disease. His other interests include skeletal muscle mechanics, ATPase cycle associated with the crossbridge cycle, energetics of muscle contraction, and mathematical modeling of muscle function.



**Christopher Ryerson**  
*UBC Department of Medicine*

Dr. Ryerson specializes in interstitial lung disease (ILD), idiopathic pulmonary fibrosis (IPF), emphysema, dyspnea, and pulmonary rehabilitation. His current research aims to provide a comprehensive understanding of frailty in ILD, including its prevalence, causes, and impact on outcomes. He specifically plans to develop an improved ILD-specific rehabilitation program to target the key deficits in ILD patients. This area of research is particularly important given the marginal benefits and major toxicities of existing ILD pharmacotherapies, thus having the potential to significantly improve the lives of ILD patients.



**Michael Seidman**  
*UBC Department of Pathology and Laboratory Medicine*

Dr. Seidman conducts primarily collaborative research studies, and is also working on several projects of his own design aimed at improving diagnostics in cardiovascular pathology. His areas of focus are cardiovascular pathology, research histopathology, and cardiovascular genetics. His recent discoveries include the identification of biomarkers for myocarditis.



**Don Sin**  
*UBC Department of Medicine*

Dr. Sin's research is geared towards biomarker discovery in COPD and related conditions such as lung cancer, ischemic heart disease and stroke. His group has shown that patients with COPD experience persistent low-grade systemic inflammation, which can be assessed by interrogating their peripheral circulation. By deploying this strategy, they found that certain pneumoproteins (proteins that are synthesized predominantly in lungs but secreted into the systemic circulation) are promising biomarkers of COPD clinical endpoints. Currently, Dr. Sin's team is using high throughput and high volume proteomics and genomics platforms to accelerate biomarker discovery in COPD.



**Wan Tan**

*UBC Department of Medicine*

Dr. Tan is a co-principal investigator of the Canadian Cohort of Obstructive Lung Disease (CanCOLD), a multi-centre cohort study conducted across Canada, dedicated to increasing the understanding of COPD and related co-morbidities, to improve its management and to reduce its burden. The objectives are to characterize the severity of COPD and patient response to disease (link of structural/physiological, clinical variables and health perception), while taking into account lifestyle risk factors (smoking and other modifiable risk factors), age and sex, and associated co-morbidities (cardiovascular diseases, osteoporosis, anxiety and depression).



**Scott Tebbutt**

*UBC Department of Medicine*

Dr. Tebbutt's research program is focused on multi-omics analyses of complex respiratory diseases, including the development of biomarker signatures of early and late reactions in allergic asthma and rhinitis. His research combines hypothesis-driven study of biological mechanisms with the development of advanced tools and technology (including bioinformatics and computational biology) to better facilitate basic and translational research. Dr. Tebbutt is also Chief Scientific Officer of the Prevention of Organ Failure (PROOF) Centre of Excellence - a not-for-profit organization dedicated to moving research findings into health care, and focused on non-invasive biomarkers.



**Stephan van Eeden**

*UBC Department of Medicine*

The focus of Dr. van Eeden's research is on the mechanisms of lung inflammation caused by infection, cigarette smoking and air pollution. His group demonstrated that pro-inflammatory mediators generated in the lung spill over in the blood stream and are responsible for the downstream adverse cardiovascular health effects following exposure to air pollution. Dr. van Eeden recently discovered that statins, a medication commonly used to treat patients with increased blood lipid/cholesterol, significantly attenuated the inflammatory response in the lung induced by exposure to air pollution particles. This novel finding holds promise for future use of this class of drug to protect the heart and lungs during episodes of worsening air pollution.



**Keith Walley**

*UBC Department of Medicine*

The focus of Dr. Walley's research is to investigate: (1) the mechanism of decreased left ventricular contractility and other organ failure during sepsis, and (2) the impact of genotype on patient outcomes in sepsis and systemic inflammatory states. Dr. Walley translates basic discoveries into clinical practice in the ICU. Together with Drs. Russell and Boyd, he recently demonstrated that blocking the function of PCSK9, an enzyme that inhibits the clearance of endogenous cholesterol from blood, is associated with increased pathogen lipid clearance via the LDLR, a decreased inflammatory response, and improved septic shock outcome. This important discovery facilitated the emergence of anti-PCSK9 therapies as a one of the most promising treatments for sepsis.



**Decheng Yang**

*UBC Department of Pathology and Laboratory  
Medicine*

The first area of Dr. Yang's research is the molecular biology and pathogenesis of coxsackievirus, an RNA virus known to cause myocarditis. Dr. Yang is studying the mechanisms of host-pathogen interactions, viral translation initiation, and cardiovirulence with the aim to develop novel antiviral therapies to treat coxsackievirus-induced myocarditis. The second area of Dr. Yang's research is the study of host gene responses to viral infection. He and his team have previously identified genes as well as microRNAs involved in myocarditis induction. His specific focus is the roles of these selected genes and microRNAs in signal transduction pathways and epigenetic modifications leading to cardiomyocyte apoptosis or cardiac hypertrophy. These studies have great potential to discover new targets for gene therapy and molecular markers for diagnosis of viral myocarditis and other related infectious diseases.



# RECOGNIZING RESEARCH EXCELLENCE



## **Dr. Keith Walley receives the PHCRI Research and Mission Award**

The 2017 PHCRI Research and Mission Award was received by HLI Principal Investigator and St. Paul's Hospital ICU physician Dr. Keith Walley. The award recognizes a scientist at PHC or PHCRI who demonstrates the mission and values of PHC while conducting outstanding research. Keith was presented with the award at the PHCRI Research Day on June 9, 2017.



## **Dr. James Russell receives the Aubrey J. Tingle Prize**

Dr. James Russell, Professor, Division of Critical Care Medicine, Department of Medicine was named winner of the 2017 Aubrey J. Tingle Prize by Michael Smith Foundation for Health Research (MSFHR). Created in honour of MSFHR's founding president & CEO, this award is given annually to a British Columbia clinician scientist whose work in health research has had a significant impact on advancing research and improving health, and the health system, in BC and beyond.

## **Dr. John Boyd receives the PHC Innovation and Translational Research Award**



Dr. John Boyd won a Innovation and Translational Research Award for his study "Ex-Vivo Heart Profusion; doubling the number of heart transplants performed in British Columbia." A shortage of donor organs for heart transplantation is a significant problem leading to mortality for patients on transplant waitlists. One way to address donor scarcity is to expand the donor pool from brain-dead donors to those who have died from circulatory arrest, but assessing the viability of these organs is difficult. This research will address the pressing need to quantify organ viability from circulatory arrest donors using ex-vivo heart perfusion. "Too many patients are suffering from heart failure as a result of a shortage of donor hearts," explains Dr. John Boyd. "This project could help by feasibly doubling the number of hearts available for transplant in British Columbia."



## **Dr. Peter Paré gives the J. Burns Amberson lecture**

Dr. Peter Paré was nominated to give the Amberson lecture at the 2017 American Thoracic Society meeting in Washington, DC. The J. Burns Amberson Lecture recognizes a career of major lifetime contributions to clinical or basic pulmonary research and/or clinical practice. The Lecture is given in honor of J. Burns Amberson, an international authority on chest disease and tuberculosis.



### **Dr. Don Sin gives the Canadian Thoracic Society Honorary Lecture at the CHEST Conference**

The CTS Honorary Lecture (formerly known as the Christie Memorial Lecture) is awarded to recognize exemplary leadership in respiratory research and education in Canada. The lecture is presented as part of the honorary lecture series of the CHEST Conference. Dr. Christie was an inspiration in the development of modern respiratory medicine in Canada and was renowned as dean and head of the Department of Medicine at McGill University, Montréal, Québec, as well as being a major supporter of the CTS.



### **Dr. James Hogg receives an honorary doctorate from SFU**

Dr. James Hogg – physician, researcher and educator – received an honorary doctorate from SFU at the June 2017 convocation ceremonies. His drive, innovation and leadership have revolutionized the medical community's understanding and treatment of Chronic Obstructive Pulmonary Disease and asthma. He is a member of the Order of Canada.



### **Dr. Bruce McManus wins the Bill and Marilyn Webber Lifetime Achievement Award**

The UBC Faculty of Medicine Bill and Marilyn Webber Lifetime Achievement Award was bestowed on Dr. Bruce McManus. The award is made in recognition of sustained scholarly achievement in the areas of research, teaching and/or service and honours extraordinary members of the Faculty of Medicine who have had sustained distinguished careers at UBC.



### **Dr. Jordan Guenette receives a Distinguished Achievement Award**

Dr. Jordan Guenette received a Distinguished Achievement Awards from the UBC Faculty of Medicine for his overall excellence as an Early Career Investigator in recognition of his recent success and contributions the Department of Physical Therapy.



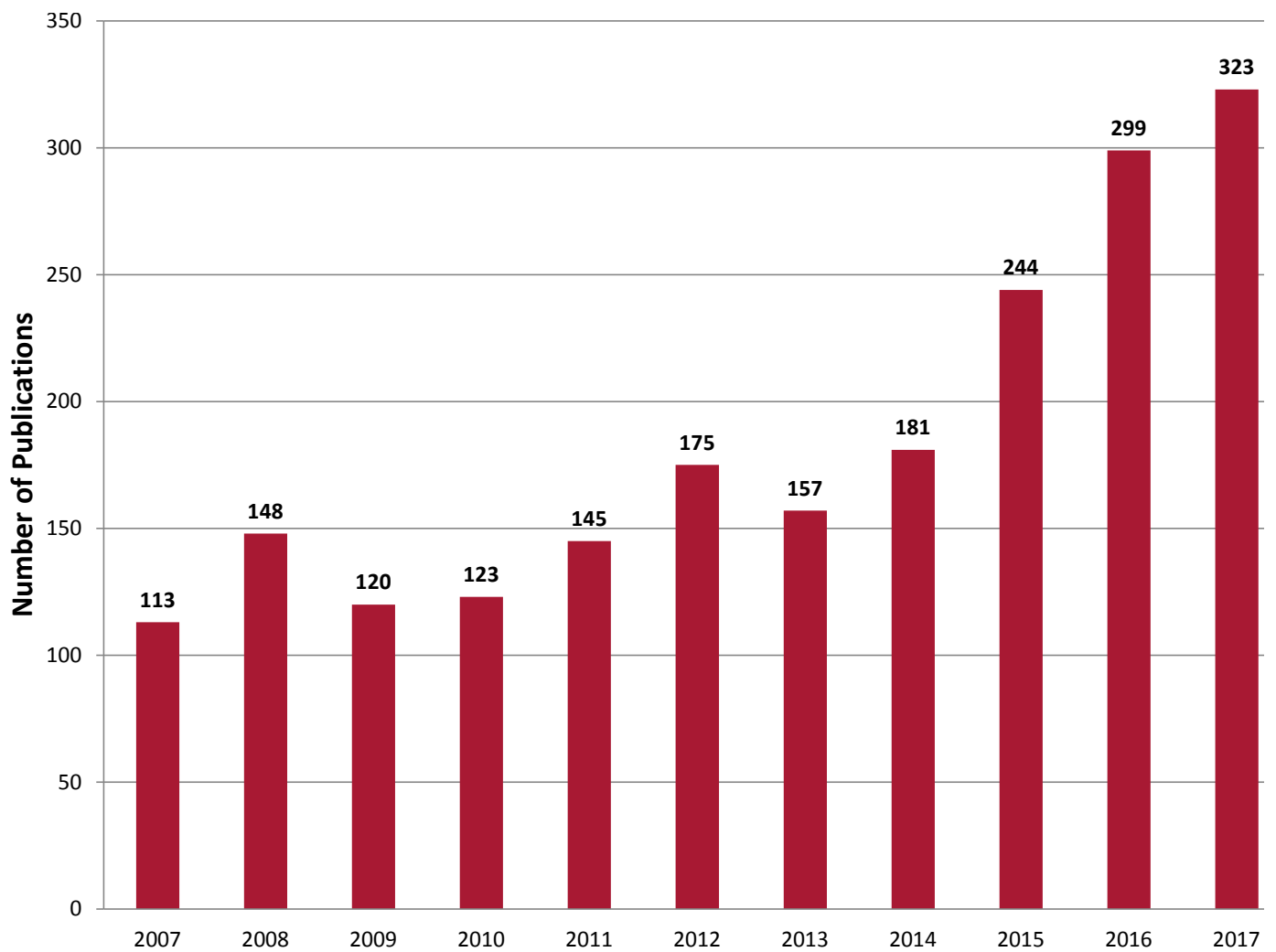
### **Dr. Liam Brunham receives a Distinguished Achievement Award**

Dr. Liam Brunham received a Distinguished Achievement Awards from the UBC Faculty of Medicine for his overall excellence as an Early Career Investigators in recognition of his recent success and contributions in the Department of Medicine.

# Peer Reviewed Publications

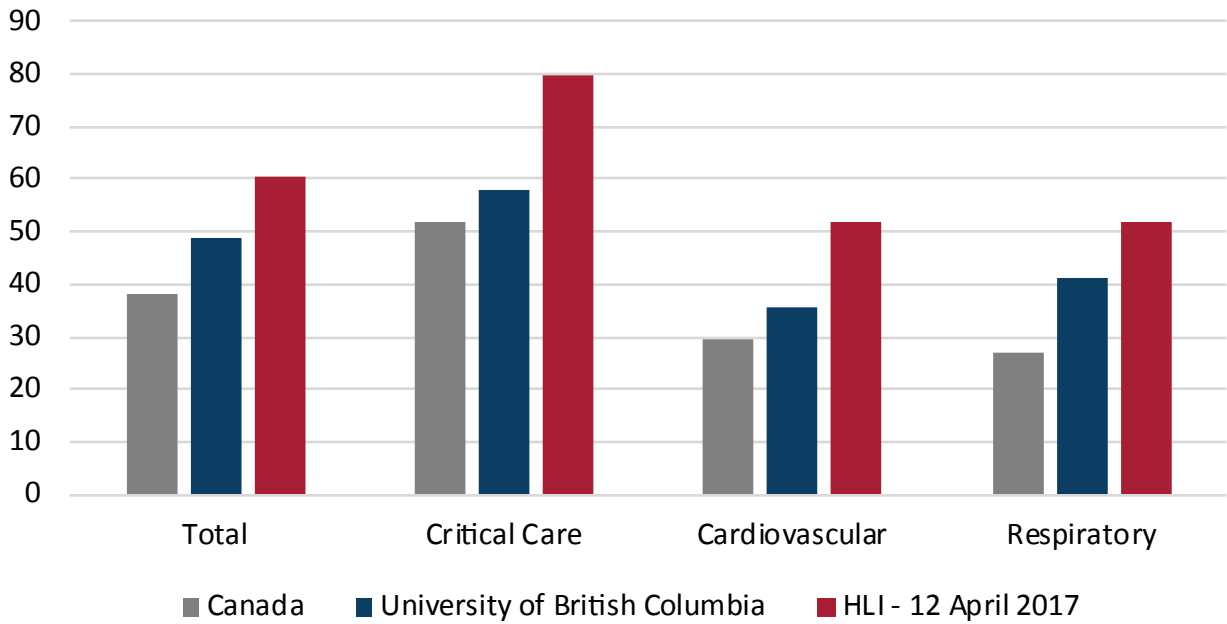
The Centre for Heart Lung Innovation's investigators and students produced 323 publications in 2017.

**Figure 4.** Publications by the Centre for Heart Lung Innovation PIs – 10 year trend. Full details about the 2017 HLI PI publications can be found in [Appendix B](#).

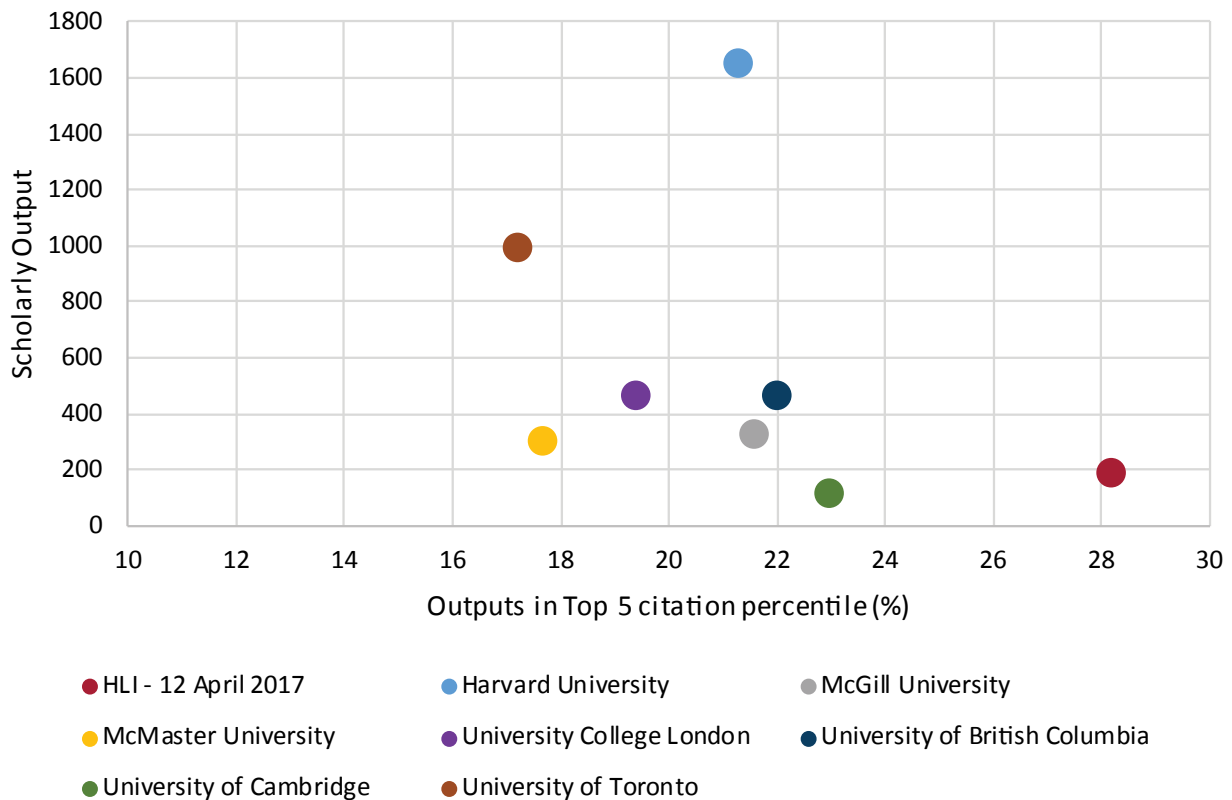


In 2017, HLI investigators published more often in high-impact journals than the average UBC or national researcher. The full list of all high impact publications (IF > 10) by HLI investigators follows.

**Figure 5.** The percentage of HLI publications in Top 10 Journals was above the UBC and Canadian average in 2017 in HLI areas of expertise.



**Figure 6.** High-Impact Publications by Total Publication Number for the Centre for Heart Lung Innovation compared to top research institutions in 2017.



# HIGH IMPACT PAPERS BY HLI INVESTIGATORS IN 2017

Lancet

Impact Factor: 47.831

**Journal Category:**  
Medicine, General and Internal

**Rank Within Category:**  
2/155

Dehghan M, Mente A, Zhang X, Swaminathan S, Li W, Mohan V, Iqbal R, Kumar R, Wentzel-Viljoen E, Rosengren A, Amma LI, Avezum A, Chifamba J, Diaz R, Khatib R, **Lear S**, Lopez-Jaramillo P, Liu X, Gupta R, Mohammadifard N, Gao N, Oguz A, Ramli AS, Seron P, Sun Y, Szuba A, Tsolekile L, Wielgosz A, Yusuf R, Hussein Yusufali A, Teo KK, Rangarajan S, Dagenais G, Bangdiwala SI, Islam S, Anand SS, Yusuf S; Prospective Urban Rural Epidemiology (PURE) study investigators. Associations of fats and carbohydrate intake with cardiovascular disease and mortality in 18 countries from five continents (PURE): a prospective cohort study. *Lancet*. 2017 Nov 4;390(10107):2050-2062. doi: 10.1016/S0140-6736(17)32252-3. Epub 2017 Aug 29.

**Lear SA**, Hu W, Rangarajan S, Gasevic D, Leong D, Iqbal R, Casanova A, Swaminathan S, Anjana RM, Kumar R, Rosengren A, Wei L, Yang W, Chuangshi W, Huaxing L, Nair S, Diaz R, Swidon H, Gupta R, Mohammadifard N, Lopez-Jaramillo P, Oguz A, Zatonska K, Seron P, Avezum A, Poirier P, Teo K, Yusuf S. The effect of physical activity on mortality and cardiovascular disease in 130 000 people from 17 high-income, middle-income, and low-income countries: the PURE study. *Lancet*. 2017 Dec 16;390(10113):2643-2654. doi: 10.1016/S0140-6736(17)31634-3. Epub 2017 Sep 21. Erratum in: *Lancet*. 2017 Dec 16;390(10113):2626.

Miller V, Mente A, Dehghan M, Rangarajan S, Zhang X, Swaminathan S, Dagenais G, Gupta R, Mohan V, **Lear S**, Bangdiwala SI, Schutte AE, Wentzel-Viljoen E, Avezum A, Altuntas Y, Yusoff K, Ismail N, Peer N, Chifamba J, Diaz R, Rahman O, Mohammadifard N, Lana F, Zatonska K, Wielgosz A, Yusufali A, Iqbal R, Lopez-Jaramillo P, Khatib R, Rosengren A, Kutty VR, Li W, Liu J, Liu X, Yin L, Teo K, Anand S, Yusuf S; Prospective Urban Rural Epidemiology (PURE) study investigators. Fruit, vegetable, and legume intake, and cardiovascular disease and deaths in 18 countries (PURE): a prospective cohort study. *Lancet*. 2017 Nov 4;390(10107):2037-2049. doi: 10.1016/S0140-6736(17)32253-5. Epub 2017 Aug 29.

Reddel HK, Busse WW, Pedersen S, **Tan WC**, Chen YZ, Jorup C, Lythgoe D, O'Byrne PM. Should recommendations about starting inhaled corticosteroid treatment for mild asthma be based on symptom frequency: a post-hoc efficacy analysis of the START study. *Lancet*. 2017 Jan 14;389(10065):157-166. doi: 10.1016/S0140-6736(16)31399-X.

Physiological Reviews

Impact Factor: 27.312

**Journal Category:**  
Physiology

**Rank Within Category:**  
1/84

**Hogg JC, Paré PD, Hackett TL**. The Contribution of Small Airway Obstruction to the Pathogenesis of Chronic Obstructive Pulmonary Disease. *Physiol Rev*. 2017 Apr;97(2):529-552. doi: 10.1152/physrev.00025.2015. Review.

Lancet: Oncology

Impact Factor: 33.900

**Journal Category:**  
Oncology

**Rank Within Category:**  
3/217

Tammemagi MC, Schmidt H, Martel S, McWilliams A, Goffin JR, Johnston MR, Nicholas G, Tremblay A, Bhatia R, Liu G, Soghrati K, Yasufuku K, Hwang DM, Laberge F, Gingras M, Pasian S, Couture C, Mayo JR, Nasute Fauerbach PV, Atkar-Khattra S, Peacock SJ, Cressman S, Ionescu D, English JC, Finley RJ, Yee J, Puksa S, Stewart L, Tsai S, Haider E, Boylan C, Cutz JC, Manos D, Xu Z, Goss GD, Seely JM, Amjadi K, Sekhon HS, Burrowes P, MacEachern P, Urbanski S, **Sin DD, Tan WC**, Leighl NB, Shepherd FA, Evans WK, Tsao MS, Lam S; PanCan Study Team. Participant selection for lung cancer screening by risk modelling (the Pan-Canadian Early Detection of Lung Cancer [PanCan] study): a single-arm, prospective study. *Lancet Oncol*. 2017 Nov;18(11):1523-1531. doi: 10.1016/S1470-2045(17)30597-1.

## Nature Genetics

Impact Factor: 27.959

**Journal Category:**  
Genetics & Heredity

**Rank Within Category:**  
2/167

Hobbs BD, de Jong K, Lamontagne M, Bossé Y, Shrine N, Artigas MS, Wain LV, Hall IP, Jackson VE, Wyss AB, London SJ, North KE, Franceschini N, Strachan DP, Beaty TH, Hokanson JE, Crapo JD, Castaldi PJ, Chase RP, Bartz TM, Heckbert SR, Psaty BM, Gharib SA, Zanen P, Lammers JW, Oudkerk M, Groen HJ, Locantore N, Tal-Singer R, Rennard SI, Vestbo J, Timens W, **Paré PD**, Latourelle JC, Dupuis J, O'Connor GT, Wilk JB, Kim WJ, Lee MK, Oh YM, Vonk JM, de Koning HJ, Leng S, Belinsky SA, Tesfaigzi Y, Manichaikul A, Wang XQ, Rich SS, Barr RG, Sparrow D, Litonjua AA, Bakke P, Gulsvik A, Lahousse L, Brusselle GG, Stricker BH, Uitterlinden AG, Ampleford EJ, Bleecker ER, Woodruff PG, Meyers DA, Qiao D, Lomas DA, Yim JJ, Kim DK, Hawrylkiewicz I, Sliwinski P, Hardin M, Fingerlin TE, Schwartz DA, Postma DS, MacNee W, Tobin MD, Silverman EK, Boezen HM, Cho MH; COPDGene Investigators; ECLIPSE Investigators; LifeLines Investigators; SPIROMICS Research Group; International COPD Genetics Network Investigators; UK BiLEVE Investigators; International COPD Genetics Consortium. Genetic loci associated with chronic obstructive pulmonary disease overlap with loci for lung function and pulmonary fibrosis. *Nat Genet.* 2017 Mar;49(3):426-432. doi: 10.1038/ng.3752. Epub 2017 Feb 6.

McKay JD, Hung RJ, Han Y, Zong X, Carreras-Torres R, Christiani DC, Caporaso NE, Johansson M, Xiao X, Li Y, Byun J, Dunning A, Pooley KA, Qian DC, Ji X, Liu G, Timofeeva MN, Bojesen SE, Wu X, Le Marchand L, Albanes D, Bickebøller H, Aldrich MC, Bush WS, Tardon A, Rennert G, Teare MD, Field JK, Kiemenev LA, Lazarus P, Haugen A, Lam S, Schabath MB, Andrew AS, Shen H, Hong YC, Yuan JM, Bertazzi PA, Pesatori AC, Ye Y, Diao N, Su L, Zhang R, Brhane Y, Leighl N, Johansen JS, Mellemgaard A, Saliba W, Haiman CA, Wilkens LR, Fernandez-Somoano A, Fernandez-Tardon G, van der Heijden HFM, Kim JH, Dai J, Hu Z, Davies MPA, Marcus MW, Brunnström H, Manjer J, Melander O, Muller DC, Overvad K, Trichopoulou A, Tumino R, Doherty JA, Barnett MP, Chen C, Goodman GE, Cox A, Taylor F, Woll P, Brüske I, Wichmann HE, Manz J, Muley TR, Risch A, Rosenberger A, Grankvist K, Johansson M, Shepherd FA, Tsao MS, Arnold SM, Haura EB, Bolca C, Holcatova I, Janout V, Kontic M, Lissowska J, Mukeria A, Ognjanovic S, Orłowski TM, Scelo G, Swiatkowska B, Zaridze D, Bakke P, Skaug V, Zienolddiny S, Duell EJ, Butler LM, Koh WP, Gao YT, Houlston RS, McLaughlin J, Stevens VL, Joubert P, Lamontagne M, Nickle DC, **Obeidat M**, Timens W, Zhu B, Song L, Kachuri L, Artigas MS, Tobin MD, Wain LV; SpiroMeta Consortium, Rafnar T, Thorgeirsson TE, Reginsson GW, Stefansson K, Hancock DB, Bierut LJ, Spitz MR, Gaddis NC, Lutz SM, Gu F, Johnson EO, Kamal A, Pikielny C, Zhu D, Lindström S, Jiang X, Tyndale RF, Chenevix-Trench G, Beesley J, Bossé Y, Chanock S, Brennan P, Landi MT, Amos CI. Large-scale association analysis identifies new lung cancer susceptibility loci and heterogeneity in genetic susceptibility across histological subtypes. *Nat Genet.* 2017 Jul;49(7):1126-1132. doi: 10.1038/ng.3892. Epub 2017 Jun 12.

Wain LV, Shrine N, Artigas MS, Erzurumluoglu AM, Noyvert B, Bossini-Castillo L, **Obeidat M**, Henry AP, Portelli MA, Hall RJ, Billington CK, Rimington TL, Fenech AG, John C, Blake T, Jackson VE, Allen RJ, Prins BP; Understanding Society Scientific Group, Campbell A, Porteous DJ, Jarvelin MR, Wielscher M, James AL, Hui J, Wareham NJ, Zhao JH, Wilson JF, Joshi PK, Stubbe B, Rawal R, Schulz H, Imboden M, Probst-Hensch NM, Karrasch S, Gieger C, Deary IJ, Harris SE, Marten J, Rudan I, Enroth S, Gyllensten U, Kerr SM, Polasek O, Kähönen M, Surakka I, Vitart V, Hayward C, Lehtimäki T, Raitakari OT, Evans DM, Henderson AJ, Pennell CE, Wang CA, Sly PD, Wan ES, Busch R, Hobbs BD, Litonjua AA, Sparrow W, Gulsvik A, Bakke PS, Crapo JD, Beaty TH, Hansel NN, Mathias RA, Ruczinski I, Barnes KC, Bossé Y, Joubert P, van den Berge M, Brandsma CA, **Paré PD**, **Sin DD**, Nickle DC, Hao K, Gottesman O, Dewey FE, Bruse SE, Carey DJ, Kirchner HL; Geisinger-Regeneron DiscovEHR Collaboration, Jonsson S, Thorleifsson G, Jonsdottir I, Gislason T, Stefansson K, Schurmann C, Nadkarni G, Bottinger EP, Loos RJ, Walters RG, Chen Z, Millwood IY, Vaucher J, Kurmi OP, Li L, Hansell AL, Brightling C, Zeggini E, Cho MH, Silverman EK, Sayers I, Trynka G, Morris AP, Strachan DP, Hall IP, Tobin MD. Genome-wide association analyses for lung function and chronic obstructive pulmonary disease identify new loci and potential druggable targets. *Nat Genet.* 2017 Mar;49(3):416-425. doi: 10.1038/ng.3787. Epub 2017 Feb 6.

## BMJ-British Medical Journal

Impact Factor: 20.785

**Journal Category:**  
Medicine, General & Internal

**Rank Within Category:**  
4/155

**Leung JM, Sin DD.** Asthma-COPD overlap syndrome: pathogenesis, clinical features, and therapeutic targets. *BMJ*. 2017 Sep 25;358:j3772. doi: 10.1136/bmj.j3772. Review.

## European Heart Journal

Impact Factor: 20.212

**Journal Category:**  
Cardiac & Cardiovascular Systems

**Rank Within Category:**  
3/126

**Leipsic J, Blanke P.** Prognostic value of coronary CT angiography: lessons from the West Denmark Cardiac Registry. *Eur Heart J*. 2017 Feb 7;38(6):422-424. doi: 10.1093/eurheartj/ehw634. No abstract available.

Ruiz CE, Hahn RT, Berrebi A, Borer JS, Cutlip DE, Fontana G, Gerosa G, Ibrahim R, Jelnin V, Jilaihawi H, Jolicoeur EM, Kliger C, Kronzon I, **Leipsic J**, Maisano F, Millan X, Nataf P, O'Gara PT, Pibarot P, Ramee SR, Rihal CS, Rodes-Cabau J, Sorajja P, Suri R, Swain JA, Turi ZG, Tuzcu EM, Weissman NJ, Zamorano JL, Serruys PW, Leon MB; of the Paravalvular Leak Academic Research Consortium. Clinical Trial Principles and Endpoint Definitions for Paravalvular Leaks in Surgical Prosthesis: An Expert Statement. *Eur Heart J*. 2017 Apr 18. doi: 10.1093/eurheartj/ehx211. [Epub ahead of print]

## Journal of the American College of Cardiology

Impact Factor: 19.896

**Journal Category:**  
Cardiac & Cardiovascular Systems

**Rank Within Category:**  
2/126

Muller DW, Farivar RS, Jansz P, Bae R, Walters D, Clarke A, Grayburn PA, Stoler RC, Dahle G, Rein KA, Shaw M, Scalia GM, Guerrero M, Pearson P, Kapadia S, Gillinov M, Pichard A, Corso P, Popma J, Chuang M, Blanke P, **Leipsic J**, Sorajja P; Tendyne Global Feasibility Trial Investigators. Transcatheter Mitral Valve Replacement for Patients With Symptomatic Mitral Regurgitation: A Global Feasibility Trial. *J Am Coll Cardiol*. 2017 Jan 31;69(4):381-391. doi: 10.1016/j.jacc.2016.10.068. Epub 2016 Dec 28.

Reichenspurner H, Schaefer A, Schäfer U, Tchétché D, Linke A, Spence MS, Søndergaard L, LeBreton H, Schymik G, Abdel-Wahab M, **Leipsic J**, Walters DL, Worthley S, Kasel M, Windecker S. Self-Expanding Transcatheter Aortic Valve System for Symptomatic High-Risk Patients With Severe Aortic Stenosis. *J Am Coll Cardiol*. 2017 Dec 26;70(25):3127-3136. doi: 10.1016/j.jacc.2017.10.060.

Rosenson RS, Baker S, Banach M, Borow KM, Braun LT, Bruckert E, **Brunham LR**, Catapano AL, Elam MB, Mancini GBJ, Moriarty PM, Morris PB, Muntner P, Ray KK, Stroes ES, Taylor BA, Taylor VH, Watts GF, Thompson PD. Optimizing Cholesterol Treatment in Patients With Muscle Complaints. *J Am Coll Cardiol*. 2017 Sep 5;70(10):1290-1301. doi: 10.1016/j.jacc.2017.07.752. Review.

Ruiz CE, Hahn RT, Berrebi A, Borer JS, Cutlip DE, Fontana G, Gerosa G, Ibrahim R, Jelnin V, Jilaihawi H, Jolicoeur EM, Kliger C, Kronzon I, **Leipsic J**, Maisano F, Millan X, Nataf P, O'Gara PT, Pibarot P, Ramee SR, Rihal CS, Rodes-Cabau J, Sorajja P, Suri R, Swain JA, Turi ZG, Tuzcu EM, Weissman NJ, Zamorano JL, Serruys PW, Leon MB; Paravalvular Leak Academic Research Consortium. Clinical Trial Principles and Endpoint Definitions for Paravalvular Leaks in Surgical Prosthesis: An Expert Statement. *J Am Coll Cardiol*. 2017 Apr 25;69(16):2067-2087. doi: 10.1016/j.jacc.2017.02.038. Review.

Shen WK, Sheldon RS, Benditt DG, Cohen MI, Forman DE, Goldberger ZD, Grubb BP, Hamdan MH, **Krahn AD**, Link MS, Olshansky B, Raj SR, Sandhu RK, Sorajja D, Sun BC, Yancy CW. 2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients With Syncope: Executive Summary: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *J Am Coll Cardiol*. 2017 Aug 1;70(5):620-663. doi: 10.1016/j.jacc.2017.03.002. Epub 2017 Mar 9. No abstract available.

Shen WK, Sheldon RS, Benditt DG, Cohen MI, Forman DE, Goldberger ZD, Grubb BP, Hamdan MH, **Krahn AD**, Link MS, Olshansky B, Raj SR, Sandhu RK, Sorajja D, Sun BC, Yancy CW. 2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients With Syncope: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *J Am Coll Cardiol*. 2017 Aug 1;70(5):e39-e110. doi: 10.1016/j.jacc.2017.03.003. Epub 2017 Mar 9. No abstract available.

Sukma Dewi I, Gidlöf O, Hollander Z, Lam KK, Benson MD, Braun OO, Nilsson J, **Tebbutt SJ**, **Ng RT**, Öhman J, **McManus BM**, Smith JG. Immunological Serum Protein Profiles for Noninvasive Detection of Acute Cellular Rejection After Heart Transplantation. *J Am Coll Cardiol*. 2017 Dec 12;70(23):2946-2947. doi: 10.1016/j.jacc.2017.10.012. No abstract available.

Webb JG, Mack MJ, White JM, Dvir D, Blanke P, Herrmann HC, **Leipsic J**, Kodali SK, Makkar R, Miller DC, Pibarot P, Pichard A, Satler LF, Svensson L, Alu MC, Suri RM, Leon MB. Transcatheter Aortic Valve Implantation Within Degenerated Aortic Surgical Bioprostheses: PARTNER 2 Valve-in-Valve Registry. *J Am Coll Cardiol*. 2017 May 9;69(18):2253-2262. doi: 10.1016/j.jacc.2017.02.057.

Yoon SH, Bleiziffer S, De Backer O, Delgado V, Arai T, Ziegelmueller J, Barbanti M, Sharma R, Perlman GY, Khalique OK, Holy EW, Saraf S, Deuschl F, Fujita B, Ruile P, Neumann FJ, Pache G, Takahashi M, Kaneko H, Schmidt T, Ohno Y, Schofer N, Kong WKF, Tay E, Sugiyama D, Kawamori H, Maeno Y, Abramowitz Y, Chakravarty T, Nakamura M, Kuwata S, Yong G, Kao HL, Lee M, Kim HS, Modine T, Wong SC, Bedgoni F, Testa L, Teiger E, Butter C, Ensminger SM, Schaefer U, Dvir D, Blanke P, **Leipsic J**, Nietlispach F, Abdel-Wahab M, Chevalier B, Tamburino C, Hildick-Smith D, Whisenant BK, Park SJ, Colombo A, Latib A, Kodali SK, Bax JJ, Søndergaard L, Webb JG, Lefèvre T, Leon MB, Makkar R. Outcomes in Transcatheter Aortic Valve Replacement for Bicuspid Versus Tricuspid Aortic Valve Stenosis. *J Am Coll Cardiol*. 2017 May 30;69(21):2579-2589. doi: 10.1016/j.jacc.2017.03.017. Epub 2017 Mar 18.

## Lancet: Diabetes & Endocrinology

Impact Factor: 19.742

**Journal Category:**  
Endocrinology & Metabolism

**Rank Within Category:**  
1/138

Mente A, Dehghan M, Rangarajan S, McQueen M, Dagenais G, Wielgosz A, **Lear S**, Li W, Chen H, Yi S, Wang Y, Diaz R, Avezum A, Lopez-Jaramillo P, Seron P, Kumar R, Gupta R, Mohan V, Swaminathan S, Kutty R, Zatonska K, Iqbal R, Yusuf R, Mohammadifard N, Khatib R, Nasir NM, Ismail N, Oguz A, Rosengren A, Yusufali A, Wentzel-Viljoen E, Puoane T, Chifamba J, Teo K, Anand SS, Yusuf S. Prospective Urban Rural Epidemiology (PURE) study investigators. Association of dietary nutrients with blood lipids and blood pressure in 18 countries: a cross-sectional analysis from the PURE study. *Lancet Diabetes Endocrinol*. 2017 Oct;5(10):774-787. doi: 10.1016/S2213-8587(17)30283-8. Epub 2017 Aug 29.

## Circulation

Impact Factor: 19.309

**Journal Category:**  
Cardiac & Cardiovascular Systems  
Peripheral Vascular Disease

**Rank Within Category:**  
3/126  
1/63

Braamskamp MJAM, Langslet G, McCrindle BW, Cassiman D, **Francis GA**, Gagne C, Gaudet D, Morrison KM, Wiegman A, Turner T, Miller E, Kusters DM, Raichlen JS, Martin PD, Stein EA, Kastelein JJP, Hutten BA. Effect of Rosuvastatin on Carotid Intima-Media Thickness in Children With Heterozygous Familial Hypercholesterolemia: The CHARON Study (Hypercholesterolemia in Children and Adolescents Taking Rosuvastatin Open Label). *Circulation*. 2017 Jul 25;136(4):359-366. doi: 10.1161/CIRCULATIONAHA.116.025158. Epub 2017 Jun 7.



HIGH IMPACT PAPERS BY HLI INVESTIGATORS IN 2017 - CONTINUED

Shen WK, Sheldon RS, Benditt DG, Cohen MI, Forman DE, Goldberger ZD, Grubb BP, Hamdan MH, **Krahn AD**, Link MS, Olshansky B, Raj SR, Sandhu RK, Sorajja D, Sun BC, Yancy CW. 2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients With Syncope: Executive Summary: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *Circulation*. 2017 Aug 1;136(5):e25-e59. doi: 10.1161/CIR.0000000000000498. Epub 2017 Mar 9. Review. No abstract available. Erratum in: *Circulation*. 2017 Oct 17;136(16):e269-e270.

Shen WK, Sheldon RS, Benditt DG, Cohen MI, Forman DE, Goldberger ZD, Grubb BP, Hamdan MH, **Krahn AD**, Link MS, Olshansky B, Raj SR, Sandhu RK, Sorajja D, Sun BC, Yancy CW. 2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients With Syncope: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *Circulation*. 2017 Aug 1;136(5):e60-e122. doi: 10.1161/CIR.0000000000000499. Epub 2017 Mar 9. Review. No abstract available. Erratum in: *Circulation*. 2017 Oct 17;136(16):e271-e272.

Lancet: Respiratory Medicine

Impact Factor: 19.287

<b>Journal Category:</b>	<b>Rank Within Category:</b>
Critical Care Medicine	1/33
Respiratory System	1/59

Allen RJ, Porte J, Braybrooke R, Flores C, Fingerlin TE, Oldham JM, Guillen-Guio B, Ma SF, Okamoto T, John AE, **Obeidat M**, Yang IV, Henry A, Hubbard RB, Navaratnam V, Saini G, Thompson N, Booth HL, Hart SP, Hill MR, Hirani N, Maher TM, McAnulty RJ, Millar AB, Molyneaux PL, Parfrey H, Rassl DM, Whyte MKB, Fahy WA, Marshall RP, Oballa E, Bossé Y, Nickle DC, **Sin DD**, Timens W, Shrine N, Sayers I, Hall IP, Noth I, Schwartz DA, Tobin MD, Wain LV, Jenkins RG. Genetic variants associated with susceptibility to idiopathic pulmonary fibrosis in people of European ancestry: a genome-wide association study. *Lancet Respir Med*. 2017 Nov;5(11):869-880. doi: 10.1016/S2213-2600(17)30387-9. Epub 2017 Oct 20.

Washko GR, **Coxson HO**, O'Donnell DE, Aaron SD. CT imaging of chronic obstructive pulmonary disease: insights, disappointments, and promise. *Lancet Respir Med*. 2017 Nov;5(11):903-908. doi: 10.1016/S2213-2600(17)30345-4. Epub 2017 Sep 28.

Annals of Internal Medicine

Impact Factor: 17.202

<b>Journal Category:</b>	<b>Rank Within Category:</b>
Medicine, General & Internal	5/155

Stephenson AL, Sykes J, Stanojevic S, **Quon BS**, Marshall BC, Petren K, Ostrenga J, Fink AK, Elbert A, Goss CH. Survival Comparison of Patients With Cystic Fibrosis in Canada and the United States: A Population-Based Cohort Study. . 2017 Apr 18;166(8):537-546. doi: 10.7326/M16-0858. Epub 2017 Mar 14.

American Journal of Respiratory and Critical Care Medicine

Impact Factor: 13.204

<b>Journal Category:</b>	<b>Rank Within Category:</b>
Critical Care Medicine	2/33
Respiratory System	2/59

Aaron SD, Tan WC, Bourbeau J, **Sin DD**, Loves RH, MacNeil J, Whitmore GA; Canadian Respiratory Research Network. Diagnostic Instability and Reversals of Chronic Obstructive Pulmonary Disease Diagnosis in Individuals with Mild to Moderate Airflow Obstruction. *Am J Respir Crit Care Med*. 2017 Aug 1;196(3):306-314. doi: 10.1164/rccm.201612-2531OC.

Amaral AFS, Patel J, Kato BS, Obaseki DO, Lawin H, **Tan WC**, Juvekar SK, Harrabi I, Studnicka M, Wouters EFM, Loh LC, Bateman ED, Mortimer K, Buist AS, Burney PGJ; BOLD Collaborative Research Group. Airflow Obstruction and Use of Solid Fuels for Cooking or Heating: BOLD Results. *Am J Respir Crit Care Med*. 2017 Sep 12. doi: 10.1164/rccm.201701-0205OC. [Epub ahead of print]

Bayram H, Bauer AK, Abdalati W, **Carlsten C**, Pinkerton KE, Thurston GD, Balmes JR, Takaro TK. 20. Environment, Global Climate Change, and Cardiopulmonary Health. *Am J Respir Crit Care Med*. 2017 Mar 15;195(6):718-724. doi: 10.1164/rccm.201604-0687PP.

Boueiz A, Lutz SM, Cho MH, Hersh CP, Bowler RP, Washko GR, Halper-Stromberg E, Bakke P, Gulsvik A, Laird NM, Beaty TH, **Coxson HO**, Crapo JD, Silverman EK, Castaldi PJ, DeMeo DL; COPDGene and ECLIPSE Investigators. Genome-Wide Association Study of the Genetic Determinants of Emphysema Distribution. *Am J Respir Crit Care Med*. 2017 Mar 15;195(6):757-771. doi: 10.1164/rccm.201605-0997OC.

Corte TJ, **Ryerson CJ**, Collard HR. Reply: Acute Exacerbation of Idiopathic Pulmonary Fibrosis. *Am J Respir Crit Care Med*. 2017 Feb 15;195(4):542-543. doi: 10.1164/rccm.201610-2025LE.

Goss CH, Sykes J, Stanojevic S, Marshall B, Petren K, Ostrenga J, Fink A, Elbert A, **Quon BS**, Stephenson AL. Comparison of Nutrition and Lung Function Outcomes in Patients with Cystic Fibrosis Living in Canada and the United States. *Am J Respir Crit Care Med*. 2017 Nov 3. doi: 10.1164/rccm.201707-1541OC. [Epub ahead of print]

Gref A, Merid SK, Gruziova O, Ballereau S, Becker A, Bellander T, Bergström A, Bossé Y, Bottai M, Chan-Yeung M, Fuertes E, Ierodiakonou D, Jiang R, Joly S, Jones M, Kobor MS, Korek M, Kozyrskyj AL, Kumar A, Lemonnier N, MacIntyre E, Ménard C, Nickle D, **Obeidat M**, Pellet J, Standl M, Sääf A, Söderhäll C, Tiesler CMT, van den Berge M, Vonk JM, Vora H, Xu CJ, Antó JM, Auffray C, Brauer M, Bousquet J, Brunekreef B, Gauderman WJ, Heinrich J, Kere J, Koppelman GH, Postma D, Carlsten C, Pershagen G, Melén E. 18. Genome-Wide Interaction Analysis of Air Pollution Exposure and Childhood Asthma with Functional Follow-up. *Am J Respir Crit Care Med*. 2017 May 15;195(10):1373-1383. doi: 10.1164/rccm.201605-1026OC.

Khakban A, **Sin DD**, FitzGerald JM, **McManus BM**, **Ng R**, Hollander Z, Sadatsafavi M. The Projected Epidemic of Chronic Obstructive Pulmonary Disease Hospitalizations over the Next 15 Years. A Population-based Perspective. *Am J Respir Crit Care Med*. 2017 Feb 1;195(3):287-291. doi: 10.1164/rccm.201606-1162PP. Review.

Labaki WW, Martinez CH, Martinez FJ, Galbán CJ, Ross BD, Washko GR, Barr RG, Regan EA, **Coxson HO**, Hoffman EA, Newell JD Jr, Curran-Everett D, **Hogg JC**, Crapo JD, Lynch DA, Kazerooni EA, Han MK. The Role of Chest Computed Tomography in the Evaluation and Management of the Patient with Chronic Obstructive Pulmonary Disease. *Am J Respir Crit Care Med*. 2017 Dec 1;196(11):1372-1379. doi: 10.1164/rccm.201703-0451PP. Review. No abstract available.

McIntyre LA, Stewart DJ, Mei SHJ, Courtman D, Watpool I, Granton J, Marshall J, Dos Santos C, **Walley KR**, Winston BW, Schlosser K, Fergusson DA; Canadian Critical Care Trials Group and the Canadian Critical Care Translational Biology Group. Cellular Immunotherapy for Septic Shock (CISS): A Phase I Clinical Trial. *Am J Respir Crit Care Med*. 2017 Sep 29. doi: 10.1164/rccm.201705-1006OC. [Epub ahead of print]

Piyadasa H, Hemshekhar M, **Carlsten C**, Mookherjee N. Inhaled Diesel Exhaust Decreases Antimicrobial Peptides Alpha-defensin and S100A7 in Human Bronchial Secretion. *Am J Respir Crit Care Med*. 2017 Dec 15. doi: 10.1164/rccm.201708-1714LE. [Epub ahead of print]

**Ryerson CJ**, Corte TJ, Lee JS, Richeldi L, Walsh SLF, Myers JL, Behr J, Cottin V, Danoff SK, Flaherty KR, Lederer DJ, Lynch DA, Martinez FJ, Raghu G, Travis WD, Udwadia Z, Wells AU, Collard HR. A Standardized Diagnostic Ontology for Fibrotic Interstitial Lung Disease. An International Working Group Perspective. *Am J Respir Crit Care Med*. 2017 Nov 15;196(10):1249-1254. doi: 10.1164/rccm.201702-0400PP. No abstract available.

**Ryerson CJ**, Corte TJ, Martinez FJ, Collard HR. Reply: The New Idiopathic Pulmonary Fibrosis Acute Exacerbations Document: One Step Ahead but Still Suspended in the Air. *Am J Respir Crit Care Med*. 2017 Jan 15;195(2):269. doi: 10.1164/rccm.201608-1607LE. No abstract available.

**Tanabe N**, **Vasilescu DM**, McDonough JE, Kinose D, Suzuki M, Cooper JD, **Paré PD**, **Hogg JC**. Micro-Computed Tomography Comparison of Preterminal Bronchioles in Centrilobular and Panlobular Emphysema. *Am J Respir Crit Care Med*. 2017 Mar 1;195(5):630-638. doi: 10.1164/rccm.201602-0278OC.

Vogelmeier CF, Criner GJ, Martinez FJ, Anzueto A, Barnes PJ, Bourbeau J, Celli BR, Chen R, Decramer M, Fabbri LM, Frith P, Halpin DM, López Varela MV, Nishimura M, Roche N, Rodriguez-Roisin R, **Sin DD**, Singh D, Stockley R, Vestbo J, Wedzicha JA, Agustí A. Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Lung Disease 2017 Report. GOLD Executive Summary. *Am J Respir Crit Care Med*. 2017 Mar 1;195(5):557-582. doi: 10.1164/rccm.201701-0218PP.

Woodruff PG, van den Berge M, Boucher RC, Brightling C, Burchard EG, Christenson SA, Han MK, Holtzman MJ, Kraft M, Lynch DA, Martinez FD, Reddel HK, **Sin DD**, Washko GR, Wenzel SE, Punturieri A, Freemer MM, Wise RA. American Thoracic Society/National Heart, Lung, and Blood Institute Asthma-Chronic Obstructive Pulmonary Disease Overlap Workshop Report. *Am J Respir Crit Care Med*. 2017 Aug 1;196(3):375-381. doi: 10.1164/rccm.201705-0973WS.

**Yang CX**, **Singh A**, **Kim YW**, Conway EM, **Carlsten C**, **Tebbutt SJ**. Diagnosis of Western Red Cedar Asthma Using a Blood-based Gene Expression Biomarker Panel. *Am J Respir Crit Care Med*. 2017 Dec 15;196(12):1615-1617. doi: 10.1164/rccm.201608-1740LE.

## The Journal of Allergy and Clinical Immunology

Impact Factor: 13.081

### Journal Category:

Allergy  
Immunology

### Rank Within Category:

1/26  
6/151

Clifford RL, Jones MJ, MacIsaac JL, McEwen LM, Goodman SJ, Mostafavi S, Kobor MS, **Carlsten C**. Inhalation of diesel exhaust and allergen alters human bronchial epithelium DNA methylation. *J Allergy Clin Immunol*. 2017 Jan;139(1):112-121. doi: 10.1016/j.jaci.2016.03.046. Epub 2016 May 10.

**Leitao Filho FS**, Ra SW, Mattman A, **Schellenberg RS**, **Sin DD**. Reply. *J Allergy Clin Immunol*. 2017 Dec 5. pii: S0091-6749(17)31670-6. doi: 10.1016/j.jaci.2017.10.013. [Epub ahead of print].

**Leitao Filho FS**, Won Ra S, Mattman A, **Schellenberg RS**, Fishbane N, Criner GJ, Woodruff PG, Lazarus SC, Albert R, Connett JE, Han MK, Martinez FJ, **Leung JM**, **Man SFP**, Aaron SD, Reed RM, **Sin DD**. Serum IgG and risk of exacerbations and hospitalizations in chronic obstructive pulmonary disease. *J Allergy Clin Immunol*. 2017 Oct;140(4):1164-1167.e6. doi: 10.1016/j.jaci.2017.01.046.

## Nature Communications

Impact Factor: 12.124

### Journal Category:

Multidisciplinary Sciences

### Rank Within Category:

3/64

Saw WY, Tantoso E, Begum H, Zhou L, Zou R, He C, Chan SL, Tan LW, Wong LP, Xu W, Moong DKN, Lim Y, Li B, Pillai NE, Peterson TA, Bielawny T, Meikle PJ, Mundra PA, Lim WY, Luo M, Chia KS, Ong RT, **Brunham LR**, Khor CC, Too HP, Soong R, Wenk MR, Little P, Teo YY. Establishing multiple omics baselines for three Southeast Asian populations in the Singapore Integrative Omics Study. *Nat Commun*. 2017 Sep 21;8(1):653. doi: 10.1038/s41467-017-00413-x.

## Intensive Care Medicine

Impact Factor: 12.015

**Journal Category:**  
Critical Care Medicine

**Rank Within Category:**  
3/33

Annane D, Pastores SM, Arlt W, Balk RA, Beishuizen A, Briegel J, Carcillo J, Christ-Crain M, Cooper MS, Marik PE, Meduri GU, Olsen KM, Rochweg B, Rodgers SC, **Russell JA**, Van den Berghe G. Critical illness-related corticosteroid insufficiency (CIRCI): a narrative review from a Multispecialty Task Force of the Society of Critical Care Medicine (SCCM) and the European Society of Intensive Care Medicine (ESICM). *Intensive Care Med.* 2017 Dec;43(12):1781-1792. doi: 10.1007/s00134-017-4914-x. Epub 2017 Sep 21.

Annane D, Pastores SM, Rochweg B, Arlt W, Balk RA, Beishuizen A, Briegel J, Carcillo J, Christ-Crain M, Cooper MS, Marik PE, Umberto Meduri G, Olsen KM, Rodgers S, **Russell JA**, Van den Berghe G. Guidelines for the diagnosis and management of critical illness-related corticosteroid insufficiency (CIRCI) in critically ill patients (Part I): Society of Critical Care Medicine (SCCM) and European Society of Intensive Care Medicine (ESICM) 2017. *Intensive Care Med.* 2017 Dec;43(12):1751-1763. doi: 10.1007/s00134-017-4919-5. Epub 2017 Sep 21.

Annane D, Pastores SM, Rochweg B, Arlt W, Balk RA, Beishuizen A, Briegel J, Carcillo J, Christ-Crain M, Cooper MS, Marik PE, Umberto Meduri G, Olsen KM, Rodgers S, **Russell JA**, Van den Berghe G. Guidelines for the diagnosis and management of critical illness-related corticosteroid insufficiency (CIRCI) in critically ill patients (Part I): Society of Critical Care Medicine (SCCM) and European Society of Intensive Care Medicine (ESICM) 2017. *Intensive Care Med.* 2017 Dec;43(12):1751-1763. doi: 10.1007/s00134-017-4919-5. Epub 2017 Sep 21.

Annane D, Pastores SM, Rochweg B, Arlt W, Balk RA, Beishuizen A, Briegel J, Carcillo J, Christ-Crain M, Cooper MS, Marik PE, Umberto Meduri G, Olsen KM, Rodgers SC, **Russell JA**, Van den Berghe G. Guidelines for the Diagnosis and Management of Critical Illness-Related Corticosteroid Insufficiency (CIRCI) in Critically Ill Patients (Part I): Society of Critical Care Medicine (SCCM) and European Society of Intensive Care Medicine (ESICM) 2017. *Crit Care Med.* 2017 Dec;45(12):2078-2088. doi: 10.1097/CCM.0000000000002737.

Bentzer P, Fisher J, Kong HJ, Mörgelin M, **Boyd JH, Walley KR, Russell JA**, Linder A. Erratum to: Heparin-binding protein is important for vascular leak in sepsis. *Intensive Care Med Exp.* 2017 Dec;5(1):6. doi: 10.1186/s40635-017-0119-4. Epub 2017 Jan 20. No abstract available.

Genga KR, **Russell JA**. How much excess fluid impairs outcome of sepsis? *Intensive Care Med.* 2017 May;43(5):680-682. doi: 10.1007/s00134-017-4746-8. Epub 2017 Mar 27. No abstract available.

Perner A, Gordon AC, Angus DC, Lamontagne F, Machado F, **Russell JA**, Timsit JF, Marshall JC, Myburgh J, Shankar-Hari M, Singer M. The intensive care medicine research agenda on septic shock. *Intensive Care Med.* 2017 Sep;43(9):1294-1305. doi: 10.1007/s00134-017-4821-1. Epub 2017 May 12. Review.

Teboul JL, Duranteau J, **Russell JA**. Intensive care medicine in 2050: vasopressors in sepsis. *Intensive Care Med.* 2017 Aug 31. doi: 10.1007/s00134-017-4909-7. [Epub ahead of print] No abstract available.

Vieillard-Baron A, **Boyd J**. Non-antiarrhythmic interventions in new onset and paroxysmal sepsis-related atrial fibrillation. *Intensive Care Med.* 2017 Nov 7. doi: 10.1007/s00134-017-4986-7. [Epub ahead of print] No abstract available.

Impact factors and journal rankings are based on the Thomson Reuters InCites Journal Citation report for 2016.

The HLI Principal Investigators' names are in **bold**.



# KNOWLEDGE TRANSLATION

# HLI IN THE NEWS

## HLI Celebrates 40th Anniversary!

On October 6th, 2017, HLI investigators, trainees and staff came together to celebrate 40 years of the Centre for Heart Lung Innovation. Dr. Jim Hogg reflected on these 40 years in an Opinion Piece in the Vancouver Sun:

*“The Centre for Heart Lung Innovation (HLI) is celebrating its evolution into a globally recognized research centre that currently investigates some of the most challenging problems facing people with both chronic heart and lung issues, and critical care illnesses.”*

See: <http://vancouversun.com/opinion/op-ed/opinion-centre-for-heart-lung-innovation-marks-40th-anniversary>

This event was featured in Providence Health Care’s Promise magazine locally and also garnered national interest – Prime Minister Justin Trudeau formally congratulated the HLI on this important anniversary!



PRIME MINISTER · PREMIER MINISTRE

### 40<sup>th</sup> Anniversary of the Centre for Heart Lung Innovation

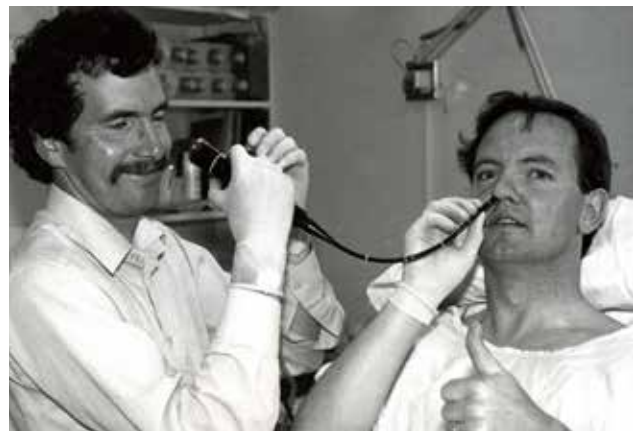
It is with great pleasure that I congratulate the members of the Centre for Heart Lung Innovation (HLI) on the occasion of its 40<sup>th</sup> anniversary.

Since its establishment at my alma mater, the University of British Columbia, in 1977, HLI has grown to become one of the world’s foremost centres for cardiovascular and pulmonary research. Over the past 40 years, the researchers of HLI have worked hard to create a better world, one in which the threat of heart and lung disease no longer looms over us.

Today, as you gather to celebrate this anniversary, I urge you to reflect on the foundations of HLI’s success. Through an unwavering commitment to teamwork and open channels of communication, researchers have tapped into new avenues of innovation that, without the cooperative atmosphere, would not otherwise be accessible. As you look to the future of HLI, I hope that this defining feature of the Centre remains at the core of its mission.

Thank you to all those who have helped ensure the success of HLI over the past 40 years. Please accept my warmest welcome and best wishes for an enjoyable 40<sup>th</sup> anniversary celebration.

# THE HLI'S 40TH ANNIVERSARY



Above, pictured from left to right:

Former director, Dr. Bruce McManus (2006-2012); co-founder and former director, Dr. Jim Hogg (1977-1999); outgoing director, Dr. Keith Walley (2013-2017); and co-founder and former director, Dr. Peter Paré (2000-2005).

## Dr. Liam Brunham recognized as "Top 40 under 40"

HLI Principal Investigator Dr. Liam Brunham was named one of Canada's top 40 under 40 in 2017. Top 40 was founded by executive search firm Caldwell Partners to recognize Canada's outstanding young achievers. This year's recipients were selected from more than 900 nominations.

Dr. Brunham was interviewed by BNN after receiving the award, where he discussed his research that focuses on using genetics to understand why some people have heart disease or high cholesterol levels, as well as how advances in genetics can be used to develop new ways to diagnose and treat heart disease.



For more: <http://www.bnn.ca/you-need-to-be-dogged-top-40-under-40-winners-share-their-secrets-to-success-1.849826>

## Dr. Chris Carlsten comments on the effects of fire and smoke on lung health



Dr. Chris Carlsten's research focuses on air quality and the health effects of air quality and inhaled exposures. This research was part of a recent commentary in the Georgia Straight, where author Charlie Smith argues that forest fires and floods are a clear sign of climate change – and that poor air quality can be fatal.

*"Air pollution causes more death than motor vehicle collisions, suicide, and HIV combined."*

"The latest estimates from the Global Burden of Disease suggest nearly eight thousand Canadian deaths annually (approximately 3 percent of the total) are related to air pollution, ranking tenth among all risk factors for death in Canada," according to Dr. Carlsten and UBC collaborator Dr. Michael Brauer.

Carlsten and Brauer note that "a warmer climate portends worsening of air quality". That's because smoke emitted from increasingly frequent wildfires "is clearly linked to increased deaths and exacerbation of lung disease".

"Over a relatively short period of time, we have witnessed growth in the frequency, magnitude, and severity of wildfires in Canada, along with an extension of the length of the fire season," Brauer and Carlsten state.

"Devastating fires in Fort McMurray and Slave Lake are recent examples, while generation of huge smoke plumes that affect major cities, and indeed large portions of the continent, are now becoming regular occurrences."

For more: <https://www.straight.com/news/934271/bc-wildfires-and-floods-show-climate-chaos-upon-us>



# Vancouver billionaire Jim Pattison donates \$75 million towards new St. Paul's Hospital

It is being described as the largest donation in Canadian history by a private citizen to a single medical facility.

"I am proud to donate to the St. Paul's Foundation for a hospital that has been putting people first in our community for more than 120 years," the 88-year-old Pattison said in a release.

*"The new Jim Pattison Medical Centre will build on St. Paul's Hospital's history of serving British Columbians with excellence and compassion, and enable close collaboration among clinicians and researchers to collectively drive new standards in health care and treatment for all British Columbians."*



The new campus will be built at the 18.4-acre site (roughly the size of 15 football fields) along Station Street in False Creek Flats. In addition to the provincial Heart Centre and BC Centre for Excellence in HIV/AIDS, the campus will be home to the Centre for Heart Lung Innovation, the PHC Research Institute as well as other research and life sciences facilities. There will also be room to expand for future need.

For more: <http://www.cbc.ca/news/canada/british-columbia/st-paul-donation-1.4043869>

<http://vancouver.sun.com/news/local-news/vancouver-billionaire-jim-pattison-donates-75m-towards-new-st-pauls-hospital>

<http://www.metronews.ca/news/vancouver/2017/03/28/vancouver-jim-pattison-donates-75-million-to-st-pauls.html>

<http://www.providencehealthcare.org/news/20170328/jim-pattison-makes-record-75-million-donation-st-pauls-foundation>

## POTENTIAL DEVELOPMENT Site Plan

This site plan is an illustrated example of how the policies in the New St. Paul's Hospital and Health Campus Policy Statement might be achieved on the site in the future.



## Dr. Zachary Laksman and his team make "heart-pounding" breakthrough

Atrial fibrillation (AFib), or an irregular heartbeat, is a life-threatening condition that affects one in four people over the age of 40. It is the most common heart rhythm problem, and can lead to blood clots, stroke, heart failure and other heart-related complications. But for those suffering from heart arrhythmias, there is hope – thanks to HLI Investigator Dr. Zachary Laksman and his team.

*“This opens the door for other clinicians and scientists to start answering important questions about the disease”*

Using AFib patient blood, Dr. Laksman and his team have grown heart cells that can mimic abnormal heart rhythms – the first time these kind of cells have been created in a petri dish.

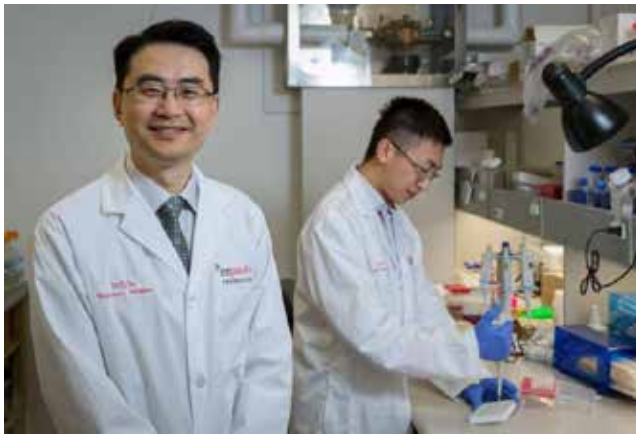
Studying these cardiomyocytes, as these cells are called, will allow them to figure out which drugs work best for people with heart arrhythmia. Importantly, this work can be done in the lab, without putting the patients at risk.



For more: <https://globalnews.ca/news/3828217/vancouver-medical-researchers-make-heart-pounding-breakthrough/>

<http://www.providencehealthcare.org/news/20171027/vancouver-medical-researchers-make-heart-pounding-breakthrough-dr-zachary-laksman>

## Dr. Don Sin will revolutionize COPD and asthma treatment with TORCH



Dr. Don Sin and colleagues received a \$2.2 million infrastructure grant from the Canada Foundation for Innovation (CFI), which will be matched by the BC Knowledge Development Fund, to improve the understanding and identification of different COPD and asthma subtypes using state-of-the-art genetic and omics technologies. The project is called TORCH, for “Towards Omics and Imaging to Revolutionize COPD and Asthma” and was recently featured in Science in the City.

Currently, 5 million Canadians suffer from asthma and COPD, costing the Canadian health care system \$3.5 billion per year, which is predicted to increase to \$7.4 billion per year by 2030 if nothing changes. TORCH provides Dr. Sin and his collaborators with the tools required to develop improved diagnostics and therapies for patients. This is the 4th major CFI awarded to the HLI.

*“The new CFI award for HLI and St. Paul’s Hospital will transform the way [we] study COPD, cystic fibrosis, asthma and pulmonary fibrosis and will lead to major breakthroughs in new therapies and diagnostics for these lung conditions.”*

For more: <http://phcnews.ca/news/dr-don-sin-receives-cfi-award-towards-revolutionizing-copd-and-asthma-treatment>

<https://scienceinthecity.com/2017/12/05/dr-don-sin-receives-cfi-award-towards-revolutionizing-copd-asthma-treatment/>

## Dr. Bradley Quon reports on Cystic Fibrosis outcomes in Canada and the USA

Cystic fibrosis is a progressive genetic disease that causes persistent lung infections that compromise ability to breathe over time. A study published by Dr. Bradley Quon and colleagues in the *Annals of Internal Medicine* reports that cystic fibrosis patients in Canada live on average 10 years longer than their counterparts in the United States, with a median life expectancy of 50.9 years compared with 40.6 years.

The study compared records of 5,941 Canadian and 45,448 American cystic fibrosis patients between 1990 and 2013. After controlling for severity of disease, age and other factors, researchers found that overall death rates were 34% lower in Canada than in the United States. Three factors seemed to be responsible for the large difference in survival rates between American and Canadian patients: number of lung transplants, diet, and health insurance status. Interestingly, differences in outcomes vanished when researchers compared the subset of US patients with insurance to those in Canada, where universal healthcare coverage exists.



This work was highlighted by the *Annals of Internal Medicine* as one of their top two health policy articles for the year, and was featured in over 30 media outlets.

For more: <http://annals.org/aim/pages/best-of-2017>

<http://www.cbc.ca/news/health/cystic-fibrosis-survival-rates-1.4022970>

<https://www.nytimes.com/2017/03/15/well/live/canadians-with-cystic-fibrosis-live-10-years-longer-than-americans-with-the-disease.html>

<https://www.cnn.com/2017/03/13/health/cystic-fibrosis-canada-vs-us-survival-study/index.html>

<https://www.wsj.com/articles/cystic-fibrosis-patients-in-canada-live-a-decade-longer-than-u-s-patients-study-says-1489438800>

# Spin-off Companies

The HLI currently hosts five UBC spin-off companies including Cyon Therapeutics, viDA Therapeutics Inc, Aspect Biosystems, Black Tusk, and PROOF Centre.



## Cyon Therapeutics: Better Outcomes in Sepsis

Driven by the knowledge that better outcomes in sepsis are possible, Cyon Therapeutics Inc. was formed in 2014 to make this a reality. Led by a team of HLI scientists and critical care physicians, Drs. Keith Walley, Jim Russell and John Boyd, and supported by two CEOs, the goal of the spin-off is to bring a novel treatment platform to sepsis. Through their groundbreaking scientific discoveries, the team is developing the means to boost the body's natural ability to clear infectious toxins from the bloodstream.

Source: [cyontherapeutics.com/about](http://cyontherapeutics.com/about)



## viDA Therapeutics: Novel Treatments for Inflammatory and Age-related Diseases

Founded in 2008 by Dr. David Granville, viDA Therapeutics is committed to the discovery, development and commercialization of novel and targeted therapeutics for the treatment of inflammatory and age-related diseases. Their unique discovery platform is based on novel research regarding a distinctly different and recently identified, extracellular role for Granzymes in the destruction and inflammation of tissues. Source: [vidatherapeutics.com](http://vidatherapeutics.com)



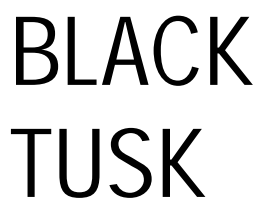
## Aspect Biosystems: Human Tissues on Demand

Dr. Sam Wadsworth, leading cell biologist at the HLI, co-founded the award-winning biotechnology company, Aspect Biosystems Ltd., in November 2013 with Dr. Konrad Walus' research group. Aspect Biosystems specializes in 3D bioprinting and tissue engineering, bringing together a multi-talented team of individuals to develop cutting-edge custom human tissue technology for use in the life sciences. Source: [aspectbiosystems.com](http://aspectbiosystems.com)



## PROOF Centre: Biomarkers to prevent organ failure

The PROOF (Prevention of Organ Failure) Centre is a not-for-profit organization that develops blood tests to better predict, diagnose, manage and treat heart, lung and kidney disease. PROOF is a cross-disciplinary biosignature development engine of partners representing academia, health care, government, industry, patients and the public. The PROOF Centre, led by HLI PI and former HLI Director Dr. Bruce McManus, was initially established by the Networks of Centres of Excellence Secretariat under the Centre of Excellence for Commercialization and Research (NCE CECR) Program, and is co-hosted by the University of British Columbia and Providence Health Care in Vancouver, British Columbia, Canada. Source: [proofcentre.ca](http://proofcentre.ca)



## Black Tusk Research Group Inc.

Founded in 2014, by HLI Clinical Research Core Manager Ms. Lynda Lazosky and HLI PI Dr. John Boyd, Black Tusk Research Group Inc. is a site monitoring organization supporting clinical trials and biobanking. BTRG supports Principal Investigators and helps them to initiate and manage pharmaceutical phase II, III and IV clinical trials and academic grant funded clinical research projects.

Dr. Bruce McManus with graduate students



TRAINING THE NEXT GENERATION

The HLI prides itself on its success in attracting international trainees and research personnel from all over the world. In the past 5 years, the HLI has hosted trainees and research personnel from 39 countries and 6 continents.



# HLI SUMMER STUDENT RESEARCH PROGRAM

## ABOUT THE HLI-SSRP

Throughout the year, numerous undergraduate students are trained at the HLI through co-operative education programs, directed studies programs or various employment opportunities. Our busiest time of year is May to August when undergraduate students participate in our Summer Student Research Program (HLI-SSRP). Students are mentored by a senior professor and an immediate supervisor, and gain hands-on basic science laboratory experience while working on a research project. Not only does each student learn, in detail, one or two technologies per four-month or eight-month fellowship, but, more importantly for this formative period of development, students learn the critical logic of complementary technologies and when to employ them to experimental advantage.

Over the last 10 years the HLI has hosted over 600 undergraduate students

In addition to technical and scientific training, students learn to present their original work at the Summer Student Research Day, a one-day conference featuring both oral and poster presentations by student researchers.

In 2017, the HLI hosted **30 summer students** through our Summer Student Research Program. The HLI was also pleased to offer the Henrietta Ehler Summer Student Respiratory Research Award to four students in 2017 (listed below).

Henrietta Ehler Awards	
Roxana Yan (Sin lab)	Wiebke Bartels (van Eeden lab)
Wai Lam Tam (Tebbutt lab)	Cameron Miller (Dorscheid lab)

## SUMMER STUDENT RESEARCH DAY - AUGUST 11, 2017



Dr. Bruce McManus Presentation Awards		
Award	Recipient	HLI Supervisor
Top Heart Oral Presentation	Cheng (Kim) Li	Michael Seidman
Top Lung Oral Presentation	Valerie Kim	Don Sin
Top Innovation Oral Presentation	Veronica Rally	Harvey Coxson
Top Poster	Roxana Yan	Delbert Dorscheid

# Heart + Lung FEST

The annual Heart + Lung Health FEST is an activity of, developed by and hosted by the community-wide umbrella organization, the Institute for Heart + Lung Health. The FEST is an opportunity for HLI trainees to present their ongoing research and engage and learn alongside professionals from all relevant heart and lung domains. The 2017 FEST was held March 15-18th at the Sheraton Vancouver Wall Centre Hotel.

## HLI Inaugural Trainee Research Day

On October 6th, 2017 the HLI hosted the first inaugural Trainee Research Day. During this exciting day of science and discovery, HLI trainees presented their research and progress towards finding cures for heart, lung, vessel and critical care disease. The event was highlighted by four honoured decade speakers, each of whom presented on the amazing work conducted during their time at the HLI.

The four speakers were:

- 1st Decade: Dr. Julio Montaner
- 2nd Decade: Dr. Claire Doerschuk
- 3rd Decade: Dr. Jonathan Choy
- 4th Decade: Dr. Tillie Hackett



Centre for  
**Heart Lung Innovation**  
UBC and St. Paul's Hospital

Trainees presented in three categories: Heart, Lung and Innovation. The winners of each category were:

- Heart: Paul Hanson (Dr. Bruce McManus' lab)
- Lung: Emmanuel Osei (Dr. Tillie Hackett's lab)
- Innovation: Steve Booth (Dr. Tillie Hackett's lab)

In addition Feng Xu (Dr. Jim Hogg's lab) won the best poster award!



Pictured: Keith Walley, Paul Hanson, Emmanuel Osei, Steve Booth, Tillie Hackett, Claire Doerschuk, Feng Xu, Jonathon Choy



## HLI Career Day



Every year the HLI holds a Career Day for trainees. In 2017 Career Day focused on providing trainees with useful information about career options in science and research.

Talks about preparing posters and writing scientific journal articles were also offered.

## High School Science Week

For one week in spring and fall each year, high school students participate in the High School Science Week hosted at the HLI. Eight students are invited to participate in various laboratory sessions and seminars. This program is a very unique opportunity for students to get real hands-on biomedical lab experience that can help shape their education and career paths.

Students who participate in the High School Science Week are eligible to apply for the **Peter D. Paré Scholarship**, an eight-week summer internship at the HLI (valued at \$2,000).

The Peter D. Paré Scholarship recipient for 2017 was **Tony Guo**. Tony worked in Dr. Del Dorscheid's lab together with Gurpreet Singhera on a pilot project to characterize the basal epithelial cell profile from individuals with asthma and COPD and establish its connection to airway epithelial repair. He presented his research at the HLI Summer Student Research Day 2017.



# HLI Weekly Seminars

The Centre for Heart Lung Innovation holds two weekly seminars, the Research in Progress Seminar Series and the HLI Friday Seminar Series, both of which run from September through June each year.

The HLI Friday Seminar Series features invited experts in specific fields from all over the world to give talks which encourage education and collaboration. Detailed information about the 2017 HLI Friday Seminars can be found in [Appendix C](#). The Research in Progress seminar series gives graduate students and post-doctoral fellows at the HLI the opportunity to present their ongoing research to other HLI researchers. The idea behind these seminars is for a critical, but supportive, audience to give feedback at the conceptual or analytic stage of the trainees' research program. Detailed information about the 2017 Research in Progress Seminars can be found in [Appendix D](#).

Below: A few of our featured Friday Seminar Series speakers.



Dr. Zachary Laksman and guest speaker Dr. Peter Backx



Dr. Jim Hogg and guest speaker Dr. Peter JM Openshaw



Guest speaker Dr. Rebecca Kusko and Dr. Jim Hogg

# Trainee Awards

## TRAINEE FELLOWSHIPS AND SCHOLARSHIPS

Name	Type/Award Name	Awarding Body
Alex Leung	Trainee Research Award	MSFHR
Ali Alasmari	Respiratory Rehabilitation Fellowship	BC Lung Association
Amrit Singh	Trainee Research Award	MSFHR
Andrew Ramsook	CGS - Doctoral Scholarship	NSERC
Arash Tehrani	Graduate Award	UBC Faculty of Medicine
Ji-Young Kim	Elevate Postdoctoral Fellowship	MITACS
Kang Dong	MicroGrant Award	Rare Disease Foundation
Kelly Genga	Graduate Award	UBC Faculty of Medicine
Leila Mostaco-Guidolin	Postdoctoral Fellowship	CIHR
Ma'en Obeidat	Parker B. Francis Fellowship	Parker B. Francis Fellowship Program
Mohammed Algamdi	Interstitial Lung Disease Fellowship	UBC Faculty of Medicine
Leila Mostaco-Guidolin	Postdoctoral Fellowship	CIHR
Steve Booth	Tuition Award	UBC Graduate Student Initiative – Dept. of Anesthesiology, Pharmacology and Therapeutics
Yannick Molgat-Seon	Respiratory Rehabilitation Fellowship	BC Lung Association

## OTHER TRAINEE AND STAFF AWARDS AND RECOGNITIONS

Name	Award	Awarding Body
Aida Eslami	Travel Award	AllerGen
Aida Eslami	Postdoctoral Travel Award	Genetic Epidemiology Society
Aida Eslami	Travel Award	CIHR Travel Award, ICS
Anthony Tam	Travel Award	CIHR Travel Award, ICS
Dragos Vasilescu	Abstract Scholarship – Assembly on Respiratory Structure and Function Program	American Thoracic Society
Dragos Vasilescu	Abstract Award	American Thoracic Society
Emmanuel Osei	Travel Award	AllerGen
Emmanuel Osei	Travel Award	HLI Trainee Research Day
Emmanuel Osei	Best Research Award	Netherlands Respiratory Society and Netherlands Asthma Foundation
Fernando Studart	Travel Award	American Thoracic Society
Gurpreet Singhera	Travel Award	AllerGen
Jasemine Yang	Travel Award	AllerGen
Josh Dubland	Trainee Award – Best Oral Presentation	Canadian Lipoprotein Conference
Josh Dubland	Trainee Travel Award	Canadian Society for Atherosclerosis, Thrombosis and Vascular Biology
Leila Mostaco-Guidolin	Travel Award	AllerGen
Margaret Huang	Travel Award	Stemcell Network
Minhee Jin	Abstract Award	American Thoracic Society
Nawaf Alotaibi	Abstract Award – Assembly on Clinical Problems through the National Emphysema Foundation	American Thoracic Society
Sabina Guler	Travel Award	CIHR Travel Award, ICS
Steve Booth	Travel Award	American Thoracic Society
Steve Booth	Best Oral Presentation Award	UBC Anesthesiology, Pharmacology and Therapeutics Research Day

# POSTDOCTORAL RESEARCH GRANTS

**St. Paul's Hospital Foundation is grateful for support from the Ajaib (Jab) and Nirmal (Munni) Sidhoo Charities Endowment Fund and the St. Paul's Hospital Pulmonary Research Endowments.**

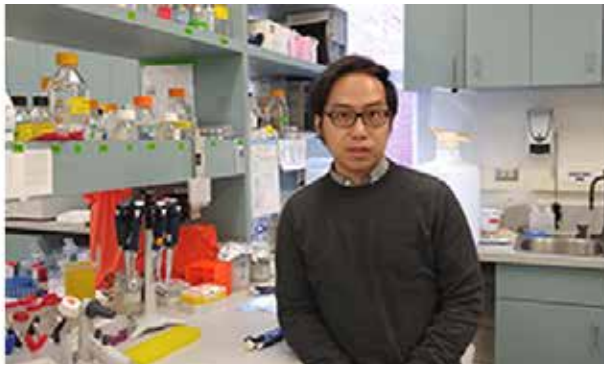
**The award winners were Drs. Amrit Singh and Alex Leung in the cardiovascular category, and Dr. Miranda Kirby in the pulmonary category!**

These generous endowments supported a Postdoctoral Research Grant Program in 2017. The goal of this program is to support promising postdoctoral researchers conducting cardiovascular and pulmonary research at the HLI. The awards provide the winning postdoctoral researchers with operating/salary support to ensure their research is successful and to increase their competitiveness in their future careers. The awards were valued at \$20,000 per researcher, over 2 years (\$10,000 per year to each fellow).

Two awards, supported by the Sidhoo Fund, were given to cardiovascular researchers and one award, supported by the Foundation's pulmonary endowments, was given to a pulmonary researcher.



Dr. Amrit Singh



Dr. Alex Leung



Dr. Miranda Kirby

Dr. Amrit Singh - co-supervised by Drs. Bruce McManus and Raymond Ng. His research aims to identify and improve the biological understanding of mechanisms and biomarkers of heart failure and heart transplant rejection.

Dr. Alex Leung - supervised by Dr. John Boyd. His research focuses on the role of lipoproteins in mediating the clearance of bacterial endotoxins during sepsis, which often leads to heart failure.

Dr. Miranda Kirby - supervised by Dr. Jim Hogg. Her research is focused on developing imaging biomarkers of the progression of emphysema and small airway disease in smokers.

## TRAINEE CAREER PATHS

**In 2017, ten of our graduate students and postdocs finished their training at the HLI. Here are some of the impressive scientific career paths they moved on to.**

Trainee	Supervisor(s)	Start/End Date	Degree/Study Level	Present Position
Jessica Inskip	Pat Camp	June 2017	Postdoctorate	Medical Science and Education Liaison – Roche
Konosuke Moritani	Don Sin	March 2017	Postdoctorate	Assistant Professor of Surgery, Keio University (Tokyo, Japan)
Naoya Tanabe	Jim Hogg	March 2017	Postdoctorate	Kyoto University, Japan
Ravipati (Swamy) Anjaneya	Mari DeMarco	August 2017	Postdoctorate	Metabolomics and Proteomics Research Management Consulting
Walden Cheung	Pat Camp	August 2017	MSc Student, Rehabilitation Sciences	UBC Master of Physical Therapy Program
Ying Yang	Gordon Francis	August 2017	Postdoctorate	Postdoctorate, Stanford
Carmen Sima	Pat Camp	November 2017	PhD Student	Lecturer and Research Assistant, UViC
Ma'en Obeidat	Don Sin	October 2017	Postdoctorate	Assistant Professor, UBC
Dragos Vasilescu	Jim Hogg	June 2017	Postdoctorate	Research Associate, HLI
Yolanda Yang	Scott Tebbutt	September 2017	MSc Student	Biostatistician, UBC

Research Technician Basak Sahin demonstrating the use of a microscope to a group of high school students



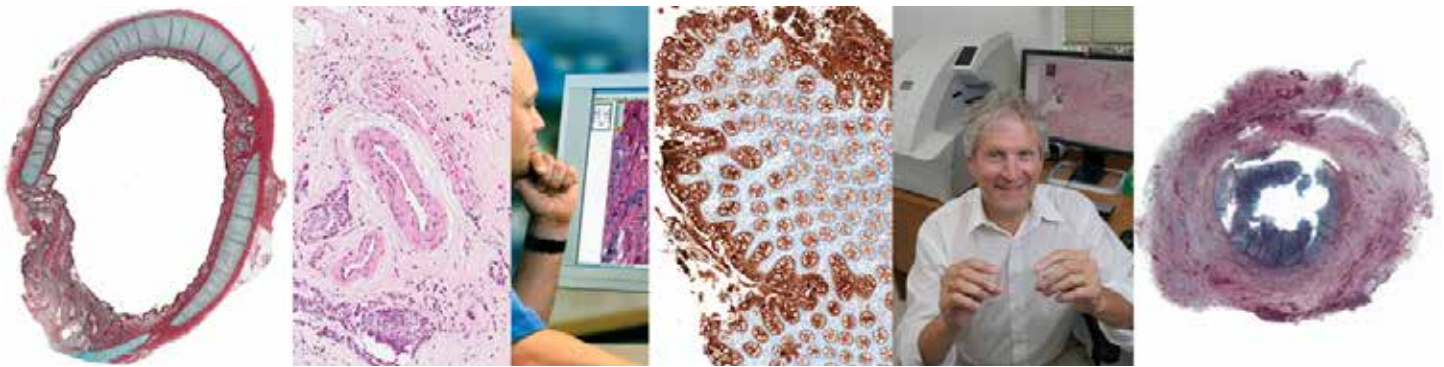
## HLI OPERATIONS

# Centre Operational Highlights

## LABORATORY EQUIPMENT ACQUISITIONS

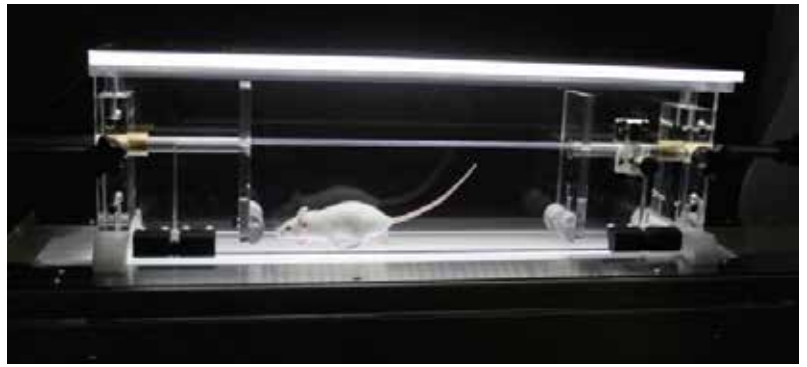
### New Digital Slide Scanner - The Aperio AT2 System

The HLI would like to thank multiple investigators, and especially Dr. Jim Hogg, for their significant funding support for the new Leica Aperio AT2 High Volume, Digital Whole Slide Scanner. For the last 9 years, the HLI hosted an Aperio XT digital pathology slide scanner to scan and analyze tissue sections from any human or disease model. This system was replaced by an updated model this year with the capacity to scan 400 slides in one 16-hour run. This new scanner will enable clinicians and researchers to image their tissue slides with unprecedented image quality, speed, reliability and most importantly have them stored within a searchable digital database. This means that high resolution images (1X to 40X magnification) from any point on the tissue slide can be used for analysis at any time for subsequent studies.



### New GEM Equipment – DigiGait

In 2017 the GEM facility, courtesy of Dr. Pascal Bernatchez, added a DigiGait system to its equipment list. This is an innovative gait measurement device for mice that uses a transparent treadmill to image the ventral side of the mouse while they walk or run at set speeds and inclines. Their gait can then be analyzed for changes in a number of parameters that may change due to disease states.



### New Water Distiller and Room Reno

The update to the HLI distillation equipment required extensive renovations to the room before installation. Asbestos was removed, new 'Aquaboard' walls were installed, and new flooring, lighting, and waterproof electrical panels. The water heating components were moved to the GEM HVAC room on the roof. We are happy that installation was successful and the new still is up and running!





## PRECLINICAL SERVICES

GEM (Preclinical Services) staff continued to contribute to UBC Facility Management and Policy Development Committees. The GEM group completed successful inspections with UBC, particularly with the ACC and Post Approval Monitoring groups, ensuring the highest standards of animal care were delivered.

## IT SERVICES

The HLI's Information Technology team had a very busy year. Just a few of the projects that were completed in 2017 were high speed data networking for the Confocal, Aperio and Micro CT scanners, remote high resolution graphical analysis installation, new and expanded storage for imaging scanners and a web portal for secure high-resolution analyses.



The IT team takes a break from overseeing a long list of projects for HLI and other groups at St. Paul's Hospital. Left to right: Nghia Tran, Dean English, Kyle Johnson, Joe Comeau and Andrew Ferris.

## CARDIOVASCULAR AND LUNG TISSUE REGISTRY

The HLI is built upon a rich history of Lung and Cardiovascular registries that collectively contain over 90,000 biospecimens and associated clinical data, donated to research by patients undergoing heart or lung surgery over the past 33 years at St. Paul's Hospital. The HLI Lung and Cardiovascular Tissue registries are currently directed by Drs. Tillie Hackett and Michael Seidman who, with their teams, enable academic and industry researchers from around the world access with ethical approval to these important samples for biomedical and translational research questions.

The Heart and Lung registries have provided human samples for research worldwide to investigators both Provincially (BC Cancer (Drs. Gilks, Huntsman, Hoodless, Lam, and Wan), Centre for Heart Lung Innovation (Drs. Dorscheid, Francis, Hackett, Hogg, Luo, Sin, Seow, Van Eeden), St. Paul's Hospital (Drs. Leipsic, Ostry) Vancouver General Hospital (Drs. Carlsten, Granville, & Hirota), Simon Fraser University (Dr. Choy), Nationally (McGill University, Sick Kids Toronto, University of Manitoba) and Internationally (Duke University, Stanford University, University of Cincinnati, University of Edinburgh, University of Florida, University of Pittsburgh) to as far as the University of Tasmania.

## LABORATORY SAFETY IN 2017

The Health and Safety Team held its second annual HLI Health and Safety Day in 2017 with presentations on hospital security, UBC Health & Wellbeing Programs, liquid nitrogen and dry ice safety, services offered by UBC's Workplace Health Services and, in addition, gave out some well-deserved Safety Awards. Throughout the year, under the leadership of Ivan Leversage, the team continued to achieve their goals including conducting more frequent lab inspections, completing chemical waste removal and updating the laboratory and large spill and flood kits.



## EXPANSION OF TRANSLATIONAL RESEARCH

Under the management of Lynda Lazosky, the HLI Clinical Research group has made great strides in aiding principal investigators to initiate and manage ongoing clinical projects. The team has been instrumental in clinical research project management, ethics applications and study coordination to help HLI realize translational research plans.



Kelly Haller, Alicia Murdoch, Kristen Bowden and Jennifer Lee



Lynda Lazosky

## MAINTENANCE AND EQUIPMENT MANAGEMENT SERVICES

The Maintenance and Equipment Management Team continued with a busy schedule handling a number of equipment repair tickets. They also provided expertise to renovation projects and lead the renovations team for the new water distillation unit installation.

# Events at the HLI

## HEALTHY WORKPLACE INITIATIVES

Basak Sahin, Beth Whalen, Claire Smits and Ivan Leversage organized events throughout the year to enhance the inclusive nature of the environment at the HLI. Thanks to support from UBC's Healthy Workplace Initiatives Fund, they held a number of "Take 5 Cafés" to promote mental health and wellness. With a main focus on stress relief, the Take 5 Cafés held in 2017 included:

- 1 - Relaxing Music
- 2 - Exercise
- 3 - Puzzles and Colouring Books
- 4 - Mindful May
- 5 - Pumpkin Carving (pictured below).



The group worked with the UBC Thrive campaign and held a Canadian Mental Health Association Workshop: *Awareness of Mental Health at Work*. They also provided information for HLI employees in the form of weekly mental health tips and led fundraising initiatives for the Lights of Hope campaign. Previous initiatives which began in 2016, such as weekly yoga classes, are ongoing thanks to contributions by participants and the HLI.



Pink Shirt Day, 2017.

## LIGHTS OF HOPE

The HLI supports the St. Paul's Foundation and the lights of Hope Campaign. The HLI again achieved a GOLD STAR and donation goal again in 2017! Thanks to all who helped with fundraising events we were able to raise a total of \$25,560.



St. Paul's Foundation Lights of Hope.

# Centre for Heart Lung Innovation

## Core and Technical Services

[www.hli.ubc.ca/services](http://www.hli.ubc.ca/services)



Centre for  
**Heart Lung Innovation**  
UBC and St. Paul's Hospital

The Centre for Heart Lung Innovation staff have extensive training and experience to provide consistent and reliable results with minimal turnover time. Some of our services, equipment and tools available are:

### HLI Cardiovascular and Lung Tissue Registries

- Tissue and sample archiving
- Gross and microscopic specimen images
- Gross specimen photography
- New expanded formalin storage facility

### Cellular Imaging & Biophysics

- Automatic tissue processing capabilities
- Nikon Model XTH225ST Micro Computed Tomography System
- Pelco BioWave Microwave Processor
- Image processing work stations
- Wide Field Fluorescence Microscope
- Leica Upright Fluorescence Microscope with Fast Confocal Scanner and CCD camera
- Leica Inverted Fluorescence microscope with Confocal Scanner
- Tunable Ultra-short pulse Infrared Laser for Two-Photon Excitation microscopy

### Imaging Services

- Digital slide scanning
- Poster and banner printing

### Histology

- Processing and embedding
- Staining and Sectioning
- Immunohistochemistry
- Immuno-peroxidase
- Immuno-alkaline phosphatase
- FITC immunofluorescence
- TUNEL staining
- In situ Hybridization (ISH)

### Molecular Phenotyping

- BeckmanCoulter Astrios EQ® high speed cell sorter
- Laser Capture Microdissection Pixcell II
- Siemens Advia 2120 Hematology analyzer
- BeckmanCoulter Gallios® Flow Cytometer
- Miltenyi AutoMACS
- ABI ViiA 7 Real-Time PCR
- Luminex IS100 XYP
- NanoString nCounter System
- Biobanking services
- SpectraMax i3 Plate Reader

### Preclinical Services

- Contract animal research projects
- Flexivent Lung Function system
- DSI Telemetry
- Visualsonics Echocardiography
- Mouse Specifics Gait Analyzer
- Level 2 Containment suite
- Colony management services
- Microsurgical / Tech services

### Clinical Research

- Consultation and project management
- Assistance with ethics applications

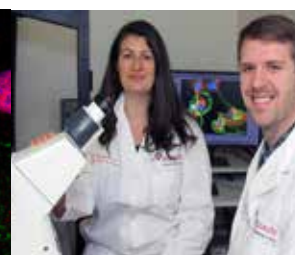
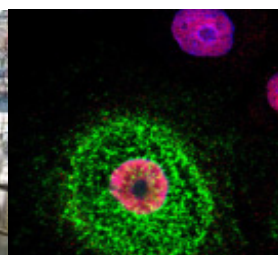
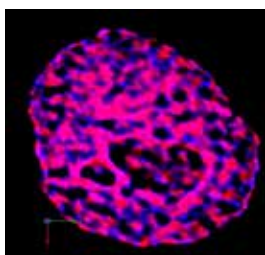
### Information Technology

- Advanced computing services
- Hosting of physical servers, virtual servers
- Secured and controlled access
- Long term storage
- Custom database and data management services
- Secure web development

For more information contact:

Claire Smits, Operations Director

t: 604.806.8852 | e: [claire.smits@hli.ubc.ca](mailto:claire.smits@hli.ubc.ca)



# Partnerships and Acknowledgements

The HLI is grateful to our funding partners: Canada Foundation for Innovation, British Columbia Knowledge Development Fund, Providence Health Care, University of British Columbia, Heart and Stroke Foundation of BC and Yukon, BC Lung Association, the St. Paul's Hospital Foundation and many vendors and industrial collaborators, for their crucial support of our ongoing programs.

## We wish to thank our current partners:

Adiga Life Sciences Inc.  
Agartee Technology Inc.  
AllerGen  
Alpha-1 Foundation  
Alzheimer Society of Canada  
Amarin Pharma Inc.  
AMGEN Canada Inc.  
Asahi Kasei Pharma America  
AstraZeneca Canada Inc.  
Bayer AG  
Boehringer Ingelheim (Canada) Ltd.  
British Columbia Knowledge Development Fund (BCKDF)  
British Columbia Lung Association  
British Columbia Proteomics Network  
Canada Foundation for Innovation  
Canada Research Chairs  
Canadian Diabetes Association  
Canadian Foundation for AIDS Research  
Canadian Institutes of Health Research (CIHR)  
Cyon Therapeutics Inc.  
Cystic Fibrosis Canada  
Cystic Fibrosis Foundation (US)  
Genentech Inc.  
Genome British Columbia  
Gilead Sciences Inc.  
GlaxoSmithKline  
Grifols Shared Services North America Inc.  
Heart and Stroke Foundation of British Columbia and Yukon  
Heart and Stroke Foundation of Canada  
Hoffmann-La Roche Ltd. (Canada)  
Networks of Centres of Excellence (NCE)  
Industry Canada  
Interior Health Authority  
InterMune Inc.  
Ionis Pharmaceuticals, Inc.  
Janssen Inc.  
Juvenile Diabetes Research Foundation International  
La Jolla Pharmaceutical Company  
Leading Biosciences Inc.  
MedImmune LLC  
Merck Sharp & Dohme Corp.  
Michael Smith Foundation for Health Research  
National Institutes of Health  
National Research Council  
Natural Sciences and Engineering Research Council of Canada (NSERC)  
Novartis Pharmaceuticals Canada Inc.  
Octapharma Canada Inc.  
Pfizer Canada Inc.  
Pharmaxis Ltd.  
ProMetic Life Sciences Inc.  
PROOF Centre of Excellence  
Providence Health Care Research Institute (PHCRI)  
Province of British Columbia  
Respivert Ltd.  
RxSource Corp.  
sanofi-aventis Canada Inc.  
St. Paul's Hospital Foundation  
The Lung Association  
Trius Therapeutics Inc.  
UBC Department of Medicine  
UBC Department of Physical Therapy  
University of Calgary  
Vertex Pharmaceuticals Inc.  
viDA Therapeutics Inc.

We are grateful to the following individuals for their assistance in the creation of this report: Kasia Celler, Nicole Rosin, Kim Schmidt, Leslie Rae, Claire Smits, Kelly Ceron, Chris Robinson, Jo-Lynn Mervyn, Gwen Sin, Ivan Leversage, Dean English, Dr. Keith Walley and all the HLI Principal investigators.

# SUPPORTING OUR FIGHT AGAINST HEART AND LUNG DISEASES

Heart and lung diseases combined are still the world's number one cause of death and disability. Help us win this fight.

The Centre for Heart Lung Innovation has been extremely successful at attracting infrastructure grants and government research dollars. However, attracting funds to allow us to retain our expertly trained staff and purchase new equipment remains a challenge. We actively seek interest and donations from private and individual donors whose interests are in alignment with our research, with the help of the following organizations.

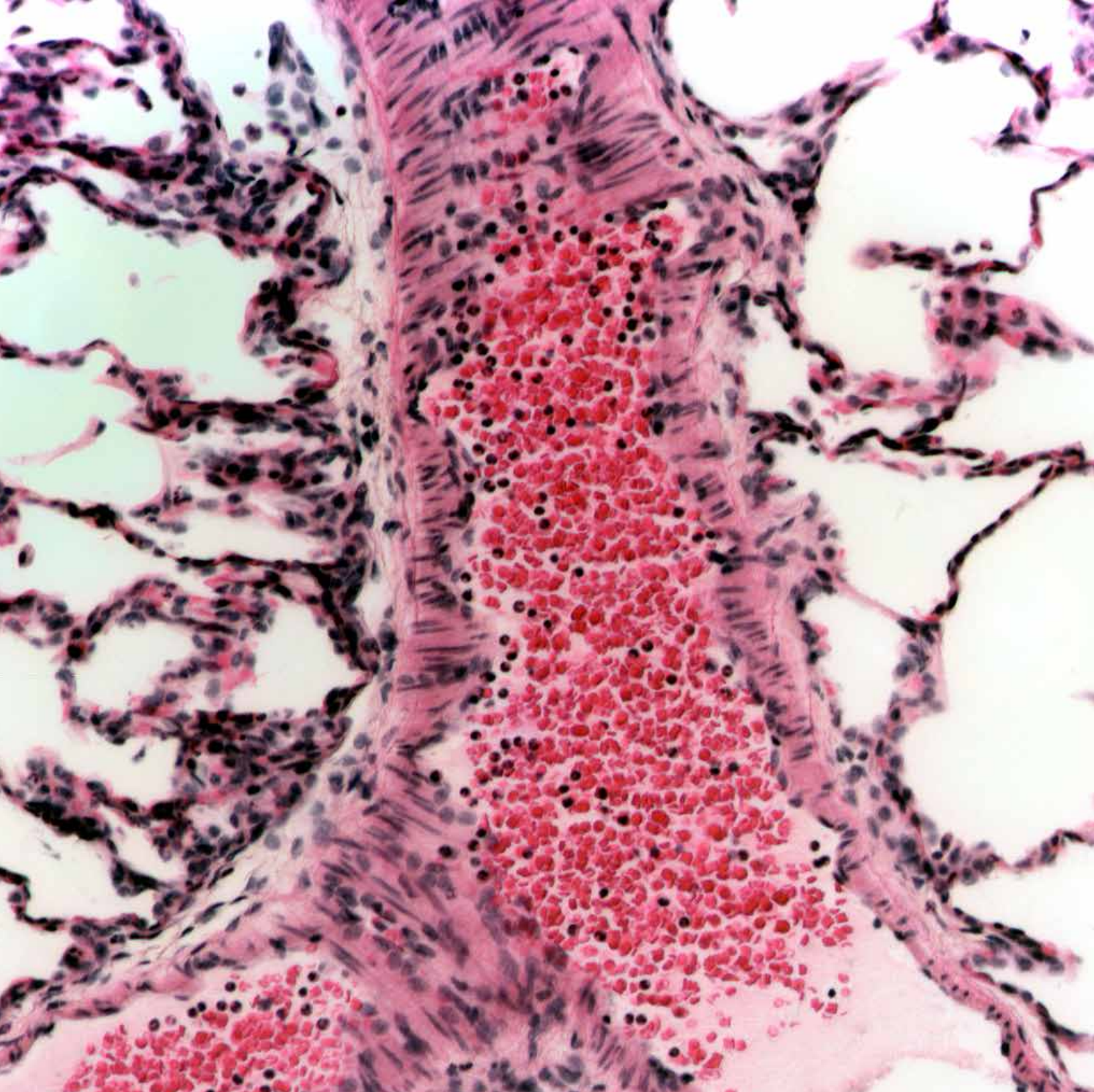


St. Paul's Foundation  
178 – 1081 Burrard Street  
Vancouver, BC V6Z 1Y6  
Phone (for residents of Metro Vancouver): 604-682-8206  
Phone (toll-free number for residents of rest of BC): 1-800-720-2983  
[sphfoundation@providencehealth.bc.ca](mailto:sphfoundation@providencehealth.bc.ca)  
[www.helpstpauls.com](http://www.helpstpauls.com)



**a place of mind**  
THE UNIVERSITY OF BRITISH COLUMBIA

University of British Columbia  
Development and Alumni Engagement  
500 - 5950 University Blvd  
Vancouver, BC Canada V6T 1Z3  
Phone: 604-822-8900  
[info@startanevolution.ubc.ca](mailto:info@startanevolution.ubc.ca)  
<https://startanevolution.ubc.ca/category/projects-by-faculty/faculty-of-medicine>



APPENDICES

## APPENDIX A: CENTRE FOR HEART LUNG INNOVATION GRANTS, CONTRACTS, CLINICAL TRIALS\* AND AGREEMENTS (APRIL 2017 – MARCH 2018)

\* Data from the UBC RISE (Research Information Services) list.

Principal Investigator	Funding Agency	Award Amount	Project Title	Award Type
Bernatchez, Pascal	Heart and Stroke Foundation of Canada	\$86,678.00	Aberrant endothelial mechano-sensing is a cause of early atherosclerosis and a pharmacological target	Grant
Boyd, John	La Jolla Pharmaceutical Company	\$2,215.00	A Phase 3, Placebo-Controlled, Randomized, Double-Blind, MultiCenter Study of LJPC-501 in Patients with Catecholamine-Resistant Hypotension (CRH)	Clinical Trial
Boyd, John	Michael Smith Foundation for Health Research	\$24,208.33	The role of PCSK9 in the clearance of bacterial lipids and the development of anti-PCSK9 treatment for sepsis	Grant
Boyd, John	Cyon Therapeutics Inc.	\$47,952.00	PCSK9 Inhibitors for SIRS, Sepsis and Septic Shock	Contract
Boyd, John	Providence Health Care Research Institute (PHCRI)	\$50,000.00	Ex-vivo heart perfusion; doubling the number of heart transplants performed in British Columbia	Grant
Boyd, John	Transplant Research Foundation of British Columbia	\$50,000.00	Biomarkers of transplant viability in marginal donor hearts	Grant
Brunham, Liam	AMGEN Canada Inc.	\$4,777.50	Guidelines Oriented Approach to Lipid lowering in Canada (GOAL I & II)	Clinical Trial
Brunham, Liam	The Medicines Co.	\$8,593.85	An open label, active comparator extension trial to assess the effect of long term dosing of inclisiran and evolocumab given as subcutaneous injections in subjects with high cardiovascular risk and elevated LDL-C (ORION-3)	Clinical Trial
Brunham, Liam	Providence Health Care Research Institute (PHCRI)	\$20,000.00	Startup funds	Grant
Brunham, Liam	VGH and UBC Hospital Foundation	\$25,000.00	Understanding patient priorities in cardiovascular prevention research	Grant
Brunham, Liam	Cerenis Therapeutics	\$30,193.95	Phase III, Multi-Center, Randomized, 48 Weeks, Double-Blind, Parallel-Group, Placebo-Controlled Study to Evaluate Efficacy and Safety of CER-001 on Vessel Wall Area in Patients with Genetically Defined Familial Primary Hypoalphalipoproteine	Clinical Trial
Brunham, Liam	UBC Department of Medicine	\$45,000.00	Startup funds	Grant
Brunham, Liam	Heart and Stroke Foundation of Canada	\$49,420.00	Genomic markers of leukoaraiosis in patients with premature vascular disease	Grant



Brunham, Liam	Genome British Columbia	\$100,000.00	SAVE BC, the Study to Avoid cardioVascular Events in British Columbia	Agreement
Brunham, Liam	Providence Health Care Research Institute (PHCRI)	\$100,000.00	Co funding: SAVE BC, the study to avoid cardiovascular events in British Columbia	Grant
Brunham, Liam	Canadian Institutes of Health Research (CIHR)	\$116,280.00	Investigating pharmacogenetic mechanisms of doxorubicin-induced cardiotoxicity in human pluripotent stem cell-serviced cardiomyocytes	Grant
Brunham, Liam	Genome British Columbia	\$157,994.00	Using genomics to improve the care of patients with familial hypercholesterolemia	Agreement
Camp, Pat	Canada Foundation for Innovation	\$7,500.00	CFI Infrastructure Operating Fund	Grant
Camp, Pat	British Columbia Lung Association	\$12,500.00	Pulmonary rehabilitation in rural BC: Engaging with communities to create novel telehealth approaches	Grant
Camp, Pat	Michael Smith Foundation for Health Research	\$14,500.00	Planning for a community-based participatory research study to improve the lung health of First Nations peoples living in remote communities in Northern British Columbia	Grant
Camp, Pat	British Columbia Lung Association	\$25,000.00	"Bayis II Tus - A Strong Breath" A community-based research project to improve lung health in remote and rural First Nations communities in British Columbia	Grant
Coxson, Harvey	British Columbia Lung Association	\$25,000.00	Development and validation of novel non-invasive imaging tools to enhance our understanding of airways in asthma	Grant
Daley, Denise	Canadian Institutes of Health Research (CIHR)	\$1,000.00	Genome wide meta-analysis of parent-of-origin effects of asthma in four cohorts	Grant
Daley, Denise	Michael Smith Foundation for Health Research	\$11,500.00	Development of hierarchical models to investigate the role of long non coding RNA regions in the etiology of asthma	Grant
Daley, Denise	Genome British Columbia	\$50,000.00	Epigenetic Mechanisms for the Development of Asthma	Agreement
Daley, Denise	Allergy, Genes and Environment Network (AllerGen) - Networks of Centres of Excellence (NCE)	\$189,860.00	Causes and Prevention: Identifying the genetic basis of peanut allergy	Grant
Daley, Denise	Canadian Institutes of Health Research (CIHR)	\$250,000.00	Epigenetic mechanisms for the development of asthma	Grant
Daley, Denise	Canadian Institutes of Health Research (CIHR)	\$340,000.00	Get-facts: Genetics, environment and therapies: Food allergy clinical tolerance studies	Agreement

DeMarco, Mari	Alzheimer's Drug Discovery Foundation	\$106,296.31	Quantitation of TDP-43 isoforms in CSF by mass spectrometry	Agreement
Dorscheid, Delbert	Allergy, Genes and Environment Network (AllerGen) - Networks of Centres of Excellence (NCE)	\$3,500.00	IgE-mediated inflammation generated by the airway epithelium is antigen independent: cause of a novel asthma phenotype	Grant
Dorscheid, Delbert	Novartis Pharmaceuticals Canada Inc.	\$4,240.00	REal-Life® Effectiveness and safety of omalizumab in patients with severe allergic asthma: The Latin American and Canadian experience (RELIEF)	Clinical Trial
Dorscheid, Delbert	Novartis Pharmaceuticals Canada Inc.	\$8,000.00	A 2-treatment period, randomized, placebo-controlled, multicenter parallel-group study to assess the safety of QAW039 when added to existing asthma therapy in GINA steps 3, 4 and 5 patients with uncontrolled asthma	Clinical Trial
Dorscheid, Delbert	Novartis Pharmaceuticals Canada Inc.	\$20,974.00	A 52-week, multicenter, randomized, double-blind, placebo- controlled study to assess the efficacy and safety of QAW039 when added to existing asthma therapy in patients with uncontrolled severe asthma	Clinical Trial
Dorscheid, Delbert	sanofi-aventis Canada Inc.	\$64,932.40	A randomized, double blind, placebo controlled, parallel group study to evaluate the efficacy and safety of dupilumab in patients with severe steroid dependent asthma	Clinical Trial
Francis, Gordon	The Medicines Co.	\$3,405.00	A placebo-controlled, double-blind, randomized trial to compare the effect of different doses of ALN-PCSSC given as single or multiple subcutaneous injections in subjects with high cardiovascular risk and elevated LDL-C	Clinical Trial
Francis, Gordon	Ionis Pharmaceuticals, Inc.	\$9,996.90	A Randomized, Double-Blind, Placebo-Controlled, Phase 3 Study of ISIS 304801 Administered Subcutaneously to Patients with Familial Chylomicronemia Syndrome (FCS) - The APPROACH study	Clinical Trial
Francis, Gordon	Michael Smith Foundation for Health Research	\$17,291.69	The role of arterial smooth muscle cells in foam cell formation in atherosclerosis	Grant
Francis, Gordon	Ionis Pharmaceuticals, Inc.	\$33,405.15	An Open-Label Extension Study of Volanesorsen Administered Subcutaneously to Patients with Familial Chylomicronemia Syndrome (FCS)	Clinical Trial
Francis, Gordon	Canada Foundation for Innovation	\$150,844.00	Molecules to human: enhanced phenotyping for discovery, prevention, & treatment of heart, lung, & blood vessel disease	Grant

Francis, Gordon	Canadian Institutes of Health Research (CIHR)	\$154,658.00	The unrecognized importance of smooth muscle foam cells in atherosclerosis development and treatment	Grant
Frohlich, Jiri	AMGEN Canada Inc.	\$16,143.00	Creation and implementation of a Registry for Familial Hypercholesterolemia	Grant
Guenette, Jordan	Canadian Respiratory Research Network	\$1,200.00	The effects of diesel exhaust on pulmonary physiology in mild chronic obstructive pulmonary disease (COPD) and 'at risk' smokers	Grant
Guenette, Jordan	Canada Foundation for Innovation	\$7,500.00	CFI Infrastructure Operating Fund	Grant
Guenette, Jordan	British Columbia Lung Association	\$12,500.00	Investigating the role of skeletal muscle dysfunction on dyspnea and exercise intolerance in interstitial lung disease	Grant
Guenette, Jordan	British Columbia Lung Association	\$25,000.00	A double-blind placebo-controlled crossover study to assess the effects of bronchodilation on dyspnea, ventilatory responses, and exercise tolerance in adults with cystic fibrosis	Grant
Guenette, Jordan	Natural Sciences and Engineering Research Council of Canada (NSERC)	\$30,000.00	Respiratory and locomotor muscle blood flow regulation during physiological stress	Grant
Guenette, Jordan	Canadian Respiratory Research Network	\$50,000.00	Mechanisms of dyspnea and exercise intolerance in patients with chronic respiratory diseases	Agreement
Hackett, Tillie Louise	National Institutes of Health	-\$870.53	Integrative omics to discover molecular determinants of COPD	Agreement
Hackett, Tillie Louise	Canadian Institutes of Health Research (CIHR)	\$5,000.00	Multimodal characterization of airway remodeling with label-free nonlinear optical imaging and spectroscopy	Grant
Hackett, Tillie Louise	Michael Smith Foundation for Health Research	\$17,291.69	Multimodal characterization of airway remodeling with label-free nonlinear optical imaging	Grant
Hackett, Tillie Louise	Canadian Institutes of Health Research (CIHR)	\$23,333.00	Multimodal characterization of airway remodeling with label-free nonlinear optical imaging and spectroscopy	Grant
Hackett, Tillie Louise	UBC VP Research & Innovation	\$36,000.00	Excellence in biobanking & digital pathology for translational research in heart and lung disease	Grant
Hackett, Tillie Louise	National Institutes of Health	\$42,924.00	MUPPITS 2mECHANISTIC: Inner city asthma consortium 3 (ICAC3)	Agreement
Hackett, Tillie Louise	Canadian Institutes of Health Research (CIHR)	\$98,608.00	Molecular determinants of small airway obstruction in COPD	Grant

Hogg, James	Alpha-1 Foundation	\$4,989.35	Molecular determinants of small airway disease in AATD	Grant
Hogg, James	British Columbia Lung Association	\$25,000.00	Developing novel computed tomography imaging measurements for predicting accelerated lung function decline in individuals at risk of chronic obstructive pulmonary disease	Grant
Hogg, James	National Institutes of Health	\$45,011.98	Genomic Analysis of Tissue and Cellular Heterogeneity in IPF	Agreement
Hogg, James	National Institutes of Health	\$98,557.86	Parametric response mapping in COPD	Agreement
Hogg, James	Janssen Research and Development, LLC	\$358,509.00	Characterising the Molecular Alterations Associated with Structural Progression of Small Airways Disease and Emphysema in COPD	Contract
Laksman, Zachary	Canadian Cardiovascular Society	\$30,000.00	Cardiac RyAnodine receptor variants in early-onset atrial fibrillation: The CRAVE-AF Study	Grant
Leung, Janice	British Columbia Lung Association	\$25,000.00	The role of the gut-lung axis in the aging HIV lung	Grant
Leung, Janice	Canadian Institutes of Health Research (CIHR)	\$89,399.00	Epigenetic and transcriptomic disturbances in HIV-associated COPD	Grant
Luo, Honglin	British Columbia Lung Association	\$25,000.00	Development of a novel coxsackievirus B3-based oncolytic virus for lung cancer therapy	Grant
Luo, Honglin	Natural Sciences and Engineering Research Council of Canada (NSERC)	\$44,000.00	Understanding the interplay between coxsackieviruses and the host ubiquitin-proteasome system	Grant
Luo, Honglin	Heart and Stroke Foundation of Canada	\$91,460.00	Molecular chaperones in viral cardiomyopathy	Grant
McManus, Bruce	Michael Smith Foundation for Health Research	\$24,208.33	Development and validation of blood-based biomarkers for improved heart failure management	Grant
McManus, Bruce	Genome British Columbia	\$100,000.00	Canadian International Data Sharing Initiative (Can-SHARE) - User-centric genomics data exchange and aggregation with BlockChain technologies	Agreement
McManus, Bruce	Canadian Institutes of Health Research (CIHR)	\$100,000.00	A novel multi-marker blood test for management of acute cardiac allograft rejection	Grant
McManus, Bruce M.	UBC Strategic Excellence Fund	\$200,000.00	Data analytics and systems science (DASS) to optimize heart + lung health	Grant
Obeidat, Ma'en	British Columbia Lung Association	\$21,700.00	The effect of sex on molecular signatures in lung tissue from COPD patients	Grant

Pare, Peter	Canadian Institutes of Health Research (CIHR)	\$1,000.00	Expression and biological functions of FAM13A and PITCH1 in patients with chronic obstructive pulmonary disease	Grant
Quon, Bradley	Cystic Fibrosis Foundation (US)	\$4,842.68	Utilizing the CFFT biorepository to identify Y validate CF biomarkers	Grant
Quon, Bradley	ProMetic BioSciences, Inc.	\$5,275.00	A Phase 2, Double Blind, Placebo Controlled Study to Evaluate the Safety & Tolerability of PBI-4050 and its Effects on Pancreatic and Pulmonary Function in Cystic Fibrosis Patients with Abnormal Glucose Tolerance	Clinical Trial
Quon, Bradley	Proteostasis Therapeutics, Inc.	\$6,700.00	A Multi-Center, Randomized, Placebo-Controlled, Phase 1, Two-Part Study Designed to Assess the Safety, Tolerability, Pharmacokinetics, Food Effect, and Drug-Drug Interactions of PTI-801 in Healthy Volunteers, and Safety, Tolerability, and P	Clinical Trial
Quon, Bradley	Gilead Sciences Inc.	\$13,607.29	A Phase 2b, Dose-Ranging Study of the Effect of GS-5745 on FEV1 in Adult Subjects with Cystic Fibrosis	Clinical Trial
Quon, Bradley	Pharmaxis Ltd.	\$16,936.07	Long Term Administration of Inhaled Mannitol in Cystic Fibrosis – A Safety and Efficacy Trial in Adult Cystic Fibrosis Subjects	Clinical Trial
Quon, Bradley	British Columbia Lung Association	\$22,500.00	Discovery of blood protein biomarkers to monitor treatment response during CF pulmonary exacerbations	Grant
Quon, Bradley	Proteostasis Therapeutics, Inc.	\$32,094.00	A Phase I, multi-center, randomized, placebo-controlled, study designed to assess the safety, tolerability, and pharmacokinetics of PTI-428 in subjects with cystic fibrosis	Clinical Trial
Quon, Bradley	Vertex Pharmaceuticals Inc.	\$34,969.60	A Phase 2, Randomized, Double-blind, Controlled Study to Evaluate the Safety and Efficacy of VX-440 Combination Therapy in Subjects Aged 12 Years and Older With Cystic Fibrosis	Clinical Trial
Quon, Bradley	Vertex Pharmaceuticals (Canada) Inc.	\$47,107.20	A Phase 3, Open-label, Rollover Study to Evaluate the Safety and Efficacy of Long-term Treatment With VX-661 in Combination With Ivacaftor in Subjects Aged 12 Years and Older With Cystic Fibrosis, Homozygous or Heterozygous for the F508del-C	Clinical Trial
Quon, Bradley	Novoteris LLC	\$59,947.90	Prospective, randomized, placebo controlled trial of the efficacy and safety of inhaled nitric oxide (NO) in cystic fibrosis (CF) patients	Clinical Trial
Quon, Bradley	Cystic Fibrosis Canada	\$75,000.00	Cystic fibrosis Canada professorship at the University of British Columbia	Grant
Quon, Bradley	Cystic Fibrosis Canada	\$92,048.00	PIPE-CF Biomarker Study	Grant

Quon, Bradley	British Columbia Knowledge Development Fund (BCKDF)	\$113,685.00	Blood protein signatures to enable personalized care in cystic fibrosis	Grant
Quon, Bradley	Canada Foundation for Innovation	\$113,685.00	Blood protein signatures to enable personalized care in cystic fibrosis	Grant
Ryerson, Chris	Canadian Institutes of Health Research (CIHR)	\$1,000.00	Prevalence, diagnostic and prognostic features of unclassifiable interstitial lung disease: A systematic review and meta-analysis	Grant
Ryerson, Chris	Canadian Institutes of Health Research (CIHR)	\$1,000.00	Predictors of physical activity in fibrotic interstitial lung disease	Grant
Ryerson, Chris	InterMune Inc.	\$1,817.12	A Prospective Observational Study to Evaluate Adherence and Treatment Outcomes in Patients with Idiopathic Pulmonary Fibrosis (IPF) treated with Esbriet® (pirfenidone) in Canada	Clinical Trial
Ryerson, Chris	Boehringer Ingelheim (Canada) Ltd.	\$7,881.08	A twelve week, open-label, randomised, parallel-group study evaluating safety, tolerability and pharmacokinetics (PK) of oral nintedanib in combination with oral pirfenidone, compared to treatment with nintedanib alone, in patients with idi	Clinical Trial
Ryerson, Chris	Hoffmann-La Roche Ltd. (Canada)	\$13,846.18	Multicenter, international, doubleblind, two-arm, randomized, placebo controlled phase II trial of pirfenidone in patients with unclassifiable progressive fibrosing ILD	Clinical Trial
Ryerson, Chris	ProMetic Life Sciences Inc.	\$21,719.03	A Phase 2, Open-label, Single Arm, Exploratory, Observational Study to Evaluate the Safety and Tolerability of PBI-4050 in Patients with Idiopathic Pulmonary Fibrosis (IPF)	Clinical Trial
Ryerson, Chris	Boehringer Ingelheim (Canada) Ltd.	\$23,154.69	A double blind randomized placebo controlled trial evaluating the effect of oral nintedanib 150 mg twice daily on high resolution computerized tomography quantitative lung fibrosis score, lung function, six minute walk test distance and St.	Clinical Trial
Ryerson, Chris	Boehringer Ingelheim (Canada) Ltd.	\$29,934.95	A 24-week, double-blind, randomized, parallel-group study evaluating the efficacy and safety of oral nintedanib coadministered with oral sildenafil, compared to treatment with nintedanib alone, in patients with idiopathic pulmonary fibrosis	Clinical Trial
Ryerson, Chris	St. Paul's Hospital Foundation	\$141,048.00	Quantitative Computed Tomography in Systemic Sclerosis-associated Interstitial Lung Disease	Grant

Ryerson, Chris	Boehringer Ingelheim (Canada) Ltd.	\$275,000.00	High Oxygen Delivery to Preserve Exercise Capacity in PIF Patients Treated with Nintedanib: The HOPE-IPF Study	Clinical Trial
Ryerson, Chris	Boehringer Ingelheim (Canada) Ltd.	\$287,142.86	The Canadian Cohort for Pulmonary Fibrosis	Clinical Trial
Seow, Chun	British Columbia Lung Association	\$25,000.00	Cytoskeletal stiffness of airway smooth muscle - A new target of asthma therapy	Grant
Seow, Chun	Natural Sciences and Engineering Research Council of Canada (NSERC)	\$48,000.00	Molecular mechanisms for length adaptation in smooth muscle cells	Grant
Seow, Chun	Canadian Institutes of Health Research (CIHR)	\$122,272.00	Plasticity in airway smooth muscle	Grant
Seow, Chun	Canadian Institutes of Health Research (CIHR)	\$132,345.00	Mechanisms underlying the bronchodilatory effect of deep inspiration in health and asthma: from airway smooth muscle to the whole lung	Grant
Sin, Don	Boehringer Ingelheim (Canada) Ltd.	\$6,643.31	A randomised, double-blind, active-controlled parallel group study to evaluate the effect of 52 weeks of once daily treatment of orally inhaled tiotropium + olodaterol fixed dose combination compared with tiotropium on Chronic obstructive Pulmonary Disease	Clinical Trial
Sin, Don	Donation	\$10,000.00	Novel insight into the H1N1 pandemic: murine allergic sensitization with house-dust extract induces a dysregulated anti-viral immune response	Grant
Sin, Don	British Columbia Lung Association	\$20,000.00	Serum immunoglobulins and risk of exacerbations in COPD	Grant
Sin, Don	AstraZeneca Canada Inc.	\$26,878.00	A randomised, double-blind, chronic dosing (56 week), placebo-controlled, parallel group, multicentre, phase III study to evaluate the efficacy and safety of 2 doses of benralizumab (MEDI-563) in patients with moderate to very severe Chronic Obstructive Pulmonary Disease	Clinical Trial
Sin, Don	Merck Sharp & Dohme Corp.	\$35,466.41	Integrative Genomics to Identify Therapeutic Targets for COPD	Contract
Sin, Don	Canadian Institutes of Health Research (CIHR)	\$58,333.00	The role of genes and sex in determining therapeutic responses in chronic obstructive pulmonary disease (COPD)	Grant
Sin, Don	Parker B. Francis Foundation	\$61,880.00	integrative genomics to identify novel therapeutic targets and biomarkers for COPD	Grant
Sin, Don	IKOMED Technologies Inc.	\$64,000.00	Frequency Treatment for Emphysema Rat Model	Contract

Sin, Don	CSA Medical Inc	\$142,536.78	A Prospective Safety and Feasibility Study of the RejuvenAir <sup>®</sup> , <sup>ç</sup> System Metered Cryospray Therapy for Chronic Bronchitis Patients	Clinical Trial
Sin, Don	UBC Strategic Excellence Fund	\$200,000.00	The UBC airway centre	Grant
Sin, Don	Canadian Institutes of Health Research (CIHR)	\$382,344.00	Using multi-omics to discover novel biomarkers and therapeutic targets fo chronic obstructive pulmonary disease	Grant
Tan-Hogg, Wan	Canadian Institutes of Health Research (CIHR)	\$35,769.50	The Canadian Cohort Obstructive Lung Diseases (CanCOLD)	Clinical Trial
Tan-Hogg, Wan	Various Companies	\$80,169.70	The Canadian Cohort Obstructive Lung Diseases (CanCOLD)	Clinical Trial
Tan-Hogg, Wan	Canadian Institutes of Health Research (CIHR)	\$132,801.52	The Canadian Cohort Obstructive Lung Diseases (CanCOLD)	Clinical Trial
Tebbutt, Scott	Innovation, Science and Economic Development Canada	\$7,500.00	Discovering the mechanism of action of a novel immunotherapy, Cat-SPIRE, using a network analysis	Grant
Tebbutt, Scott	Province of British Columbia	\$7,500.00	Discovering the mechanism of action of a novel immunotherapy, Cat-SPIRE, using a network analysis	Grant
Tebbutt, Scott	National Institutes of Health	\$12,960.00	Dengue Human Immunology Project Consortium (DHIPC)	Agreement
Tebbutt, Scott	Adiga Life Sciences Inc.	\$15,000.00	Discovering the mechanism of action of a novel immunotherapy, Cat-SPIRE, using a network analysis	Grant
Tebbutt, Scott	British Columbia Lung Association	\$25,000.00	Novel diagnosis of Western Red Cedar Asthma	Grant
Tebbutt, Scott	National Institutes of Health	\$29,472.64	Systems biology to identify biomarkers of neonatal vaccine immunogenicity: DMC	Agreement
Tebbutt, Scott	Natural Sciences and Engineering Research Council of Canada (NSERC)	\$34,000.00	When human and fungal worlds collide - a systems biology approach to understanding the dynamic interactions between human bronchial epithelial cells and conidiospores of <i>Aspergillus fumigatus</i>	Grant
Tebbutt, Scott	Allergy, Genes and Environment Network (AllerGen) - Networks of Centres of Excellence (NCE)	\$50,000.00	Biomarker development for monitoring responses in CIC clinical trials	Grant
Tebbutt, Scott	National Institutes of Health	\$86,631.87	Systems biology to identify biomarkers of neonatal vaccine immunogenicity: Project 1 - Innovative OMIC integration to predict immunogenicity	Agreement



Walley, Keith	UBC VP Research & Innovation	\$23,696.00	Molecular phenotyping core, centre for heart lung innovation (HLI), UBC	Grant
Walley, Keith	Canadian Institutes of Health Research (CIHR)	\$26,941.00	Toll-like receptor anti-inflammatory response in cardiac inflammatory states	Grant
Walley, Keith	Canadian Institutes of Health Research (CIHR)	\$32,408.00	Mechanism of improved cardiovascular function and survival during sepsis when PCSK9 function is decreased	Grant
Walley, Keith	Genome British Columbia	\$46,973.00	A National Biobank and Database for Patients with Traumatic Brain Injury	Agreement
Walley, Keith	Brain Canada	\$100,000.00	A National Biobank and Database for Patients with Traumatic Brain Injury	Clinical Trial
Walley, Keith	Canadian Institutes of Health Research (CIHR)	\$396,857.00	Translational research to improve sepsis outcomes	Grant
Yang, Decheng	Natural Sciences and Engineering Research Council of Canada (NSERC)	\$34,000.00	Mechanisms of selective host gene translation regulation in picornavirus infection	Grant
Yang, Decheng	Heart and Stroke Foundation of Canada	\$76,932.00	Role of translation initiation factor DAP5 in viral myocarditis	Grant

## APPENDIX B: PUBLICATIONS BY CENTRE FOR HEART LUNG INNOVATION PIs AND ECIs IN 2017

1. Aamli Gagnat A, Gjerdevik M, Gallefoss F, **Coxson HO**, Gulsvik A, Bakke P. Incidence of non-pulmonary cancer and lung cancer by amount of emphysema and airway wall thickness: a community-based cohort. *Eur Respir J*. 2017 May 11;49(5). pii: 1601162. doi: 10.1183/13993003.01162-2016. Print 2017 May.
2. Aaron SD, **Tan WC**, Bourbeau J, **Sin DD**, Loves RH, MacNeil J, Whitmore GA; Canadian Respiratory Research Network. Diagnostic Instability and Reversals of Chronic Obstructive Pulmonary Disease Diagnosis in Individuals with Mild to Moderate Airflow Obstruction. *Am J Respir Crit Care Med*. 2017 Aug 1;196(3):306-314. doi: 10.1164/rccm.201612-2531OC.
3. Abdelsayed M, Baruteau AE, Gibbs K, Sanatani S, **Krahn AD**, Probst V, Ruben PC. Differential calcium sensitivity in Na<sub>v</sub> 1.5 mixed syndrome mutants. *J Physiol*. 2017 Sep 15;595(18):6165-6186. doi: 10.1113/JP274536. Epub 2017 Aug 20.
4. Allen RJ, Porte J, Braybrooke R, Flores C, Fingerlin TE, Oldham JM, Guillen-Guio B, Ma SF, Okamoto T, John AE, **Obeidat M**, Yang IV, Henry A, Hubbard RB, Navaratnam V, Saini G, Thompson N, Booth HL, Hart SP, Hill MR, Hirani N, Maher TM, McAnulty RJ, Millar AB, Molyneaux PL, Parfrey H, Rassi DM, Whyte MKB, Fahy WA, Marshall RP, Oballa E, Bossé Y, Nickle DC, **Sin DD**, Timens W, Shrine N, Sayers I, Hall IP, Noth I, Schwartz DA, Tobin MD, Wain LV, Jenkins RG. Genetic variants associated with susceptibility to idiopathic pulmonary fibrosis in people of European ancestry: a genome-wide association study. *Lancet Respir Med*. 2017 Nov;5(11):869-880. doi: 10.1016/S2213-2600(17)30387-9. Epub 2017 Oct 20.
5. Alshabanat A, Otterstatter MC, **Sin DD**, Road J, Rempel C, Burns J, **van Eeden SF**, FitzGerald JM. Impact of a COPD comprehensive case management program on hospital length of stay and readmission rates. *Int J Chron Obstruct Pulmon Dis*. 2017 Mar 21;12:961-971. doi: 10.2147/COPD.S124385. eCollection 2017.
6. Andreini D, Pontone G, Mushtaq S, Gransar H, Conte E, Bartorelli AL, Pepi M, Opolski MP, Ó Hartaigh B, Berman DS, Budoff MJ, Achenbach S, Al-Mallah M, Cademartiri F, Callister TQ, Chang HJ, Chinnaiyan K, Chow BJ, Cury R, Delago A, Hadamitzky M, Hausleiter J, Feuchtner G, Kim YJ, Kaufmann PA, **Leipsic J**, Lin FY, Maffei E, Raff G, Shaw LJ, Villines TC, Dunning A, Marques H, Rubinshtein R, Hindoyan N, Gomez M, Min JK. Long-term prognostic impact of CT-Leaman score in patients with non-obstructive CAD: Results from the COronary CT Angiography EvaluatioN For Clinical Outcomes InteRnational Multicenter (CONFIRM) study. *Int J Cardiol*. 2017 Mar 15;231:18-25. doi: 10.1016/j.ijcard.2016.12.137. Epub 2016 Dec 28.
7. Ang HX, Chan SL, Sani LL, Quah CB, **Brunham LR**, Tan BOP, Winther MD. Pharmacogenomics in Asia: a systematic review on current trends and novel discoveries. *Pharmacogenomics*. 2017 Jun;18(9):891-910. doi: 10.2217/pgs-2017-0009. Epub 2017 Jun 8.
8. Annane D, Pastores SM, Arlt W, Balk RA, Beishuizen A, Briegel J, Carcillo J, Christ-Crain M, Cooper MS, Marik PE, Meduri GU, Olsen KM, Rochweg B, Rodgers SC, Russell JA, Van den Berghe G. Critical illness-related corticosteroid insufficiency (CIRCI): a narrative review from a Multispecialty Task Force of the Society of Critical Care Medicine (SCCM) and the European Society of Intensive Care Medicine (ESICM). *Intensive Care Med*. 2017 Dec;43(12):1781-1792. doi: 10.1007/s00134-017-4914-x. Epub 2017 Sep 21.
9. Annane D, Pastores SM, Arlt W, Balk RA, Beishuizen A, Briegel J, Carcillo J, Christ-Crain M, Cooper MS, Marik PE, Meduri GU, Olsen KM, Rochweg B, Rodgers SC, **Russell JA**, Van den Berghe G. Critical Illness-Related Corticosteroid Insufficiency (CIRCI): A Narrative Review from a Multispecialty Task Force of the Society of Critical Care Medicine (SCCM) and the European Society of Intensive Care Medicine (ESICM). *Crit Care Med*. 2017 Dec;45(12):2089-2098. doi: 10.1097/CCM.0000000000002724.
10. Annane D, Pastores SM, Rochweg B, Arlt W, Balk RA, Beishuizen A, Briegel J, Carcillo J, Christ-Crain M, Cooper MS, Marik PE, Umberto Meduri G, Olsen KM, Rodgers S, **Russell JA**, Van den Berghe G. Guidelines for the diagnosis and management of critical illness-related corticosteroid insufficiency (CIRCI) in critically ill patients (Part I): Society of Critical Care Medicine (SCCM) and European Society of Intensive Care Medicine (ESICM) 2017. *Intensive Care Med*. 2017 Dec;43(12):1751-1763. doi: 10.1007/s00134-017-4919-5. Epub 2017 Sep 21.
11. Annane D, Pastores SM, Rochweg B, Arlt W, Balk RA, Beishuizen A, Briegel J, Carcillo J, Christ-Crain M, Cooper MS, Marik PE, Umberto Meduri G, Olsen KM, Rodgers SC, **Russell JA**, Van den Berghe G. Guidelines for the Diagnosis and Management of Critical Illness-Related Corticosteroid Insufficiency (CIRCI) in Critically Ill Patients (Part I): Society of Critical Care Medicine (SCCM) and European Society of Intensive Care Medicine (ESICM) 2017. *Crit Care Med*. 2017 Dec;45(12):2078-2088. doi: 10.1097/CCM.0000000000002737.

12. Arias M, Martínez-Lostao L, Santiago L, Ferrandez A, **Granville DJ**, Pardo J. The Untold Story of Granzymes in Oncoimmunology: Novel Opportunities with Old Acquaintances. *Trends Cancer*. 2017 Jun;3(6):407-422. doi: 10.1016/j.trecan.2017.04.001. Epub 2017 Jun 9. Review.
13. Attaei MW, Khatib R, McKee M, **Lear S**, Dagenais G, Igumbor EU, AlHabib KF, Kaur M, Kruger L, Teo K, Lanas F, Yusoff K, Oguz A, Gupta R, Yusufali AM, Bahonar A, Kutty R, Rosengren A, Mohan V, Avezum A, Yusuf R, Szuba A, Rangarajan S, Chow C, Yusuf S; PURE study investigators. Availability and affordability of blood pressure-lowering medicines and the effect on blood pressure control in high-income, middle-income, and low-income countries: an analysis of the PURE study data. *Lancet Public Health*. 2017 Sep;2(9):e411-e419. doi: 10.1016/S2468-2667(17)30141-X. Epub 2017 Sep 5.
14. Bayram H, Bauer AK, Abdalati W, **Carlsten C**, Pinkerton KE, Thurston GD, Balmes JR, Takaro TK. 20. Environment, Global Climate Change, and Cardiopulmonary Health. *Am J Respir Crit Care Med*. 2017 Mar 15;195(6):718-724. doi: 10.1164/rccm.201604-0687PP.
15. Beauchamp MK, Brooks D, Ellerton C, Lee A, Alison J, **Camp PG**, Dechman G, Haines K, Harrison SL, Holland AE, Marques A, Moineddin R, Skinner EH, Spencer L, Stickland MK, Xie F, Goldstein RS. Pulmonary Rehabilitation With Balance Training for Fall Reduction in Chronic Obstructive Pulmonary Disease: Protocol for a Randomized Controlled Trial. *JMIR Res Protoc*. 2017 Nov 20;6(11):e228. doi: 10.2196/resprot.8178.
16. Beiko T, Janech MG, Alekseyenko AV, Atkinson C, **Coxson HO**, Barth JL, Stephenson SE, Wilson CL, Schnapp LM, Barker A, Brantly M, Sandhaus RA, Silverman EK, Stoller JK, Trapnell B, Charlie S. Serum Proteins Associated with Emphysema Progression in Severe Alpha-1 Antitrypsin Deficiency. *Chronic Obstr Pulm Dis*. 2017 Jul 15;4(3):204-216. doi: 10.15326/jcopdf.4.3.2016.0180.
17. Bennett M, Parkash R, Nery P, Sénéchal M, Mondesert B, Birnie D, Sterns LD, Rinne C, Exner D, Philippon F, Campbell D, Cox J, Dorian P, Essebag V, **Krahn A**, Manlucu J, Molin F, Slawnych M, Talajic M. Canadian Cardiovascular Society/Canadian Heart Rhythm Society 2016 Implantable Cardioverter-Defibrillator Guidelines. *Can J Cardiol*. 2017 Feb;33(2):174-188. doi: 10.1016/j.cjca.2016.09.009. Epub 2016 Oct 6.
18. Bentzer P, Fisher J, Kong HJ, Mörgelin M, **Boyd JH, Walley KR, Russell JA**, Linder A. Erratum to: Heparin-binding protein is important for vascular leak in sepsis. *Intensive Care Med Exp*. 2017 Dec;5(1):6. doi: 10.1186/s40635-017-0119-4. Epub 2017 Jan 20.
19. Blanke P, Park JK, Grayburn P, Naoum C, Ong K, Kohli K, Norgaard BL, Webb JG, Popma J, Boshell D, Sorajja P, Muller D, **Leipsic J**. Left ventricular access point determination for a coaxial approach to the mitral annular landing zone in transcatheter mitral valve replacement. *J Cardiovasc Comput Tomogr*. 2017 Jul - Aug;11(4):281-287. doi: 10.1016/j.jcct.2017.04.002. Epub 2017 Apr 7.
20. Blanke P, Pibarot P, Hahn R, Weissman N, Kodali S, Thourani V, Parvataneni R, Dvir D, Naoum C, Nørgaard BL, Douglas P, Jaber W, Khalique OK, Jilaihawi H, Mack M, Smith C, Leon M, Webb J, **Leipsic J**. Computed Tomography-Based Oversizing Degrees and Incidence of Paravalvular Regurgitation of a New Generation transcatheter Heart Valve. *JACC Cardiovasc Interv*. 2017 Apr 24;10(8):810-820. doi: 10.1016/j.jcin.2017.02.021.
21. Boorsma CE, van der Veen TA, Putri KSS, de Almeida A, Draijer C, Mauad T, Fejer G, Brandsma CA, van den Berge M, Bossé Y, **Sin D**, Hao K, Reithmeier A, Andersson G, Olinga P, Timens W, Casini A, Melgert BN. A Potent Tartrate Resistant Acid Phosphatase Inhibitor to Study the Function of TRAP in Alveolar Macrophages. *Sci Rep*. 2017 Oct 3;7(1):12570. doi: 10.1038/s41598-017-12623-w.
22. Boueiz A, Lutz SM, Cho MH, Hersh CP, Bowler RP, Washko GR, Halper-Stromberg E, Bakke P, Gulsvik A, Laird NM, Beaty TH, **Coxson HO**, Crapo JD, Silverman EK, Castaldi PJ, DeMeo DL; COPDGene and ECLIPSE Investigators. Genome-Wide Association Study of the Genetic Determinants of Emphysema Distribution. *Am J Respir Crit Care Med*. 2017 Mar 15;195(6):757-771. doi: 10.1164/rccm.201605-0997OC.
23. Bourne SC, Townsend KN, Shyr C, Matthews A, **Lear SA**, Attariwala R, Lehman A, Wasserman WW, van Karnebeek C, Sinclair G, Vallance H, Gibson WT. Optic atrophy, cataracts, lipodystrophy/lipoatrophy, and peripheral neuropathy caused by a de novo OPA3 mutation. *Cold Spring Harb Mol Case Stud*. 2017 Jan;3(1):a001156. doi: 10.1101/mcs.a001156.
24. Braamskamp MJAM, Langslet G, McCrindle BW, Cassiman D, **Francis GA**, Gagne C, Gaudet D, Morrison KM, Wiegman A, Turner T, Miller E, Kusters DM, Raichlen JS, Martin PD, Stein EA, Kastelein JJP, Hutten BA. Effect of Rosuvastatin on Carotid Intima-Media Thickness in Children With Heterozygous Familial Hypercholesterolemia: The CHARON Study (Hypercholesterolemia in Children and Adolescents Taking Rosuvastatin Open Label). *Circulation*. 2017 Jul 25;136(4):359-366. doi: 10.1161/CIRCULATIONAHA.116.025158.

25. Bridgman SL, Azad MB, Field CJ, Haqq AM, Becker AB, Mandhane PJ, Subbarao P, Turvey SE, Sears MR, Scott JA, Wishart DS, Kozyrskyj AL; **CHILD Study Investigators**. Fecal Short-Chain Fatty Acid Variations by Breastfeeding Status in Infants at 4 Months: Differences in Relative versus Absolute Concentrations. *Front Nutr*. 2017 Apr 10;4:11. doi: 10.3389/fnut.2017.00011. eCollection 2017. **D Daley, A Sandford, and S Tebbutt are CHILD Study Investigators**
26. Brown KE, **Sin DD**, Voelker H, Connett JE, Niewoehner DE, Kunisaki KM; COPD Clinical Research Network. Serum bilirubin and the risk of chronic obstructive pulmonary disease exacerbations. *Respir Res*. 2017 Oct 24;18(1):179. doi: 10.1186/s12931-017-0664-0.
27. **Brunham LR**, Cermakova L, Lee T, Prieceleva I, Alloul K, de Chantal M, **Francis GA**, Frohlich J. Contemporary Trends in the Management and Outcomes of Patients With Familial Hypercholesterolemia in Canada: A Prospective Observational Study. *Can J Cardiol*. 2017 Mar;33(3):385-392. doi: 10.1016/j.cjca.2016.08.016. Epub 2016 Sep 3.
28. **Brunham LR**. HDL as a Causal Factor in Atherosclerosis: Insights from Human Genetics. *Curr Atheroscler Rep*. 2016 Dec;18(12):71. Review.
29. Brunner NW, Yue SF, Stub D, Ye J, Cheung A, **Leipsic J**, Lauck S, Dvir D, Perlman G, Htun N, Fahmy P, Prakash R, Eng L, Ong K, Tsang M, Cairns JA, Webb JG, Wood DA. The prognostic importance of the diastolic pulmonary gradient, transpulmonary gradient, and pulmonary vascular resistance in patients undergoing transcatheter aortic valve replacement. *Catheter Cardiovasc Interv*. 2017 Dec 1;90(7):1185-1191. doi: 10.1002/ccd.27107.
30. Burgel PR, Paillasseur JL, Janssens W, Piquet J, Ter Riet G, Garcia-Aymerich J, Cosio B, Bakke P, Puhan MA, Langhammer A, Alfageme I, Almagro P, Ancochea J, Celli BR, Casanova C, de-Torres JP, Decramer M, Echazarreta A, Esteban C, Gomez Punter RM, Han MK, Johannessen A, Kaiser B, Lamprecht B, Lange P, Leivseth L, Marin JM, Martin F, Martinez-Cambor P, Miravittles M, Oga T, Sofia Ramirez A, **Sin DD**, Sobradillo P, Soler-Cataluña JJ, Turner AM, Verdu Rivera FJ, Soriano JB, Roche N; Initiatives BPCO, EABPCO, Leuven and 3CIA study groups. A simple algorithm for the identification of clinical COPD phenotypes. *Eur Respir J*. 2017 Nov 2;50(5). pii: 1701034. doi: 10.1183/13993003.01034-2017. Print 2017 Nov.
31. Busch R, Hobbs BD, Zhou J, Castaldi PJ, McGeachie MJ, Hardin ME, Hawrylkiewicz I, Sliwinski P, Yim JJ, Kim WJ, Kim DK, Agusti A, Make BJ, Crapo JD, Calverley PM, Donner CF, Lomas DA, Wouters EF, Vestbo J, Tal-Singer R, Bakke P, Gulsvik A, Litonjua AA, Sparrow D, **Paré PD**, Levy RD, Rennard SI, Beaty TH, Hokanson J, Silverman EK, Cho MH; National Emphysema Treatment Trial Genetics; Evaluation of COPD Longitudinally to Identify Predictive Surrogate End-Points; International COPD Genetics Network; COPD Gene Investigators. Genetic Association and Risk Scores in a Chronic Obstructive Pulmonary Disease Meta-analysis of 16,707 Subjects. *Am J Respir Cell Mol Biol*. 2017 Jul;57(1):35-46. doi: 10.1165/rcmb.2016-0331OC.
32. **Camp PG**, Hernandez P, Dechman G. Continuing professional development, training opportunities, and research participation of pulmonary rehabilitation programs in Canada: a rural versus urban comparison. *Can J Respir Crit Care Sleep*. 2017 1:2, 84-89, DOI: 10.1080/24745332.2017.1328934
33. **Carlsten C**, Hirota J. Air Pollution-Who "Nose" What Chronic Exposure Models Will Reveal Next? *Am J Respir Cell Mol Biol*. 2017 Jul;57(1):5-6. doi: 10.1165/rcmb.2017-0078ED.
34. **Carlsten C**, Rider CF. *Curr Opin Allergy Clin Immunol*. Traffic-related air pollution and allergic disease: an update in the context of global urbanization. 2017 Apr;17(2):85-89. doi: 10.1097/ACI.0000000000000351.
35. Chan SL, Chua APG, Aminkeng F, Chee CBE, Jin S, Loh M, Gan SH, Wang YT, **Brunham LR**. Association and clinical utility of NAT2 in the prediction of isoniazid-induced liver injury in Singaporean patients. *PLoS One*. 2017 Oct 16;12(10):e0186200. doi: 10.1371/journal.pone.0186200. eCollection 2017.
36. Chan SL, Tham MY, Tan SH, Loke C, Foo B, Fan Y, Ang PS, **Brunham LR**, Sung C. Development and validation of algorithms for the detection of statin myopathy signals from electronic medical records. *Clin Pharmacol Ther*. 2017 May;101(5):667-674. doi: 10.1002/cpt.526. Epub 2017 Jan 21.
37. Charlton JM, Ramsook AH, Mitchell RA, Hunt MA, Puyat JH, **Guenette JA**. Respiratory Mechanical and Cardiorespiratory Consequences of Cycling with Aerobars. *Med Sci Sports Exerc*. 2017 Dec;49(12):2578-2584. doi: 10.1249/MSS.0000000000001393.
38. Chawla LS, **Russell JA**, Bagshaw SM, Shaw AD, Goldstein SL, Fink MP, Tidmarsh GF. Angiotensin II for the Treatment of High-Output Shock 3 (ATHOS-3): protocol for a phase III, double-blind, randomised controlled trial. *Crit Care Resusc*. 2017 Mar;19(1):43-49.
39. Chen W, FitzGerald JM, **Sin DD**, Sadatsafavi M; Canadian Respiratory Research Network. Excess economic burden of comorbidities in COPD: a 15-year population-based study. *Eur Respir J*. 2017 Jul 27;50(1). pii: 1700393. doi: 10.1183/13993003.00393-2017. Print 2017 Jul.

40. Chen YR, Chen V, Hollander Z, **Leipsic JA**, Hague CJ, **DeMarco ML**, FitzGerald JM, **McManus BM**, **Ng RT**, **Sin DD**. C-reactive protein and N-terminal prohormone brain natriuretic peptide as biomarkers in acute exacerbations of COPD leading to hospitalizations. *PLoS One*. 2017 Mar 22;12(3):e0174063. doi: 10.1371/journal.pone.0174063. eCollection 2017.
41. Chen YW, **Camp PG**, **Coxson HO**, Road JD, **Guenette JA**, Hunt MA, Reid WD. Comorbidities That Cause Pain and the Contributors to Pain in Individuals With Chronic Obstructive Pulmonary Disease. *Arch Phys Med Rehabil*. 2017 Aug;98(8):1535-1543. doi: 10.1016/j.apmr.2016.10.016. Epub 2016 Nov 17.
42. Chen YW, **Camp PG**, **Coxson HO**, Road JD, **Guenette JA**, Hunt MA, Reid WD. A Comparison of Pain, Fatigue, Dyspnea and their Impact on Quality of Life in Pulmonary Rehabilitation Participants with Chronic Obstructive Pulmonary Disease. *COPD*. 2017 Feb;15(1):65-72. doi: 10.1080/15412555.2017.1401990. Epub 2017 Dec 11.
43. Cheng JZ, Wilcox PG, Glaspole I, Corte TJ, Murphy D, Hague CJ, **Ryerson CJ**. Cough is less common and less severe in systemic sclerosis-associated interstitial lung disease compared to other fibrotic interstitial lung diseases. *Respirology*. 2017 Nov;22(8):1592-1597. doi: 10.1111/resp.13084. Epub 2017 May 23.
44. Chinnaiyan KM, Akasaka T, Amano T, Bax JJ, Blanke P, De Bruyne B, Kawasaki T, **Leipsic J**, Matsuo H, Morino Y, Nieman K, Norgaard BL, Patel MR, Pontone G, Rabbat M, Rogers C, Sand NP, Raff G. Rationale, design and goals of the HeartFlow assessing diagnostic value of non-invasive FFRCT in Coronary Care (ADVANCE) registry. *J Cardiovasc Comput Tomogr*. 2017 Jan - Feb;11(1):62-67. doi: 10.1016/j.jcct.2016.12.002. Epub 2016 Dec 14.
45. Chitano P, Wang L, Tin GYY, Ikebe M, **Paré PD**, **Seow CY**. Smooth muscle function and myosin polymerization. *J Cell Sci*. 2017 Aug 1;130(15):2468-2480. doi: 10.1242/jcs.202812. Epub 2017 Jun 8.
46. Cho I, Ó Hartaigh B, Gransar H, Valenti V, Lin FY, Achenbach S, Berman DS, Budoff MJ, Callister TQ, Al-Mallah MH, Cademartiri F, Chinnaiyan K, Chow BJW, Dunning AM, DeLago A, Villines TC, Hadamitzky M, Hausleiter J, **Leipsic J**, Shaw LJ, Kaufmann PA, Cury RC, Feuchtner G, Kim YJ, Maffei E, Raff G, Pontone G, Andreini D, Chang HJ, Min JK. Prognostic implications of coronary artery calcium in the absence of coronary artery luminal narrowing. *Atherosclerosis*. 2017 Jul;262:185-190. doi: 10.1016/j.atherosclerosis.2016.12.006. Epub 2016 Dec 3.
47. Chow CK, Corsi DJ, Gilmore AB, Kruger A, Igumbor E, Chifamba J, Yang W, Wei L, Iqbal R, Mony P, Gupta R, Vijayakumar K, Mohan V, Kumar R, Rahman O, Yusoff K, Ismail N, Zatonska K, Altuntas Y, Rosengren A, Bahonar A, Yusufali A, Dagenais G, **Lear S**, Diaz R, Avezum A, Lopez-Jaramillo P, Lananias F, Rangarajan S, Teo K, McKee M, Yusuf S. Tobacco control environment: cross-sectional survey of policy implementation, social unacceptability, knowledge of tobacco health harms and relationship to quit ratio in 17 low-income, middle-income and high-income countries. *BMJ Open*. 2017 Mar 31;7(3):e013817. doi: 10.1136/bmjopen-2016-013817.
48. Chow CK, Islam SM, Farmer A, Bobrow K, Maddison R, Whittaker R, Dale LP, Lechner A, Niessen L, **Lear SA**, Eapen ZJ, Santo K, Stepien S, Redfern J, Rodgers A. Text2PreventCVD: protocol for a systematic review and individual participant data meta-analysis of text message-based interventions for the prevention of cardiovascular diseases. *BMJ Open*. 2016 Oct 17;6(10):e012723. doi: 10.1136/bmjopen-2016-012723. Review.
49. Churg A, Wright JL, **Ryerson CJ**. Pathologic Separation of Chronic Hypersensitivity Pneumonitis From Fibrotic Connective Tissue Disease-associated Interstitial Lung Disease. *Am J Surg Pathol*. 2017 Oct;41(10):1403-1409. doi: 10.1097/PAS.0000000000000885.
50. Churg A, **Ryerson CJ**. The Many Faces of Hypersensitivity Pneumonitis. *Chest*. 2017 Sep;152(3):458-460. doi: 10.1016/j.chest.2017.03.024.
51. Cirstea M, **Walley KR**, **Russell JA**, **Brunham LR**, Genga KR, **Boyd JH**. Decreased high-density lipoprotein cholesterol level is an early prognostic marker for organ dysfunction and death in patients with suspected sepsis. *J Crit Care*. 2017 Apr;38:289-294. doi: 10.1016/j.jcrc.2016.11.041. Epub 2016 Dec 7.
52. Clifford RL, Jones MJ, Maclsaac JL, McEwen LM, Goodman SJ, Mostafavi S, Kobor MS, **Carlsten C**. Inhalation of diesel exhaust and allergen alters human bronchial epithelium DNA methylation. *J Allergy Clin Immunol*. 2017 Jan;139(1):112-121. doi: 10.1016/j.jaci.2016.03.046. Epub 2016 May 10.
53. Correa N, Rajaraman D, Swaminathan S, Vaz M, Jayachitra KG, **Lear SA**, Punthakee Z. Perceptions of healthy eating amongst Indian adolescents in India and Canada. *Appetite*. 2017 Sep 1;116:471-479. doi: 10.1016/j.appet.2017.05.029. Epub 2017 May 18.
54. Corte TJ, **Ryerson CJ**, Collard HR. Reply: Acute Exacerbation of Idiopathic Pulmonary Fibrosis. *Am J Respir Crit Care Med*. 2017 Feb 15;195(4):542-543. doi: 10.1164/rccm.201610-2025LE.

55. Coton S, Vollmer WM, Bateman E, Marks GB, **Tan W**, Mejza F, Juvekar S, Janson C, Mortimer K, P A M, Buist AS, Burney PGJ; Burden of Obstructive Lung Disease Study investigators. Severity of Airflow Obstruction in Chronic Obstructive Pulmonary Disease (COPD): Proposal for a New Classification. *COPD*. 2017 Oct;14(5):469-475. doi: 10.1080/15412555.2017.1339681. Epub 2017 Aug 11.
56. Cressman S, Peacock SJ, Tammemägi MC, Evans WK, Leighl NB, Goffin JR, Tremblay A, Liu G, Manos D, MacEachern P, Bhatia R, Puksa S, Nicholas G, McWilliams A, Mayo JR, Yee J, English JC, Pataky R, McPherson E, Atkar-Khattra S, Johnston MR, Schmidt H, Shepherd FA, Soghrati K, Amjadi K, Burrowes P, Couture C, Sekhon HS, Yasufuku K, Goss G, Ionescu DN, Hwang DM, Martel S, **Sin DD, Tan WC**, Urbanski S, Xu Z, Tsao MS, Lam S. The Cost-Effectiveness of High-Risk Lung Cancer Screening and Drivers of Program Efficiency. *J Thorac Oncol*. 2017 Aug;12(8):1210-1222. doi: 10.1016/j.jtho.2017.04.021. Epub 2017 May 10.
57. Danad I, Raijmakers PG, Driessen RS, **Leipsic J**, Raju R, Naoum C, Knuuti J, Mäki M, Underwood RS, Min JK, Elmore K, Stuijzand WJ, van Royen N, Tulevski II, Somsen AG, Huisman MC, van Lingen AA, Heymans MW, van de Ven PM, van Kuijk C, Lammertsma AA, van Rossum AC, Knaapen P. Comparison of Coronary CT Angiography, SPECT, PET, and Hybrid Imaging for Diagnosis of Ischemic Heart Disease Determined by Fractional Flow Reserve. *JAMA Cardiol*. 2017 Oct 1;2(10):1100-1107. doi: 10.1001/jamacardio.2017.2471.
58. **DeMarco ML**. Amplification of Misfolded Prion Proteins in Blood and Cerebrospinal Fluid for Detection of Creutzfeldt-Jakob Disease. *Clin Chem*. 2017 Nov;63(11):1671-1673. doi: 10.1373/clinchem.2017.272229. Epub 2017 Jul 19.
59. de Sousa Sena R, Ahmed S, **Tan WC**, Li PZ, Labonté L, Aaron SD, Benedetti A, Chapman KR, Walker B, Fitzgerald JM, Hernandez P, Maltais F, Marciniuk DD, O'Donnell DE, **Sin DD**, Bourbeau J; CanCOLD Collaborative Research Group and The Canadian Respiratory Research Network. Work productivity loss in mild to moderate COPD: lessons learned from the CanCOLD study. *Eur Respir J*. 2017 Sep 12;50(3). pii: 1701154. doi: 10.1183/13993003.01154-2017. Print 2017 Sep.
60. Dechman G, Hernandez P, **Camp PG**. Exercise Prescription Practices in Pulmonary Rehabilitation Programs. *Can J Respir Crit Care Sleep*. 2017 1(2): 77-83, DOI: 10.1080/24745332.2017.1328935.
61. Dehghan M, Mente A, Zhang X, Swaminathan S, Li W, Mohan V, Iqbal R, Kumar R, Wentzel-Viljoen E, Rosengren A, Amma LI, Avezum A, Chifamba J, Diaz R, Khatib R, **Lear S**, Lopez-Jaramillo P, Liu X, Gupta R, Mohammadifard N, Gao N, Oguz A, Ramli AS, Seron P, Sun Y, Szuba A, Tsolekile L, Wielgosz A, Yusuf R, Hussein Yusufali A, Teo KK, Rangarajan S, Dagenais G, Bangdiwala SI, Islam S, Anand SS, Yusuf S; Prospective Urban Rural Epidemiology (PURE) study investigators. Associations of fats and carbohydrate intake with cardiovascular disease and mortality in 18 countries from five continents (PURE): a prospective cohort study. *Lancet*. 2017 Nov 4;390(10107):2050-2062. doi: 10.1016/S0140-6736(17)32252-3. Epub 2017 Aug 29.
62. Deng H, Fung G, Qiu Y, Wang C, Zhang J, Jin ZG, **Luo H**. Cleavage of Grb2-Associated Binding Protein 2 by Viral Proteinase 2A during Coxsackievirus Infection. *Front Cell Infect Microbiol*. 2017 Mar 16;7:85. doi: 10.3389/fcimb.2017.00085. eCollection 2017.
63. Deseive S, Shaw LJ, Min JK, Achenbach S, Andreini D, Al-Mallah MH, Berman DS, Budoff MJ, Callister TQ, Cademartiri F, Chang HJ, Chinnaiyan K, Chow BJ, Cury RC, DeLago A, Dunning AM, Feuchtner G, Kaufmann PA, Kim YJ, **Leipsic J**, Marques H, Maffei E, Pontone G, Raff G, Rubinshtein R, Villines TC, Hausleiter J, Hadamitzky M. Improved 5-year prediction of all-cause mortality by coronary CT angiography applying the CONFIRM score. *Eur Heart J Cardiovasc Imaging*. 2017 Mar 1;18(3):286-293. doi: 10.1093/ehjci/jew195.
64. Dharma C, Lefebvre DL, Tran MM, Lou WYW, Subbarao P, Becker AB, Mandhane PJ, Turvey SE, Sears MR; **CHILD Study investigators**. Patterns of allergic sensitization and atopic dermatitis from 1 to 3 years: Effects on allergic diseases. *Clin Exp Allergy*. 2018 Jan;48(1):48-59. doi: 10.1111/cea.13063. Epub 2017 Dec 15. **D Daley, A Sandford, and S Tebbutt are CHILD Study Investigators**
65. Dhillion SS, Levy RPD, Wilcox PG, **Guenette JA, Quon BS, Ryerson CJ, Camp PG**. Physical activity measurement accuracy in advanced chronic lung disease. *Can J Respir Crit Care Sleep*. 2017 2:1, 9-18, DOI: 10.1080/24745332.2017.1393636
66. Drögemöller BI, Monzon JG, Bhavsar AP, Borrie AE, Brooks B, Wright GEB, Liu G, Renouf DJ, Kollmannsberger CK, Bedard PL, Aminkeng F, Amstutz U, Hildebrand CA, Gunaretnam EP, Critchley C, Chen Z, **Brunham LR**, Hayden MR, Ross CJD, Gelmon KA, Carleton BC. Association Between SLC16A5 Genetic Variation and Cisplatin-Induced Ototoxic Effects in Adult Patients With Testicular Cancer. *JAMA Oncol*. 2017 Nov 1;3(11):1558-1562. doi: 10.1001/jamaoncol.2017.0502.

67. Duan EH, Adhikari NKJ, D'Aragon F, Cook DJ, Mehta S, Alhazzani W, Goligher E, Charbonney E, Arabi YM, Karachi T, Turgeon AF, Hand L, Zhou Q, Austin P, Friedrich J, Lamontagne F, Lauzier F, Patel R, Muscedere J, Hall R, Aslanian P, Piraino T, Albert M, Bagshaw SM, Jacka M, Wood G, Henderson W, **Dorscheid D**, Ferguson ND, Meade MO; Canadian Critical Care Trials Group. Management of Acute Respiratory Distress Syndrome and Refractory Hypoxemia. A Multicenter Observational Study. *Ann Am Thorac Soc*. 2017 Dec;14(12):1818-1826. doi: 10.1513/AnnalsATS.201612-1042OC.
68. Duffy S, Marron R, Voelker H, Albert R, Connett J, Bailey W, Casaburi R, Cooper JA Jr, Curtis JL, Dransfield M, Han MK, Make B, Marchetti N, Martinez F, Lazarus S, Niewoehner D, Scanlon PD, Sciruba F, Scharf S, Reed RM, Washko G, Woodruff P, McEvoy C, Aaron S, **Sin D**, Criner GJ; NIH COPD Clinical Research Network and the Canadian Institutes of Health Research. Effect of beta-blockers on exacerbation rate and lung function in chronic obstructive pulmonary disease (COPD). *Respir Res*. 2017 Jun 19;18(1):124. doi: 10.1186/s12931-017-0609-7.
69. Dugo M, Cotroneo CE, Lavoie-Charland E, Incarbone M, Santambrogio L, Rosso L, van den Berge M, Nickle D, **Paré PD**, Bossé Y, Dragani TA, Colombo F. Human Lung Tissue Transcriptome: Influence of Sex and Age. *PLoS One*. 2016 Nov 30;11(11):e0167460. doi: 10.1371/journal.pone.0167460. eCollection 2016.
70. Eapen MS, Hansbro PM, McAlinden K, Kim RY, Ward C, **Hackett TL**, Walters EH, Sohal SS. Abnormal M1/M2 macrophage phenotype profiles in the small airway wall and lumen in smokers and chronic obstructive pulmonary disease (COPD). *Sci Rep*. 2017 Oct 17;7(1):13392. doi: 10.1038/s41598-017-13888-x.
71. Eftekhari A, Min J, Achenbach S, Marwan M, Budoff M, **Leipsic J**, Gaur S, Jensen JM, Ko BS, Christiansen EH, Kaltoft A, Bøtker HE, Jensen JF, Nørgaard BL. Fractional flow reserve derived from coronary computed tomography angiography: diagnostic performance in hypertensive and diabetic patients. *Eur Heart J Cardiovasc Imaging*. 2017 Dec 1;18(12):1351-1360. doi: 10.1093/ehjci/jew209.
72. Elbehairy AF, Faisal A, **Guenette JA**, Jensen D, Webb KA, Ahmed R, Neder JA, O'Donnell DE; Canadian Respiratory Research Network (CRRN). Resting Physiological Correlates of Reduced Exercise Capacity in Smokers with Mild Airway Obstruction. *COPD*. 2017 Jun;14(3):267-275. doi: 10.1080/15412555.2017.1281901. Epub 2017 Apr 3.
73. Engel L, Mortimer D, Bryan S, **Lear SA**, Whitehurst DGT. An Investigation of the Overlap Between the ICECAP-A and Five Preference-Based Health-Related Quality of Life Instruments. *Pharmacoeconomics*. 2017 Jul;35(7):741-753. doi: 10.1007/s40273-017-0491-7.
74. Ets HK, **Seow CY**, Moreland RS. Corrigendum: Sustained Contraction in Vascular Smooth Muscle by Activation of L-type Ca<sup>2+</sup> Channels Does Not Involve Ca<sup>2+</sup> Sensitization or Caldesmon. *Front Pharmacol*. 2017 Mar 7;8:112. doi: 10.3389/fphar.2017.00112. eCollection 2017.
75. Ets HK, **Seow CY**, Moreland RS. Sustained Contraction in Vascular Smooth Muscle by Activation of L-type Ca<sup>2+</sup> Channels Does Not Involve Ca<sup>2+</sup> Sensitization or Caldesmon. *Front Pharmacol*. 2016 Dec 26;7:516. doi: 10.3389/fphar.2016.00516. eCollection 2016. Erratum in: *Front Pharmacol*. 2017 Mar 07;8:112.
76. Expert Panel on Cardiac Imaging and Vascular Imaging: **Leipsic JA**, Blanke P, Hanley M, Batlle JC, Bolen MA, Brown RKJ, Desjardins B, Eberhardt RT, Gornik HL, Hurwitz LM, Maniar H, Patel HJ, Sheybani EF, Steigner ML, Verma N, Abbara S, Rybicki FJ, Kirsch J, Dill KE. ACR Appropriateness Criteria® Imaging for Transcatheter Aortic Valve Replacement. *J Am Coll Radiol*. 2017 Nov;14(11S):S449-S455. doi: 10.1016/j.jacr.2017.08.046.
77. Expert Panel on Cardiac Imaging: Vogel-Claussen J, Elshafee ASM, Kirsch J, Brown RKJ, Hurwitz LM, Javidan-Nejad C, Julsrud PR, Kramer CM, Krishnamurthy R, Laroia AT, **Leipsic JA**, Panchal KK, Shah AB, White RD, Woodard PK, Abbara S. ACR Appropriateness Criteria® Dyspnea-Suspected Cardiac Origin. *J Am Coll Radiol*. 2017 May;14(5S):S127-S137. doi: 10.1016/j.jacr.2017.01.032.
78. Expert Panel on Cardiac and Thoracic Imaging: Kirsch J, Brown RKJ, Henry TS, Javidan-Nejad C, Jokerst C, Julsrud PR, Kanne JP, Kramer CM, **Leipsic JA**, Panchal KK, Ravenel JG, Shah AB, Mohammed TL, Woodard PK, Abbara S. ACR Appropriateness Criteria® Acute Chest Pain-Suspected Pulmonary Embolism. *J Am Coll Radiol*. 2017 May;14(5S):S2-S12. doi: 10.1016/j.jacr.2017.02.027.
79. Farias-Godoy A, Chan S, Claydon VE, Ignaszewski A, Mendell J, Park JE, Singer J, **Lear SA**. The Impact of Reduced Cardiac Rehabilitation on Maximal Treadmill Exercise Time: A RANDOMIZED CONTROLLED TRIAL. *J Cardiopulm Rehabil Prev*. 2018 Jan;38(1):24-30. doi: 10.1097/HCR.0000000000000269.

80. Farzan N, Vijverberg SJ, Andiappan AK, Arianto L, Berce V, Blanca-López N, Bisgaard H, Bønnelykke K, Burchard EG, Campo P, Canino G, Carleton B, Celedón JC, Chew FT, Chiang WC, Cloutier MM, **Daley D**, Den Dekker HT, Dijk FN, Duijts L, Flores C, Forno E, Hawcutt DB, Hernandez-Pacheco N, de Jongste JC, Kabesch M, Koppelman GH, Manolopoulos VG, Melén E, Mukhopadhyay S, Nilsson S, Palmer CN, Pino-Yanes M, Pirmohamed M, Potočnik U, Raaijmakers JA, Repnik K, Schieck M, Sio YY, Smyth RL, Szalai C, Tantisira KG, Turner S, van der Schee MP, Verhamme KM, Maitland-van der Zee AH. Rationale and design of the multiethnic Pharmacogenomics in Childhood Asthma consortium. *Pharmacogenomics*. 2017 Jul;18(10):931-943. doi: 10.2217/pgs-2017-0035. Epub 2017 Jun 22.
81. Feuchtner G, Plank F, Mueller S, Schachner T, Bonaros N, Burghard P, Wolf F, Alhassan DE, Blanke P, **Leipsic J**, Alkadhi H, Plass A, Felmly LM, Spandorfer AJ, De Cecco CN, Schoepf UJ. Cardiac CTA for Evaluation of Prosthetic Valve Dysfunction. *JACC Cardiovasc Imaging*. 2017 Jan;10(1):91-93. doi: 10.1016/j.jcmg.2016.08.005. Epub 2016 Nov 16.
82. Fisher J, **Russell JA**, Bentzer P, Parsons D, Secchia S, Mörgelin M, **Walley KR**, **Boyd JH**, Linder A. Heparin-Binding Protein (HBP): A Causative Marker and Potential Target for Heparin Treatment of Human Sepsis-Induced Acute Kidney Injury. *Shock*. 2017 Sep;48(3):313-320. doi: 10.1097/SHK.0000000000000862.
83. Flexman AM, Roughead T, Fisher JH, Sewell D, **Ryerson CJ**. In Response. *Anesth Analg*. 2017 May;124(5):1742-1743. doi: 10.1213/ANE.0000000000002035.
84. Fowokan AO, Lesser IA, Humphries KH, Mancini JG, **Leaar SA**. The predictive relationship between baseline insulin and glucose with subclinical carotid atherosclerosis after 5 years in a multi-ethnic cohort. *Atherosclerosis*. 2017 Feb;257:146-151. doi: 10.1016/j.atherosclerosis.2016.12.013. Epub 2016 Dec 15.
85. Fung G, Wong J, Berhe F, Mohamud Y, Xue YC, **Luo H**. Phosphorylation and degradation of  $\alpha$ B-crystallin during enterovirus infection facilitates viral replication and induces viral pathogenesis. *Oncotarget*. 2017 Aug 19;8(43):74767-74780. doi: 10.18632/oncotarget.20366. eCollection 2017 Sep 26.
86. Gazzola M, Lortie K, Henry C, Mailhot-Larouche S, Chapman DG, Couture C, **Seow CY**, **Paré PD**, King GG, Boulet LP, Bossé Y. Airway smooth muscle tone increases airway responsiveness in healthy young adults. *Am J Physiol Lung Cell Mol Physiol*. 2017 Mar 1;312(3):L348-L357. doi: 10.1152/ajplung.00400.2016. Epub 2016 Dec 9.
87. Genga KR, **Russell JA**. How much excess fluid impairs outcome of sepsis? *Intensive Care Med*. 2017 May;43(5):680-682. doi: 10.1007/s00134-017-4746-8. Epub 2017 Mar 27.
88. **Russell JA**, Lee T, Singer J, **Boyd JH**, **Walley KR**; Vasopressin and Septic Shock Trial (VASST) Group. The Septic Shock 3.0 Definition and Trials: A Vasopressin and Septic Shock Trial Experience. *Crit Care Med*. 2017 Jun;45(6):940-948. doi: 10.1097/CCM.0000000000002323.
89. Genga KR, **Russell JA**. Update of Sepsis in the Intensive Care Unit. *J Innate Immun*. 2017;9(5):441-455. doi: 10.1159/000477419. Epub 2017 Jul 12.
90. Gillam LD, **Leipsic J**, Weissman NJ. Use of Imaging Endpoints in Clinical Trials. *JACC Cardiovasc Imaging*. 2017 Mar;10(3):296-303. doi: 10.1016/j.jcmg.2016.12.003. Review.
91. Glaspole IN, Watson AL, Allan H, Chapman S, Cooper WA, Corte TJ, Ellis S, Grainge C, Goh N, Hopkins P, Keir G, Macansh S, Mahar A, Moodley Y, Reynolds PN, **Ryerson CJ**, Walters EH, Zappala CJ, Holland AE. Determinants and outcomes of prolonged anxiety and depression in idiopathic pulmonary fibrosis. *Eur Respir J*. 2017 Aug 17;50(2). pii: 1700168. doi: 10.1183/13993003.00168-2017. Print 2017 Aug.
92. Gref A, Merid SK, Gruziova O, Ballereau S, Becker A, Bellander T, Bergström A, Bossé Y, Bottai M, Chan-Yeung M, Fuertes E, Ierodiakonou D, Jiang R, Joly S, Jones M, Kobor MS, Korek M, Kozyrskyj AL, Kumar A, Lemonnier N, MacIntyre E, Ménard C, Nickle D, **Obeidat M**, Pellet J, Standl M, Sääf A, Söderhäll C, Tiesler CMT, van den Berge M, Vonk JM, Vora H, Xu CJ, Antó JM, Auffray C, Brauer M, Bousquet J, Brunekreef B, Gauderman WJ, Heinrich J, Kere J, Koppelman GH, Postma D, **Carlsten C**, Pershagen G, Melén E. 18. Genome-Wide Interaction Analysis of Air Pollution Exposure and Childhood Asthma with Functional Follow-up. *Am J Respir Crit Care Med*. 2017 May 15;195(10):1373-1383. doi: 10.1164/rccm.201605-1026OC.



93. Grønseth R, Erdal M, **Tan WC**, Obaseki DO, Amaral AFS, Gislason T, Juvekar SK, Koul PA, Studnicka M, Salvi S, Burney P, Buist AS, Vollmer WM, Johannessen A; Research teams at centres. Unemployment in chronic airflow obstruction around the world: results from the BOLD study. *Eur Respir J*. 2017 Sep 20;50(3). pii: 1700499. doi: 10.1183/13993003.00499-2017. Print 2017 Sep.
94. Grover R, **Leipsic JA**, Mooney J, Kueh SH, Ohana M, Nørgaard BL, Eftekhari A, Bax JJ, Murphy DT, Hague CJ, **Seidman MA**, Blanke P, Sedlak T, Sellers SL. Coronary lumen volume to myocardial mass ratio in primary microvascular angina. *J Cardiovasc Comput Tomogr*. 2017 Nov;11(6):423-428. doi: 10.1016/j.jcct.2017.09.015. Epub 2017 Sep 22.
95. Guler SA, Kwan JM, Winstone TA, Milne KM, Dunne JV, Wilcox PG, **Ryerson CJ**. Severity and features of frailty in systemic sclerosis-associated interstitial lung disease. *Respir Med*. 2017 Aug;129:1-7. doi: 10.1016/j.rmed.2017.05.012. Epub 2017 May 25.
96. **Hackett TL**, Ferrante SC, Hoptay CE, Engelhardt JF, Ingram JL, Zhang Y, Alcalá SE, Shaheen F, Matz E, Pillai DK, Freishtat RJ. A Heterotopic Xenograft Model of Human Airways for Investigating Fibrosis in Asthma. *Am J Respir Cell Mol Biol*. 2017 Mar;56(3):291-299. doi: 10.1165/rcmb.2016-0065MA.
97. Hanson PJ, **Seidman MA**. Diagnosing Myocarditis in the Absence of Leukocyte Infiltration: A Complementary Approach. *Can J Cardiol*. 2017 Oct;33(10):1223-1224. doi: 10.1016/j.cjca.2017.07.006. Epub 2017 Jul 18.
98. Hansson NC, **Leipsic J**, Leetmaa T, Mortensen UM, Andersen HR, Jensen JM, Nørgaard BL. Stroke Related to Transcatheter Heart Valve Thrombosis. *J Heart Valve Dis*. 2016 Nov;25(6):756-759.
99. Hecht H, Blaha MJ, Berman DS, Nasir K, Budoff M, **Leipsic J**, Blankstein R, Narula J, Rumberger J, Shaw LJ. Clinical indications for coronary artery calcium scoring in asymptomatic patients: Expert consensus statement from the Society of Cardiovascular Computed Tomography. *J Cardiovasc Comput Tomogr*. 2017 Mar - Apr;11(2):157-168. doi: 10.1016/j.jcct.2017.02.010. Epub 2017 Feb 24. Review.
100. Hiraiwa K, Miller S, Ngan DA, Vasilescu DM, **Hackett TL**, Kinose D, Cheng JC, **van Eeden SF**. Statins reduce the burden of ambient particulate matter and inflammatory cells within the lung tissues of smokers with and without COPD. *Eur Respir J*. 2017 Jan 3;49(1). pii: 1601689. doi: 10.1183/13993003.01689-2016. Print 2017 Jan.
101. Hirano Y, Choi A, Tsuruta M, Jaw JE, Oh Y, Ngan D, Moritani K, Chen YR, Tam S, Li Y, Vasilescu DM, **Hogg JC**, **Francis G**, **Bernatchez P**, **Man SP**, **Sin DD**. Surfactant protein-D deficiency suppresses systemic inflammation and reduces atherosclerosis in ApoE knockout mice. *Cardiovasc Res*. 2017 Aug 1;113(10):1208-1218. doi: 10.1093/cvr/cvx067.
102. Hobbs BD, de Jong K, Lamontagne M, Bossé Y, Shrine N, Artigas MS, Wain LV, Hall IP, Jackson VE, Wyss AB, London SJ, North KE, Franceschini N, Strachan DP, Beaty TH, Hokanson JE, Crapo JD, Castaldi PJ, Chase RP, Bartz TM, Heckbert SR, Psaty BM, Gharib SA, Zanen P, Lammers JW, Oudkerk M, Groen HJ, Locantore N, Tal-Singer R, Rennard SI, Vestbo J, Timens W, **Paré PD**, Latourelle JC, Dupuis J, O'Connor GT, Wilk JB, Kim WJ, Lee MK, Oh YM, Vonk JM, de Koning HJ, Leng S, Belinsky SA, Tesfaigzi Y, Manichaikul A, Wang XQ, Rich SS, Barr RG, Sparrow D, Litonjua AA, Bakke P, Gulsvik A, Lahousse L, Brusselle GG, Stricker BH, Uitterlinden AG, Ampleford EJ, Bleeker ER, Woodruff PG, Meyers DA, Qiao D, Lomas DA, Yim JJ, Kim DK, Hawrylykiewicz I, Sliwinski P, Hardin M, Fingerlin TE, Schwartz DA, Postma DS, MacNee W, Tobin MD, Silverman EK, Boezen HM, Cho MH; COPDGene Investigators; ECLIPSE Investigators; LifeLines Investigators; SPIROMICS Research Group; International COPD Genetics Network Investigators; UK BiLEVE Investigators; International COPD Genetics Consortium. Genetic loci associated with chronic obstructive pulmonary disease overlap with loci for lung function and pulmonary fibrosis. *Nat Genet*. 2017 Mar;49(3):426-432. doi: 10.1038/ng.3752. Epub 2017 Feb 6.
103. **Hogg JC**, **Paré PD**, **Hackett TL**. The Contribution of Small Airway Obstruction to the Pathogenesis of Chronic Obstructive Pulmonary Disease. *Physiol Rev*. 2017 Apr;97(2):529-552. doi: 10.1152/physrev.00025.2015. Review.
104. Hollander Z, **DeMarco ML**, Sadatsafavi M, **McManus BM**, **Ng RT**, **Sin DD**. Biomarker Development in COPD: Moving From P Values to Products to Impact Patient Care. *Chest*. 2017 Feb;151(2):455-467. doi: 10.1016/j.chest.2016.09.012. Epub 2016 Sep 29. Review.
105. Hüls A, Krämer U, **Carlsten C**, Schikowski T, Ickstadt K, Schwender H. Comparison of weighting approaches for genetic risk scores in gene-environment interaction studies. *BMC Genet*. 2017 Dec 16;18(1):115. doi: 10.1186/s12863-017-0586-3.

106. Ishii T, Angata T, Wan ES, Cho MH, Motegi T, Gao C, Ohtsubo K, Kitazume S, Gemma A, **Paré PD**, Lomas DA, Silverman EK, Taniguchi N, Kida K. Influence of SIGLEC9 polymorphisms on COPD phenotypes including exacerbation frequency. *Respirology*. 2017 May;22(4):684-690. doi: 10.1111/resp.12952. Epub 2016 Nov 22.
107. Jamil S, Mousavizadeh R, Roshan-Moniri M, **Tebbutt SJ**, McCormack RG, Duronio V, Scott A. Angiopoietin-like 4 Enhances the Proliferation and Migration of Tendon Fibroblasts. *Med Sci Sports Exerc*. 2017 Sep;49(9):1769-1777. doi: 10.1249/MSS.0000000000001294.
108. Janssen C, Buttyan R, **Seow CY**, Jäger W, Solomon D, Fazli L, Chew BH, Lange D. A Role for the Hedgehog Effector Gli1 in Mediating Stent-induced Ureteral Smooth Muscle Dysfunction and Aperistalsis. *Urology*. 2017 Jun;104:242.e1-242.e8. doi: 10.1016/j.urology.2017.01.029. Epub 2017 Feb 8.
109. Janzen ML, Cheung C, Sanatani S, Cunningham T, Kerr C, Steinberg C, Sherwin E, Arbour L, Deyell MW, Andrade JG, Lehman AM, Gula LJ, **Krahn AD**. Cost Analysis of Patients Referred for Inherited Heart Rhythm Disorder Evaluation. *Can J Cardiol*. 2017 Jun;33(6):814-821. doi: 10.1016/j.cjca.2016.12.009. Epub 2016 Dec 20.
110. Johannson KA, Pendharkar SR, Mathison K, Fell CD, **Guenette JA**, Kalluri M, Kolb M, **Ryerson CJ**. Supplemental Oxygen in Interstitial Lung Disease: An Art in Need of Science. *Ann Am Thorac Soc*. 2017 Sep;14(9):1373-1377. doi: 10.1513/AnnalsATS.201702-137OI.
111. John C, Soler Artigas M, Hui J, Nielsen SF, Rafaels N, **Paré PD**, Hansel NN, Shrine N, Kilty I, Malarstig A, Jelinsky SA, Vedel-Krogh S, Barnes K, Hall IP, Beilby J, Musk AW, Nordestgaard BG, James A, Wain LV, Tobin MD. Genetic variants affecting cross-sectional lung function in adults show little or no effect on longitudinal lung function decline. *Thorax*. 2017 May;72(5):400-408. doi: 10.1136/thoraxjnl-2016-208448. Epub 2017 Feb 7.
112. Kalisz K, Halliburton S, Abbara S, **Leipsic JA**, Albrecht MH, Schoepf UJ, Rajiah P. Update on Cardiovascular Applications of Multienergy CT. *Radiographics*. 2017 Nov-Dec;37(7):1955-1974. doi: 10.1148/rg.2017170100.
113. Kearns MJ, Miller SD, Cheung A, Bashir J, Wong S, **Seidman MA**, **Boyd JH**. A Rodent Model of Cardiac Donation After Circulatory Death and Novel Biomarkers of Cardiac Viability During Ex Vivo Heart Perfusion. *Transplantation*. 2017 Aug;101(8):e231-e239. doi: 10.1097/TP.0000000000001815.
114. Kepplinger D, Takhar M, Sasaki M, Hollander Z, Smith D, **McManus B**, McMaster WR, **Ng RT**, Cohen Freue GV. PGCA: An algorithm to link protein groups created from MS/MS data. *PLoS One*. 2017 May 31;12(5):e0177569. doi: 10.1371/journal.pone.0177569. eCollection 2017.
115. Khakban A, **Sin DD**, Fitzgerald JM, **McManus BM**, **Ng R**, Hollander Z, Sadatsafavi M. The Projected Epidemic of Chronic Obstructive Pulmonary Disease Hospitalizations over the Next 15 Years. A Population-based Perspective. *Am J Respir Crit Care Med*. 2017 Feb 1;195(3):287-291. doi: 10.1164/rccm.201606-1162PP. Review.
116. Khan A, Benthin C, Zeno B, Albertson TE, **Boyd J**, Christie JD, Hall R, Poirier G, Ronco JJ, Tidswell M, Harges K, Powley WM, Wright TJ, Siederer SK, Fairman DA, Lipson DA, Bayliffe AI, Lazaar AL. A pilot clinical trial of recombinant human angiotensin-converting enzyme 2 in acute respiratory distress syndrome. *Crit Care*. 2017 Sep 7;21(1):234. doi: 10.1186/s13054-017-1823-x.
117. Kim YW, Singh A, Shannon CP, Thiele J, Steacy LM, Ellis AK, Neighbour H, Gliddon DR, Hickey PLC, Larché M, **Tebbutt SJ**. Investigating Immune Gene Signatures in Peripheral Blood from Subjects with Allergic Rhinitis Undergoing Nasal Allergen Challenge. *J Immunol*. 2017 Nov 15;199(10):3395-3405. doi: 10.4049/jimmunol.1700378. Epub 2017 Oct 18.
118. Kirby M, Eddy RL, Pike D, Svenningsen S, **Coxson HO**, **Sin DD**, McCormack DG, Parraga G; Canadian Respiratory Research Network. MRI ventilation abnormalities predict quality-of-life and lung function changes in mild-to-moderate COPD: longitudinal TINCan study. *Thorax*. 2017 May;72(5):475-477. doi: 10.1136/thoraxjnl-2016-209770. Epub 2017 Mar 3.
119. Kirby M, van Beek EJ, Seo JB, Biederer J, Nakano Y, **Coxson HO**, Parraga G. Management of COPD: Is there a role for quantitative imaging? *Eur J Radiol*. 2017 Jan;86:335-342. doi: 10.1016/j.ejrad.2016.08.022. Epub 2016 Aug 28. Review.
120. Kirby M, Yin Y, Tschirren J, **Tan WC**, **Leipsic J**, Hague CJ, Bourbeau J, **Sin DD**, **Hogg JC**, **Coxson HO**; CanCOLD Collaborative Research Group and the Canadian Respiratory Research Network. A Novel Method of Estimating Small Airway Disease Using Inspiratory-to-Expiratory Computed Tomography. *Respiration*. 2017;94(4):336-345. doi: 10.1159/000478865. Epub 2017 Aug 23.

121. Klopp A, Vehling L, Becker AB, Subbarao P, Mandhane PJ, Turvey SE, Lefebvre DL, Sears MR; **CHILD Study Investigators**, Azad MB. Modes of Infant Feeding and the Risk of Childhood Asthma: A Prospective Birth Cohort Study. *J Pediatr*. 2017 Nov;190:192-199.e2. doi: 10.1016/j.jpeds.2017.07.012. **D Daley, A Sandford, and S Tebbutt are CHILD Study Investigators**
122. Kramer MM, Hirota JA, Sood A, Teschke K, **Carlsten C**. Airway and serum adipokines after allergen and diesel exposure in a controlled human crossover study of atopic adults. *Transl Res*. 2017 Apr;182:49-60. doi: 10.1016/j.trsl.2016.11.001. Epub 2016 Nov 9.
123. Kueh SH, Boroditsky M, **Leipsic J**. Fractional flow reserve computed tomography in the evaluation of coronary artery disease. *Cardiovasc Diagn Ther*. 2017 Oct;7(5):463-474. doi: 10.21037/cdt.2017.01.04. Review.
124. Kueh SH, Mooney J, Ohana M, Kim U, Blanke P, Grover R, Sellers S, Ellis J, Murphy D, Hague C, Bax JJ, Nørgaard BL, Rabbat M, **Leipsic JA**. Fractional flow reserve derived from coronary computed tomography angiography reclassification rate using value distal to lesion compared to lowest value. *J Cardiovasc Comput Tomogr*. 2017 Nov;11(6):462-467. doi: 10.1016/j.jcct.2017.09.009. Epub 2017 Sep 21.
125. Kusumoto FM, Schoenfeld MH, Wilkoff BL, Berul CI, Birgersdotter-Green UM, Carrillo R, Cha YM, Clancy J, Deharo JC, Ellenbogen KA, Exner D, Hussein AA, Kennergren C, **Krahn A**, Lee R, Love CJ, Madden RA, Mazzetti HA, Moore JC, Parsonnet J, Patton KK, Rozner MA, Selzman KA, Shoda M, Srivathsan K, Strathmore NF, Swerdlow CD, Tompkins C, Wazni O. 2017 HRS expert consensus statement on cardiovascular implantable electronic device lead management and extraction. *Heart Rhythm*. 2017 Dec;14(12):e503-e551. doi: 10.1016/j.hrthm.2017.09.001. Epub 2017 Sep 15.
126. Labaki WW, Martinez CH, Martinez FJ, Galbán CJ, Ross BD, Washko GR, Barr RG, Regan EA, **Coxson HO**, Hoffman EA, Newell JD Jr, Curran-Everett D, **Hogg JC**, Crapo JD, Lynch DA, Kazerooni EA, Han MK. The Role of Chest Computed Tomography in the Evaluation and Management of the Patient with Chronic Obstructive Pulmonary Disease. *Am J Respir Crit Care Med*. 2017 Dec 1;196(11):1372-1379. doi: 10.1164/rccm.201703-0451PP. Review.
127. Lalu MM, Sullivan KJ, Mei SH, Moher D, Straus A, Fergusson DA, Stewart DJ, Jazi M, MacLeod M, Winston B, Marshall J, Hutton B, **Walley KR**, McIntyre L. Evaluating mesenchymal stem cell therapy for sepsis with preclinical meta-analyses prior to initiating a first-in-human trial. *Elife*. 2016 Nov 17;5. pii: e17850. doi: 10.7554/eLife.17850.
128. **Lear SA**, Hu W, Rangarajan S, Gasevic D, Leong D, Iqbal R, Casanova A, Swaminathan S, Anjana RM, Kumar R, Rosengren A, Wei L, Yang W, Chuangshi W, Huaxing L, Nair S, Diaz R, Swidon H, Gupta R, Mohammadifard N, Lopez-Jaramillo P, Oguz A, Zatonska K, Seron P, Avezum A, Poirier P, Teo K, Yusuf S. The effect of physical activity on mortality and cardiovascular disease in 130 000 people from 17 high-income, middle-income, and low-income countries: the PURE study. *Lancet*. 2017 Dec 16;390(10113):2643-2654. doi: 10.1016/S0140-6736(17)31634-3. Epub 2017 Sep 21. Erratum in: *Lancet*. 2017 Dec 16;390(10113):2626.
129. **Lear SA**, Yusuf S. Physical Activity to Prevent Cardiovascular Disease: A Simple, Low-Cost, and Widely Applicable Approach for All Populations. *JAMA Cardiol*. 2017 Dec 1;2(12):1358-1360. doi: 10.1001/jamacardio.2017.4070.
130. Lee SE, Chang HJ, Rizvi A, Hadamitzky M, Kim YJ, Conte E, Andreini D, Pontone G, Volpato V, Budoff MJ, Gottlieb I, Lee BK, Chun EJ, Cademartiri F, Maffei E, Marques H, **Leipsic JA**, Shin S, Choi JH, Chung N, Min JK. Rationale and design of the Progression of Atherosclerotic Plaque Determined by Computed Tomographic Angiography IMaging (PARADIGM) registry: A comprehensive exploration of plaque progression and its impact on clinical outcomes from a multicenter serial coronary computed tomographic angiography study. *Am Heart J*. 2016 Dec;182:72-79. doi: 10.1016/j.ahj.2016.09.003. Epub 2016 Sep 22.
131. **Leipsic J**, Bax JJ, Webb JG, Martin R, Blanke P. Trials Testing the Value of Imaging Use in Valve Disease and in Transcatheter Valvular Interventions. *JACC Cardiovasc Imaging*. 2017 Mar;10(3):286-295. doi: 10.1016/j.jcmg.2016.09.031. Review.
132. **Leipsic J**, Blanke P, Nørgaard BL. Defining the relationship between atherosclerotic plaque, ischaemia, and risk-the story unfolds. *Eur Heart J Cardiovasc Imaging*. 2017 May 1;18(5):508-509. doi: 10.1093/ehjci/jew282.
133. **Leipsic J**, Blanke P. Cardiac CT: a coming of age. *Minerva Cardioangiol*. 2017 Jun;65(3):199-200. doi: 10.23736/S0026-4725.16.04307-3.
134. **Leipsic J**, Blanke P. Prognostic value of coronary CT angiography: lessons from the West Denmark Cardiac Registry. *Eur Heart J*. 2017 Feb 7;38(6):422-424. doi: 10.1093/eurheartj/ehw634.
135. **Leipsic J**, Sellers S, Blanke P. Sex differences in the aortic root size: Implications for TAVR. *J Cardiovasc Comput Tomogr*. 2017 Mar - Apr;11(2):97-98. doi: 10.1016/j.jcct.2017.01.009. Epub 2017 Feb 1.

136. Leitao Filho FS, Won Ra S, Mattman A, **Schellenberg RS**, Fishbane N, Criner GJ, Woodruff PG, Lazarus SC, Albert R, Connett JE, Han MK, Martinez FJ, **Leung JM**, **Man SFP**, Aaron SD, Reed RM, **Sin DD**. Serum IgG and risk of exacerbations and hospitalizations in chronic obstructive pulmonary disease. *J Allergy Clin Immunol*. 2017 Oct;140(4):1164-1167.e6. doi: 10.1016/j.jaci.2017.01.046. Epub 2017 Apr 27.
137. Leung AA, Daskalopoulou SS, Dasgupta K, McBrien K, Butalia S, Zarnke KB, Nerenberg K, Harris KC, Nakhla M, Cloutier L, Gelfer M, Lamarre-Cliche M, Milot A, Bolli P, Tremblay G, McLean D, Tobe SW, Ruzicka M, Burns KD, Vallée M, Prasad GVR, Gryn SE, Feldman RD, Selby P, Pipe A, Schiffrin EL, McFarlane PA, Oh P, Hegele RA, Khara M, Wilson TW, Penner SB, Burgess E, Sivapalan P, Herman RJ, Bacon SL, Rabkin SW, Gilbert RE, Campbell TS, Grover S, Honos G, Lindsay P, Hill MD, Coutts SB, Gubitz G, Campbell NRC, Moe GW, Howlett JG, Boulanger JM, Prebtani A, Kline G, Leiter LA, Jones C, Côté AM, Woo V, Kaczorowski J, Trudeau L, Tsuyuki RT, Hiremath S, Drouin D, Lavoie KL, Hamet P, Grégoire JC, Lewanczuk R, Dresser GK, Sharma M, Reid D, **Lear SA**, Moullec G, Gupta M, Magee LA, Logan AG, Dionne J, Fournier A, Benoit G, Feber J, Poirier L, Padwal RS, Rabi DM; Hypertension Canada. Hypertension Canada's 2017 Guidelines for Diagnosis, Risk Assessment, Prevention, and Treatment of Hypertension in Adults. *Can J Cardiol*. 2017 May;33(5):557-576. doi: 10.1016/j.cjca.2017.03.005. Epub 2017 Mar 10. Erratum in: *Can J Cardiol*. 2017 Dec;33(12):1733-1734.
138. **Leung JM**, Fishbane N, Jones M, Morin A, Xu S, Liu JC, Maclsaac J, Milloy MJ, Hayashi K, Montaner J, Horvath S, Kobor M, Sin DD, Harrigan PR, **Man SF**. Longitudinal study of surrogate aging measures during human immunodeficiency virus seroconversion. *Aging (Albany NY)*. 2017 Feb 23;9(3):687-705. doi: 10.18632/aging.101184.
139. **Leung JM**, Tiew PY, Mac Aogáin M, Budden KF, Yong VF, Thomas SS, Pethe K, Hansbro PM, Chotirmall SH. The role of acute and chronic respiratory colonization and infections in the pathogenesis of COPD. *Respirology*. 2017 May;22(4):634-650. doi: 10.1111/resp.13032. Epub 2017 Mar 25.
140. **Leung JM**, Malagoli A, Santoro A, Besutti G, Ligabue G, Scaglioni R, Dai D, Hague C, **Leipsic J**, **Sin DD**, **Man SF**, Guaraldi G. Emphysema Distribution and Diffusion Capacity Predict Emphysema Progression in Human Immunodeficiency Virus Infection. *PLoS One*. 2016 Nov 30;11(11):e0167247. doi: 10.1371/journal.pone.0167247. eCollection 2016.
141. **Leung JM**, **Sin DD**. Asthma-COPD overlap syndrome: pathogenesis, clinical features, and therapeutic targets. *BMJ*. 2017 Sep 25;358:j3772. doi: 10.1136/bmj.j3772. Review.
142. Li X, **Obeidat M**, Zhou G, **Leung JM**, Tashkin D, Wise R, Connett J, Joubert P, Bossé Y, van den Berge M, Brandsma CA, Nickle DC, Hao K, **Paré PD**, **Sin DD**. Responsiveness to Ipratropium Bromide in Male and Female Patients with Mild to Moderate Chronic Obstructive Pulmonary Disease. *EBioMedicine*. 2017 May;19:139-145. doi: 10.1016/j.ebiom.2017.04.020. Epub 2017 Apr 12.
143. Lin AH, Kendrick JG, Wilcox PG, **Quon BS**. Patient knowledge and pulmonary medication adherence in adult patients with cystic fibrosis. *Patient Prefer Adherence*. 2017 Mar 30;11:691-698. doi: 10.2147/PPA.S129088. eCollection 2017.
144. Liu Q, Wu S, Xue M, **Sandford AJ**, Wu J, Wang Y, Chen G, Tao C, Tang Y, Feng Y, Luo J, He JQ. Heterozygote Advantage of the rs3794624 Polymorphism in CYBA for Resistance to Tuberculosis in Two Chinese Populations. *Sci Rep*. 2016 Nov 30;6:38213. doi: 10.1038/srep38213.
145. Lu MT, Ferencik M, Roberts RS, Lee KL, Ivanov A, Adami E, Mark DB, Jaffer FA, **Leipsic JA**, Douglas PS, Hoffmann U. Noninvasive FFR Derived From Coronary CT Angiography: Management and Outcomes in the PROMISE Trial. *JACC Cardiovasc Imaging*. 2017 Nov;10(11):1350-1358. doi: 10.1016/j.jcmg.2016.11.024. Epub 2017 Apr 12.
146. **Luo H**, Winkelmann E, Xie G, Fang R, Peng BH, Li L, Lazear HM, Paessler S, Diamond MS, Gale M Jr, Barrett AD, Wang T. MAVS Is Essential for Primary CD4+ T Cell Immunity but Not for Recall T Cell Responses following an Attenuated West Nile Virus Infection. *J Virol*. 2017 Feb 28;91(6). pii: e02097-16. doi: 10.1128/JVI.02097-16. Print 2017 Mar 15.
147. Lutchen KR, **Paré PD**, **Seow CY**. Hyperresponsiveness: Relating the Intact Airway to the Whole Lung. *Physiology (Bethesda)*. 2017 Jul;32(4):322-331. doi: 10.1152/physiol.00008.2017. Review.
148. Maestre-Batlle D, Pena OM, Hirota JA, Gunawan E, Rider CF, Sutherland D, Alexis NE, **Carlsten C**. Novel flow cytometry approach to identify bronchial epithelial cells from healthy human airways. *Sci Rep*. 2017 Feb 6;7:42214. doi: 10.1038/srep42214.
149. Mai C, Verleden SE, McDonough JE, Willems S, De Wever W, Coolen J, Dubbeldam A, Van Raemdonck DE, Verbeken EK, Verleden GM, **Hogg JC**, Vanaudenaerde BM, Wuyts WA, Verschakelen JA. Thin-Section CT Features of Idiopathic Pulmonary Fibrosis Correlated with Micro-CT and Histologic Analysis. *Radiology*. 2017 Apr;283(1):252-263. doi: 10.1148/radiol.2016152362. Epub 2016 Oct 6.

150. Maillet A, Tan KP, **Brunham LR**. Use of Human Pluripotent Stem Cell Derived-Cardiomyocytes to Study Drug-Induced Cardiotoxicity. *Curr Protoc Toxicol*. 2017 Aug 4;73:22.5.1-22.5.22. doi: 10.1002/cptx.30.
151. Martin M, Almeras N, Després JP, **Coxson HO**, Washko GR, Vivodtzev I, Wouters EF, Rutten E, Williams MC, Murchison JT, MacNee W, **Sin DD**, Maltais F. Ectopic fat accumulation in patients with COPD: an ECLIPSE substudy. *Int J Chron Obstruct Pulmon Dis*. 2017 Jan 31;12:451-460. doi: 10.2147/COPD.S124750. eCollection 2017.
152. Masoudkabar F, Sarrafzadegan N, Gotay C, Ignaszewski A, **Krahn AD**, Davis MK, Franco C, Mani A. Cardiovascular disease and cancer: Evidence for shared disease pathways and pharmacologic prevention. *Atherosclerosis*. 2017 Aug;263:343-351. doi: 10.1016/j.atherosclerosis.2017.06.001. Epub 2017 Jun 2. Review.
153. McKay JD, Hung RJ, Han Y, Zong X, Carreras-Torres R, Christiani DC, Caporaso NE, Johansson M, Xiao X, Li Y, Byun J, Dunning A, Pooley KA, Qian DC, Ji X, Liu G, Timofeeva MN, Bojesen SE, Wu X, Le Marchand L, Albanes D, Bickeböller H, Aldrich MC, Bush WS, Tardon A, Rennert G, Teare MD, Field JK, Kiemeny LA, Lazarus P, Haugen A, Lam S, Schabath MB, Andrew AS, Shen H, Hong YC, Yuan JM, Bertazzi PA, Pesatori AC, Ye Y, Diao N, Su L, Zhang R, Brhane Y, Leighl N, Johansen JS, Mellemegaard A, Saliba W, Haiman CA, Wilkens LR, Fernandez-Somoano A, Fernandez-Tardon G, van der Heijden HFM, Kim JH, Dai J, Hu Z, Davies MPA, Marcus MW, Brunnström H, Manjer J, Melander O, Muller DC, Overvad K, Trichopoulou A, Tumino R, Doherty JA, Barnett MP, Chen C, Goodman GE, Cox A, Taylor F, Woll P, Brüske I, Wichmann HE, Manz J, Muley TR, Risch A, Rosenberger A, Grankvist K, Johansson M, Shepherd FA, Tsao MS, Arnold SM, Haura EB, Bolca C, Holcatova I, Janout V, Kontic M, Lissowska J, Mukeria A, Ognjanovic S, Orłowski TM, Scelo G, Swiatkowska B, Zaridze D, Bakke P, Skaug V, Zienolddiny S, Duell EJ, Butler LM, Koh WP, Gao YT, Houlston RS, McLaughlin J, Stevens VL, Joubert P, Lamontagne M, Nickle DC, **Obeidat M**, Timens W, Zhu B, Song L, Kachuri L, Artigas MS, Tobin MD, Wain LV; SpiroMeta Consortium, Rafnar T, Thorgeirsson TE, Reginsson GW, Stefansson K, Hancock DB, Bierut LJ, Spitz MR, Gaddis NC, Lutz SM, Gu F, Johnson EO, Kamal A, Pikielny C, Zhu D, Lindström S, Jiang X, Tyndale RF, Chenevix-Trench G, Beesley J, Bossé Y, Chanock S, Brennan P, Landi MT, Amos CI. Large-scale association analysis identifies new lung cancer susceptibility loci and heterogeneity in genetic susceptibility across histological subtypes. *Nat Genet*. 2017 Jul;49(7):1126-1132. doi: 10.1038/ng.3892. Epub 2017 Jun 12.
154. **McManus B**, Omer S. A tiered approach in mandatory assessment training. *Med Educ*. 2017 May;51(5):548. doi: 10.1111/medu.13307.
155. Mehta S, Granton J, Gordon AC, Cook DJ, Lapinsky S, Newton G, Bandayrel K, Little A, Siau C, Ayers D, Singer J, Lee TCK, **Walley KR**, Storms M, Cooper DJ, Holmes CL, Hebert P, Presneill J, **Russell JA**; Vasopressin and Septic Shock Trial (VASST) Investigators. Erratum to: Cardiac ischemia in patients with septic shock randomized to vasopressin or norepinephrine. *Crit Care*. 2017 May 4;21(1):98. doi: 10.1186/s13054-017-1680-7.
156. Mellor G, **Laksman ZWM**, Tadros R, Roberts JD, Gerull B, Simpson CS, Klein GJ, Champagne J, Talajic M, Gardner M, Steinberg C, Arbour L, Birnie DH, Angaran P, Leather R, Sanatani S, Chauhan VS, Seifer C, Healey JS, **Krahn AD**. Genetic Testing in the Evaluation of Unexplained Cardiac Arrest: From the CASPER (Cardiac Arrest Survivors With Preserved Ejection Fraction Registry). *Circ Cardiovasc Genet*. 2017 Jun;10(3). pii: e001686. doi: 10.1161/CIRCGENETICS.116.001686.
157. Meng F, Saxena S, Liu Y, Joshi B, Wong TH, Shankar J, Foster LJ, **Bernatchez P**, Nabi IR. The phospho-caveolin-1 scaffolding domain dampens force fluctuations in focal adhesions and promotes cancer cell migration. *Mol Biol Cell*. 2017 Aug 1;28(16):2190-2201. doi: 10.1091/mbc.E17-05-0278. Epub 2017 Jun 7.
158. Mente A, Dehghan M, Rangarajan S, McQueen M, Dagenais G, Wielgosz A, **Lear S**, Li W, Chen H, Yi S, Wang Y, Diaz R, Avezum A, Lopez-Jaramillo P, Seron P, Kumar R, Gupta R, Mohan V, Swaminathan S, Kutty R, Zatonska K, Iqbal R, Yusuf R, Mohammadifard N, Khatib R, Nasir NM, Ismail N, Oguz A, Rosengren A, Yusufali A, Wentzel-Viljoen E, Puoane T, Chifamba J, Teo K, Anand SS, Yusuf S; Prospective Urban Rural Epidemiology (PURE) study investigators. Association of dietary nutrients with blood lipids and blood pressure in 18 countries: a cross-sectional analysis from the PURE study. *Lancet Diabetes Endocrinol*. 2017 Oct;5(10):774-787. doi: 10.1016/S2213-8587(17)30283-8. Epub 2017 Aug 29.
159. Milad N, White Z, Tehrani AY, Sellers S, Rossi FMV, **Bernatchez P**. Increased plasma lipid levels exacerbate muscle pathology in the mdx mouse model of Duchenne muscular dystrophy. *Skelet Muscle*. 2017 Sep 12;7(1):19. doi: 10.1186/s13395-017-0135-9.

160. Miller V, Mente A, Dehghan M, Rangarajan S, Zhang X, Swaminathan S, Dagenais G, Gupta R, Mohan V, **Lear S**, Bangdiwala SI, Schutte AE, Wentzel-Viljoen E, Avezum A, Altuntas Y, Yusoff K, Ismail N, Peer N, Chifamba J, Diaz R, Rahman O, Mohammadifard N, Lana F, Zatonska K, Wielgosz A, Yusufali A, Iqbal R, Lopez-Jaramillo P, Khatib R, Rosengren A, Kutty VR, Li W, Liu J, Liu X, Yin L, Teo K, Anand S, Yusuf S; Prospective Urban Rural Epidemiology (PURE) study investigators. Fruit, vegetable, and legume intake, and cardiovascular disease and deaths in 18 countries (PURE): a prospective cohort study. *Lancet*. 2017 Nov 4;390(10107):2037-2049. doi: 10.1016/S0140-6736(17)32253-5. Epub 2017 Aug 29.
161. Milne KM, Kwan JM, Guler S, Winstone TA, Le A, Khalil N, **Camp PG**, Wilcox PG, **Ryerson CJ**. Frailty is common and strongly associated with dyspnoea severity in fibrotic interstitial lung disease. *Respirology*. 2017 May;22(4):728-734. doi: 10.1111/resp.12944. Epub 2016 Nov 9.
162. Mitchell RA, Schaeffer MR, Ramsook AH, Wilkie SS, **Guenette JA**. Sex differences in respiratory muscle activation patterns during high-intensity exercise in healthy humans. *Respir Physiol Neurobiol*. 2018 Jan;247:57-60. doi: 10.1016/j.resp.2017.09.002. Epub 2017 Sep 7.
163. Mooney J, Sellers SL, Blanke P, Pibarot P, Hahn RT, Dvir D, Douglas PS, Weissman NJ, Kodali SK, Thourani VH, Jilaihawi H, Khalique O, Smith CR, Kueh SH, Ohana M, Grover R, Naoum C, Crowley A, Jaber WA, Alu MC, Parvataneni R, Mack M, Webb JG, Leon MB, **Leipsic JA**. CT-Defined Prosthesis-Patient Mismatch Downgrades Frequency and Severity, and Demonstrates No Association With Adverse Outcomes After Transcatheter Aortic Valve Replacement. *JACC Cardiovasc Interv*. 2017 Aug 14;10(15):1578-1587. doi: 10.1016/j.jcin.2017.05.031. Epub 2017 Jul 19.
164. Mooney J, Sellers SL, Ohana M, Cavalcante JL, Arepalli CD, Grover R, Kim U, Selvakumar K, Blanke P, **Leipsic JA**. Imaging for structural heart procedures: focus on computed tomography. *EuroIntervention*. 2017 Sep 24;13(AA):AA85-AA96. doi: 10.4244/EIJ-D-17-00516.
165. Morisset J, Johannson KA, Vittinghoff E, Aravena C, Elicker BM, Jones KD, Fell CD, Manganas H, Dubé BP, Wolters PJ, Collard HR, **Ryerson CJ**, Ley B. Use of Mycophenolate Mofetil or Azathioprine for the Management of Chronic Hypersensitivity Pneumonitis. *Chest*. 2017 Mar;151(3):619-625. doi: 10.1016/j.chest.2016.10.029. Epub 2016 Nov 3.
166. Morisset J, **Ryerson CJ**, Johannson KA. Oxygen Prescription in Interstitial Lung Disease: 2.5 Billion Years in the Making. *Ann Am Thorac Soc*. 2017 Dec;14(12):1755-1756. doi: 10.1513/AnnalsATS.201708-675ED.
167. Morissette MC, Gao Y, Shen P, Thayaparan D, Bérubé JC, **Paré PD**, Brandsma CA, Hao K, Bossé Y, Ettinger R, Herbst R, Humbles AA, Kolbeck R, Zhong N, Chen R, Stämpfli MR. Role of BAFF in pulmonary autoantibody responses induced by chronic cigarette smoke exposure in mice. *Physiol Rep*. 2016 Dec;4(24). pii: e13057. doi: 10.14814/phy2.13057.
168. Mostaco-Guidolin L, Hajimohammadi S, Vasilescu DM, **Hackett TL**. Application of Euclidean distance mapping for assessment of basement membrane thickness distribution in asthma. *J Appl Physiol* (1985). 2017 Aug 1;123(2):473-481. doi: 10.1152/jappphysiol.00171.2017. Epub 2017 Jun 8.
169. Mostaço-Guidolin L, Rosin NL, **Hackett TL**. Imaging Collagen in Scar Tissue: Developments in Second Harmonic Generation Microscopy for Biomedical Applications. *Int J Mol Sci*. 2017 Aug 15;18(8). pii: E1772. doi: 10.3390/ijms18081772. Review.
170. Muller DW, Farivar RS, Jansz P, Bae R, Walters D, Clarke A, Grayburn PA, Stoler RC, Dahle G, Rein KA, Shaw M, Scalia GM, Guerrero M, Pearson P, Kapadia S, Gillinov M, Pichard A, Corso P, Popma J, Chuang M, Blanke P, **Leipsic J**, Sorajja P; Tendyne Global Feasibility Trial Investigators. Transcatheter Mitral Valve Replacement for Patients With Symptomatic Mitral Regurgitation: A Global Feasibility Trial. *J Am Coll Cardiol*. 2017 Jan 31;69(4):381-391. doi: 10.1016/j.jacc.2016.10.068. Epub 2016 Dec 28.
171. Murray LA, Dunmore R, Camelo A, Da Silva CA, Gustavsson MJ, Habiel DM, **Hackett TL**, Hogaboam CM, Sleeman MA, Knight DA. Acute cigarette smoke exposure activates apoptotic and inflammatory programs but a second stimulus is required to induce epithelial to mesenchymal transition in COPD epithelium. *Respir Res*. 2017 May 3;18(1):82. doi: 10.1186/s12931-017-0565-2.
172. Nakanishi R, Baskaran L, Gransar H, Budoff MJ, Achenbach S, Al-Mallah M, Cademartiri F, Callister TQ, Chang HJ, Chinnaiyan K, Chow BJW, DeLago A, Hadamitzky M, Hausleiter J, Cury R, Feuchtner G, Kim YJ, **Leipsic J**, Kaufmann PA, Maffei E, Raff G, Shaw LJ, Villines TC, Dunning A, Marques H, Pontone G, Andreini D, Rubinshtein R, Bax J, Jones E, Hindoyan N, Gomez M, Lin FY, Min JK, Berman DS. Relationship of Hypertension to Coronary Atherosclerosis and Cardiac Events in Patients With Coronary Computed Tomographic Angiography. *Hypertension*. 2017 Aug;70(2):293-299. doi: 10.1161/HYPERTENSIONAHA.117.09402. Epub 2017 Jun 12.

173. Naoum C, Berman DS, Ahmadi A, Blanke P, Gransar H, Narula J, Shaw LJ, Kritharides L, Achenbach S, Al-Mallah MH, Andreini D, Budoff MJ, Cademartiri F, Callister TQ, Chang HJ, Chinnaiyan K, Chow B, Cury RC, DeLago A, Dunning A, Feuchtner G, Hadamitzky M, Hausleiter J, Kaufmann PA, Kim YJ, Maffei E, Marquez H, Pontone G, Raff G, Rubinshtein R, Villines TC, Min J, **Leipsic J**. Predictive Value of Age- and Sex-Specific Nomograms of Global Plaque Burden on Coronary Computed Tomography Angiography for Major Cardiac Events. *Circ Cardiovasc Imaging*. 2017 Mar;10(3). pii: e004896. doi: 10.1161/CIRCIMAGING.116.004896.
174. Naoum C, Blanke P, Cavalcante JL, **Leipsic J**. Cardiac Computed Tomography and Magnetic Resonance Imaging in the Evaluation of Mitral and Tricuspid Valve Disease: Implications for Transcatheter Interventions. *Circ Cardiovasc Imaging*. 2017 Mar;10(3). pii: e005331. doi: 10.1161/CIRCIMAGING.116.005331. Review.
175. Nørgaard BL, Gormsen LC, Bøtker HE, Parner E, Nielsen LH, Mathiassen ON, Grove EL, Øvrehus KA, Gaur S, **Leipsic J**, Pedersen K, Terkelsen CJ, Christiansen EH, Kaltoft A, Mæng M, Kristensen SD, Krusell LR, Lassen JF, Jensen JM. Myocardial Perfusion Imaging Versus Computed Tomography Angiography-Derived Fractional Flow Reserve Testing in Stable Patients With Intermediate-Range Coronary Lesions: Influence on Downstream Diagnostic Workflows and Invasive Angiography Findings. *J Am Heart Assoc*. 2017 Aug 22;6(8). pii: e005587. doi: 10.1161/JAHA.117.005587.
176. Nørgaard BL, Jensen JM, Blanke P, Sand NP, Rabbat M, **Leipsic J**. Coronary CT Angiography Derived Fractional Flow Reserve: The Game Changer in Noninvasive Testing. *Curr Cardiol Rep*. 2017 Sep 22;19(11):112. doi: 10.1007/s11886-017-0923-1. Review.
177. **Obeidat M**, Li X, Burgess S, Zhou G, Fishbane N, Hansel NN, Bossé Y, Joubert P, Hao K, Nickle DC, van den Berge M, Timens W, Cho MH, Hobbs BD, de Jong K, Boezen M, Hung RJ, Rafaels N, Mathias R, Ruczinski I, Beaty TH, Barnes KC, **Paré PD, Sin DD**; International COPD Genetics Consortium, Lung eQTL Consortium, Lung Health Study. Surfactant protein D is a causal risk factor for COPD: results of Mendelian randomisation. *Eur Respir J*. 2017 Nov 30;50(5). pii: 1700657. doi: 10.1183/13993003.00657-2017. Print 2017 Nov.
178. **Obeidat M**, Nie Y, Chen V, Shannon CP, Andiappan AK, Lee B, Rotzschke O, Castaldi PJ, Hersh CP, Fishbane N, **Ng RT, McManus B**, Miller BE, Rennard S, **Paré PD, Sin DD**. Network-based analysis reveals novel gene signatures in peripheral blood of patients with chronic obstructive pulmonary disease. *Respir Res*. 2017 Apr 24;18(1):72. doi: 10.1186/s12931-017-0558-1.
179. **Obeidat M**, Nie Y, Fishbane N, Li X, Bossé Y, Joubert P, Nickle DC, Hao K, Postma DS, Timens W, Sze MA, Shannon CP, Hollander Z, **Ng RT, McManus B**, Miller BE, Rennard S, Spira A, **Hackett TL**, Lam W, Lam S, Faner R, Agusti A, **Hogg JC, Sin DD, Paré PD**. Integrative Genomics of Emphysema-Associated Genes Reveals Potential Disease Biomarkers. *Am J Respir Cell Mol Biol*. 2017 Oct;57(4):411-418. doi: 10.1165/rcmb.2016-0284OC.
180. **Obeidat M, Sin DD**. GDF11: a fountain of youth for the ageing COPD lung? *Thorax*. 2017 Oct;72(10):874-875. doi: 10.1136/thoraxjnl-2017-210359. Epub 2017 Aug 11.
181. Osei ET, Florez-Sampedro L, Tasena H, Faiz A, Noordhoek JA, Timens W, Postma DS, **Hackett TL**, Heijink IH, Brandsma CA. miR-146a-5p plays an essential role in the aberrant epithelial-fibroblast cross-talk in COPD. *Eur Respir J*. 2017 May 25;49(5). pii: 1602538. doi: 10.1183/13993003.02538-2016. Print 2017 May.
182. Pascoe CD, **Obeidat M**, Arsenault BA, Nie Y, Warner S, Stefanowicz D, Wadsworth SJ, Hirota JA, Jasmine Yang S, **Dorscheid DR, Carlsten C, Hackett TL, Seow CY, Paré PD**. Gene expression analysis in asthma using a targeted multiplex array. *BMC Pulm Med*. 2017 Dec 11;17(1):189. doi: 10.1186/s12890-017-0545-9.
183. Pascoe CD, **Seow CY, Hackett TL, Paré PD**, Donovan GM. Heterogeneity of airway wall dimensions in humans: a critical determinant of lung function in asthmatics and nonasthmatics. *Am J Physiol Lung Cell Mol Physiol*. 2017 Mar 1;312(3):L425-L431. doi: 10.1152/ajplung.00421.2016. Epub 2017 Jan 6.
184. Perlman G, Praz F, Puri R, Ofek H, Ye J, Philippon F, Carrel T, Pibarot P, Attinger A, Htun NM, Dvir D, Moss R, Campelo-Parada F, Bédard E, Reineke D, Moschovitis A, Lauck S, Blanke P, **Leipsic J**, Windecker S, Rodés-Cabau J, Webb J. Transcatheter Tricuspid Valve Repair With a New Transcatheter Coaptation System for the Treatment of Severe Tricuspid Regurgitation: 1-Year Clinical and Echocardiographic Results. *JACC Cardiovasc Interv*. 2017 Oct 9;10(19):1994-2003. doi: 10.1016/j.jcin.2017.06.036. Epub 2017 Aug 2.
185. Perlman GY, Cheung A, Dumont E, Stub D, Dvir D, Del Trigo M, Pelletier M, Alnasser S, Ye J, Wood D, Thompson C, Blanke P, **Leipsic J, Seidman MA**, LeBlanc H, Buller CE, Rodés-Cabau J, Webb JG. Transcatheter aortic valve replacement with the Portico valve: one-year results of the early Canadian experience. *EuroIntervention*. 2017 Jan 20;12(13):1653-1659. doi: 10.4244/EIJ-D-16-00299.

186. Perner A, Gordon AC, Angus DC, Lamontagne F, Machado F, **Russell JA**, Timsit JF, Marshall JC, Myburgh J, Shankar-Hari M, Singer M. The intensive care medicine research agenda on septic shock. *Intensive Care Med.* 2017 Sep;43(9):1294-1305. doi: 10.1007/s00134-017-4821-1. Epub 2017 May 12. Review.
187. Pibarot P, Hahn RT, Weissman NJ, Arsenault M, Beaudoin J, Bernier M, Dahou A, Khalique OK, Asch FM, Toubal O, **Leipsic J**, Blanke P, Zhang F, Parvataneni R, Alu M, Herrmann H, Makkar R, Mack M, Smalling R, Leon M, Thourani VH, Kodali S. Association of Paravalvular Regurgitation With 1-Year Outcomes After Transcatheter Aortic Valve Replacement With the SAPIEN 3 Valve. *JAMA Cardiol.* 2017 Nov 1;2(11):1208-1216. doi: 10.1001/jamacardio.2017.3425.
188. Pisitsak C, **Walley KR**. The authors reply. *Crit Care Med.* 2017 Mar;45(3):e332-e333. doi: 10.1097/CCM.0000000000002221.
189. Poureslami I, **Camp P**, Shum J, Afshar R, Tang T, FitzGerald JM. Using Exploratory Focus Groups to Inform the Development of a Peer-Supported Pulmonary Rehabilitation Program: DIRECTIONS FOR FURTHER RESEARCH. *J Cardiopulm Rehabil Prev.* 2017 Jan;37(1):57-64. doi: 10.1097/HCR.0000000000000213.
190. Pui M, Nicol AM, Brauer M, Palad F, **Carlsten C**. A qualitative study of the knowledge, attitudes, and behaviors of people exposed to diesel exhaust at the workplace in British Columbia, Canada. *PLoS One.* 2017 Aug 25;12(8):e0182890. doi: 10.1371/journal.pone.0182890.
191. Qiu Y, Ye X, Zhang HM, Hanson P, Zhao G, Tong L, Xie R, **Yang D**. Cleavage of osmosensitive transcriptional factor NFAT5 by Coxsackieviral protease 2A promotes viral replication. *PLoS Pathog.* 2017 Dec 8;13(12):e1006744. doi: 10.1371/journal.ppat.1006744. eCollection 2017 Dec.
192. Quanjer PH, Ruppel GL, Langhammer A, Krishna A, Mertens F, Johannessen A, Menezes AMB, Wehrmeister FC, Perez-Padilla R, Swanney MP, **Tan WC**, Bourbeau J. Bronchodilator Response in FVC Is Larger and More Relevant Than in FEV1 in Severe Airflow Obstruction. *Chest.* 2017 May;151(5):1088-1098. doi: 10.1016/j.chest.2016.12.017. Epub 2016 Dec 28.
193. Ra SW, Sze MA, Lee EC, Tam S, Oh Y, Fishbane N, Criner GJ, Woodruff PG, Lazarus SC, Albert R, Connett JE, Han MK, Martinez FJ, Aaron SD, Reed RM, **Man SFP, Sin DD**; Canadian Respiratory Research Network. Azithromycin and risk of COPD exacerbations in patients with and without *Helicobacter pylori*. *Respir Res.* 2017 May 30;18(1):109. doi: 10.1186/s12931-017-0594-x.
194. Ra SW, **Sin DD**. Response. *Chest.* 2017 Jul;152(1):221-222. doi: 10.1016/j.chest.2017.04.158.
195. Ra SW, **Sin DD**. Should We Screen for Pulmonary Embolism in Severe COPD Exacerbations? Not Just Yet, Primum Non Nocere. *Chest.* 2017 Mar;151(3):523-524. doi: 10.1016/j.chest.2016.09.018.
196. Rabbat MG, Berman DS, Kern M, Raff G, Chinnaiyan K, Koweek L, Shaw LJ, Blanke P, Scherer M, Jensen JM, Lesser J, Nørgaard BL, Pontone G, De Bruyne B, Bax JJ, **Leipsic J**. Interpreting results of coronary computed tomography angiography-derived fractional flow reserve in clinical practice. *J Cardiovasc Comput Tomogr.* 2017 Sep - Oct;11(5):383-388. doi: 10.1016/j.jcct.2017.06.002. Epub 2017 Jun 23. Review.
197. Ramos KJ, **Quon BS**, Heltshe SL, Mayer-Hamblett N, Lease ED, Aitken ML, Weiss NS, Goss CH. Heterogeneity in Survival in Adult Patients With Cystic Fibrosis With FEV1 < 30% of Predicted in the United States. *Chest.* 2017 Jun;151(6):1320-1328. doi: 10.1016/j.chest.2017.01.019. Epub 2017 Jan 20.
198. Ramsook AH, Mitchell RA, Bell T, Calli S, Kennedy C, Lehmann J, Thompson M, Puyat JH, **Guenette JA**. Is parasternal intercostal EMG an accurate surrogate of respiratory neural drive and biomarker of dyspnea during cycle exercise testing? *Respir Physiol Neurobiol.* 2017 Aug;242:40-44. doi: 10.1016/j.resp.2017.03.003. Epub 2017 Mar 20.
199. Ramsook AH, Molgat-Seon Y, Schaeffer MR, Wilkie SS, **Camp PG**, Reid WD, Romer LM, **Guenette JA**. Effects of inspiratory muscle training on respiratory muscle electromyography and dyspnea during exercise in healthy men. *J Appl Physiol (1985).* 2017 May 1;122(5):1267-1275. doi: 10.1152/jappphysiol.00046.2017. Epub 2017 Mar 2.
200. Raymakers AJN, Sadatsafavi M, **Sin DD**, De Vera MA, Lynd LD. The Impact of Statin Drug Use on All-Cause Mortality in Patients With COPD: A Population-Based Cohort Study. *Chest.* 2017 Sep;152(3):486-493. doi: 10.1016/j.chest.2017.02.002. Epub 2017 Feb 12.
201. Reddel HK, Busse WW, Pedersen S, **Tan WC**, Chen YZ, Jorup C, Lythgoe D, O'Byrne PM. Should recommendations about starting inhaled corticosteroid treatment for mild asthma be based on symptom frequency: a post-hoc efficacy analysis of the START study. *Lancet.* 2017 Jan 14;389(10065):157-166. doi: 10.1016/S0140-6736(16)31399-X. Epub 2016 Nov 30.



202. Reed RM, Dransfield MT, Eberlein M, Miller M, Netzer G, Pavlovich M, Pollin TI, Scharf SM, Shuldiner AR, **Sin D**, Mitchell BD. Gender differences in first and secondhand smoke exposure, spirometric lung function and cardiometabolic health in the old order Amish: A novel population without female smoking. *PLoS One*. 2017 Mar 31;12(3):e0174354. doi: 10.1371/journal.pone.0174354. eCollection 2017.
203. Reichenspurner H, Schaefer A, Schäfer U, Tchétché D, Linke A, Spence MS, Søndergaard L, LeBreton H, Schymik G, Abdel-Wahab M, **Leipsic J**, Walters DL, Worthley S, Kasel M, Windecker S. Self-Expanding Transcatheter Aortic Valve System for Symptomatic High-Risk Patients With Severe Aortic Stenosis. *J Am Coll Cardiol*. 2017 Dec 26;70(25):3127-3136. doi: 10.1016/j.jacc.2017.10.060.
204. Robert J, Button EB, Stukas S, Boyce GK, Gibbs E, Cowan CM, Gilmour M, Cheng WH, Soo SK, Yuen B, Bahrabadi A, Kang K, Kulic I, **Francis G**, Cashman N, Wellington CL. High-density lipoproteins suppress A $\beta$ -induced PBMC adhesion to human endothelial cells in bioengineered vessels and in monoculture. *Mol Neurodegener*. 2017 Aug 22;12(1):60. doi: 10.1186/s13024-017-0201-0.
205. Roberts JD, **Krahn AD**, Ackerman MJ, Rohatgi RK, Moss AJ, Nazer B, Tadros R, Gerull B, Sanatani S, Wijeyeratne YD, Baruteau AE, Muir AR, Pang B, Cadrin-Tourigny J, Talajic M, Rivard L, Tester DJ, Liu T, Whitman IR, Wojciak J, Conacher S, Gula LJ, Leong-Sit P, Manlucu J, Green MS, Hamilton R, Healey JS, Lopes CM, Behr ER, Wilde AA, Gollob MH, Scheinman MM. Loss-of-Function KCNE2 Variants: True Monogenic Culprits of Long-QT Syndrome or Proarrhythmic Variants Requiring Secondary Provocation? *Circ Arrhythm Electrophysiol*. 2017 Aug;10(8). pii: e005282. doi: 10.1161/CIRCEP.117.005282.
206. Rosenson RS, Baker S, Banach M, Borow KM, Braun LT, Bruckert E, **Brunham LR**, Catapano AL, Elam MB, Mancini GBJ, Moriarty PM, Morris PB, Muntner P, Ray KK, Stroes ES, Taylor BA, Taylor VH, Watts GF, Thompson PD. Optimizing Cholesterol Treatment in Patients With Muscle Complaints. *J Am Coll Cardiol*. 2017 Sep 5;70(10):1290-1301. doi: 10.1016/j.jacc.2017.07.752. Review.
207. Rosner SR, Pascoe CD, Blankman E, Jensen CC, Krishnan R, James AL, Elliot JG, Green FH, Liu JC, **Seow CY**, Park JA, Beckerle MC, **Paré PD**, Fredberg JJ, Smith MA. The actin regulator zyxin reinforces airway smooth muscle and accumulates in airways of fatal asthmatics. *PLoS One*. 2017 Mar 9;12(3):e0171728. doi: 10.1371/journal.pone.0171728. eCollection 2017.
208. Ross BA, Wald R, Goldstein MB, Yuen DA, **Leipsic J**, Kiaii M, Rathe A, Deva DP, Kirpalani A, Bello OO, Graham JJ, Leong-Poi H, Connelly KA, Yan AT. Relationships Between Left Ventricular Structure and Function According to Cardiac MRI and Cardiac Biomarkers in End-Stage Renal Disease. *Can J Cardiol*. 2017 Apr;33(4):501-507. doi: 10.1016/j.cjca.2016.11.021. Epub 2016 Dec 3.
209. Ross ES, Sakakibara BM, Mackay MH, Whitehurst DG, Singer J, Toma M, Corbett KK, Van Spall HG, Rutherford K, Gheorghiu B, Code J, **Lear SA**. The Use of Text Messaging to Improve the Hospital-to-Community Transition in Acute Coronary Syndrome Patients (Txt2Prevent): Intervention Development and Pilot Randomized Controlled Trial Protocol. *JMIR Res Protoc*. 2017 May 23;6(5):e91. doi: 10.2196/resprot.6968.
210. Roston T, **Krahn AD**. My Approach to the patient with a borderline long QT interval. *Trends Cardiovasc Med*. 2017 Oct;27(7):516-517. doi: 10.1016/j.tcm.2017.06.009. Epub 2017 Jun 13.
211. Roston TM, Cunningham T, Lehman A, **Laksman ZW**, **Krahn AD**, Sanatani S. Beyond the Electrocardiogram: Mutations in Cardiac Ion Channel Genes Underlie Nonarrhythmic Phenotypes. *Clin Med Insights Cardiol*. 2017 Mar 16;11:1179546817698134. doi: 10.1177/1179546817698134. eCollection 2017. Review.
212. Roveran Genga K, Lo C, Cirstea M, Zhou G, **Walley KR**, **Russell JA**, Levin A, **Boyd JH**. Two-year follow-up of patients with septic shock presenting with low HDL: the effect upon acute kidney injury, death and estimated glomerular filtration rate. *J Intern Med*. 2017 May;281(5):518-529. doi: 10.1111/joim.12601. Epub 2017 Mar 19.
213. Ruile P, Jander N, Blanke P, Schoechlin S, Reinöhl J, Gick M, Rothe J, Langer M, **Leipsic J**, Buettner HJ, Neumann FJ, Pache G. Course of early subclinical leaflet thrombosis after transcatheter aortic valve implantation with or without oral anticoagulation. *Clin Res Cardiol*. 2017 Feb;106(2):85-95. doi: 10.1007/s00392-016-1052-3. Epub 2016 Nov 16.
214. Ruiz CE, Hahn RT, Berrebi A, Borer JS, Cutlip DE, Fontana G, Gerosa G, Ibrahim R, Jelnin V, Jilaihawi H, Jolicoeur EM, Kliger C, Kronzon I, **Leipsic J**, Maisano F, Millan X, Nataf P, O'Gara PT, Pibarot P, Ramee SR, Rihal CS, Rodes-Cabau J, Sorajja P, Suri R, Swain JA, Turi ZG, Tuzcu EM, Weissman NJ, Zamorano JL, Serruys PW, Leon MB; Paravalvular Leak Academic Research Consortium. Clinical Trial Principles and Endpoint Definitions for Paravalvular Leaks in Surgical Prosthesis: An Expert Statement. *J Am Coll Cardiol*. 2017 Apr 25;69(16):2067-2087. doi: 10.1016/j.jacc.2017.02.038. Review.

215. Rush B, Martinka P, Kilb B, McDermid RC, **Boyd JH**, Celi LA. Acute Respiratory Distress Syndrome in Pregnant Women. *Obstet Gynecol*. 2017 Mar;129(3):530-535. doi: 10.1097/AOG.0000000000001907.
216. Rush B, Martinka P, McDermid RC, **Boyd JH**, Celi LA. In Reply. *Obstet Gynecol*. 2017 Jul;130(1):218-219. doi: 10.1097/AOG.0000000000002124.
217. Rush B, McDermid RC, Celi LA, **Walley KR**, **Russell JA**, **Boyd JH**. Association between chronic exposure to air pollution and mortality in the acute respiratory distress syndrome. *Environ Pollut*. 2017 May;224:352-356. doi: 10.1016/j.envpol.2017.02.014. Epub 2017 Feb 13.
218. Rush B, Tyler PD, Stone DJ, Geisler BP, **Walley KR**, Celi LA. Outcomes of Ventilated Patients With Sepsis Who Undergo Interhospital Transfer: A Nationwide Linked Analysis. *Crit Care Med*. 2018 Jan;46(1):e81-e86. doi: 10.1097/CCM.0000000000002777.
219. Rush B, **Walley KR**, Celi LA, Rajoriya N, Brahmania M. Palliative care access for hospitalized patients with end-stage liver disease across the United States. *Hepatology*. 2017 Nov;66(5):1585-1591. doi: 10.1002/hep.29297. Epub 2017 Sep 26.
220. **Russell JA**, Lee T, Singer J, **Boyd JH**, **Walley KR**; Vasopressin and Septic Shock Trial (VASST) Group. The Septic Shock 3.0 Definition and Trials: A Vasopressin and Septic Shock Trial Experience. *Crit Care Med*. 2017 Jun;45(6):940-948. doi: 10.1097/CCM.0000000000002323.
221. **Russell JA**, Rush B, **Boyd J**. Pathophysiology of Septic Shock. *Crit Care Clin*. 2018 Jan;34(1):43-61. doi: 10.1016/j.ccc.2017.08.005. Review.
222. **Russell JA**, Vincent JL, Kjølbye AL, Olsson H, Blemings A, Spapen H, Carl P, Laterre PF, Grundemar L. Selepressin, a novel selective vasopressin V1A agonist, is an effective substitute for norepinephrine in a phase IIa randomized, placebo-controlled trial in septic shock patients. *Crit Care*. 2017 Aug 15;21(1):213. doi: 10.1186/s13054-017-1798-7.
223. **Russell JA**. Vasopressin, Norepinephrine, and Vasodilatory Shock after Cardiac Surgery: Another "VASST" Difference? *Anesthesiology*. 2017 Jan;126(1):9-11.
224. Ryan HM, Jones MA, Payne BA, Sharma S, Hutfield AM, Lee T, Ukah UV, **Walley KR**, Magee LA, von Dadelszen P. Validating the Performance of the Modified Early Obstetric Warning System Multivariable Model to Predict Maternal Intensive Care Unit Admission. *J Obstet Gynaecol Can*. 2017 Sep;39(9):728-733.e3. doi: 10.1016/j.jogc.2017.01.028. Epub 2017 May 26.
225. **Ryerson CJ**, Corte TJ, Lee JS, Richeldi L, Walsh SLF, Myers JL, Behr J, Cottin V, Danoff SK, Flaherty KR, Lederer DJ, Lynch DA, Martinez FJ, Raghu G, Travis WD, Udwadia Z, Wells AU, Collard HR. A Standardized Diagnostic Ontology for Fibrotic Interstitial Lung Disease. An International Working Group Perspective. *Am J Respir Crit Care Med*. 2017 Nov 15;196(10):1249-1254. doi: 10.1164/rccm.201702-0400PP.
226. **Ryerson CJ**, Corte TJ, Martinez FJ, Collard HR. Reply: The New Idiopathic Pulmonary Fibrosis Acute Exacerbations Document: One Step Ahead but Still Suspended in the Air. *Am J Respir Crit Care Med*. 2017 Jan 15;195(2):269. doi: 10.1164/rccm.201608-1607LE.
227. Sakakibara BM, Ross E, Arthur G, Brown-Ganzert L, Petrin S, Sedlak T, **Lear SA**. Using Mobile-Health to Connect Women with Cardiovascular Disease and Improve Self-Management. *Telemed J E Health*. 2017 Mar;23(3):233-239. doi: 10.1089/tmj.2016.0133. Epub 2016 Sep 13.
228. Sakakibara BM, **Lear SA**, Barr SI, Benavente O, Goldsmith CH, Silverberg ND, Yao J, Eng JJ. Development of a Chronic Disease Management Program for Stroke Survivors Using Intervention Mapping: The Stroke Coach. *Arch Phys Med Rehabil*. 2017 Jun;98(6):1195-1202. doi: 10.1016/j.apmr.2017.01.019. Epub 2017 Feb 20.
229. Sarak B, Wald R, Goldstein MB, Deva DP, **Leipsic J**, Kiaii M, Leung G, Barfett JJ, Perl J, Yuen DA, Connelly KA, Yan AT. Relationship between changes in blood pressure and left ventricular mass over 1 year in end-stage renal disease. *J Hypertens*. 2017 Aug;35(8):1709-1716. doi: 10.1097/HJH.0000000000001353.
230. Saw WY, Tantoso E, Begum H, Zhou L, Zou R, He C, Chan SL, Tan LW, Wong LP, Xu W, Moong DKN, Lim Y, Li B, Pillai NE, Peterson TA, Bielawny T, Meikle PJ, Mundra PA, Lim WY, Luo M, Chia KS, Ong RT, **Brunham LR**, Khor CC, Too HP, Soong R, Wenk MR, Little P, Teo YY. Establishing multiple omics baselines for three Southeast Asian populations in the Singapore Integrative Omics Study. *Nat Commun*. 2017 Sep 21;8(1):653. doi: 10.1038/s41467-017-00413-x.
231. Schaeffer MR, Molgat-Seon Y, **Ryerson CJ**, **Guenette JA**. Supplemental oxygen and dyspnoea in interstitial lung disease: absence of evidence is not evidence of absence. *Eur Respir Rev*. 2017 Aug 9;26(145). pii: 170033. doi: 10.1183/16000617.0033-2017. Print 2017 Sep 30.

232. Schaeffer MR, **Ryerson CJ**, Ramsook AH, Molgat-Seon Y, Wilkie SS, Dhillon SS, Mitchell RA, Sheel AW, Khalil N, **Camp PG**, **Guenette JA**. Effects of hyperoxia on dyspnoea and exercise endurance in fibrotic interstitial lung disease. *Eur Respir J*. 2017 May 25;49(5). pii: 1602494. doi: 10.1183/13993003.02494-2016. Print 2017 May.
233. Schulman-Marcus J, Lin FY, Gransar H, Berman D, Callister T, DeLago A, Hadamitzky M, Hausleiter J, Al-Mallah M, Budoff M, Kaufmann P, Achenbach S, Raff G, Chinnaiyan K, Cademartiri F, Maffei E, Villines T, Kim J, **Leipsic J**, Feuchtner G, Rubinshtein R, Pontone G, Andreini D, Marques H, Chang HJ, Chow BJW, Cury RC, Dunning A, Shaw L, Min JK. Coronary revascularization vs. medical therapy following coronary-computed tomographic angiography in patients with low-, intermediate- and high-risk coronary artery disease: results from the CONFIRM long-term registry. *Eur Heart J Cardiovasc Imaging*. 2017 May 1;18(8):841-848. doi: 10.1093/ehjci/jew287.
234. **Seidman MA**, Mitchell RN. Genes in the Basement, Postmortem Genetic Testing...and 3 (New) Realities. *Circ Cardiovasc Genet*. 2017 Dec;10(6). pii: e002008. doi: 10.1161/CIRCGENETICS.117.002008.
235. Sellers SL, Milad N, White Z, Pascoe CD, Chan R, Payne GW, **Seow CY**, Rossi F, **Seidman MA**, **Bernatchez P**. Increased non-HDL cholesterol levels cause muscle wasting and ambulatory dysfunction in the mouse model of LGMD2B. *J Lipid Res*. 2017 Nov 25. pii: jlr.M079459. doi: 10.1194/jlr.M079459.
236. Sellers SL, Murphy DT, **Leipsic JA**. Indexed Aortic Area in Bicuspid Valve Disease: An Important Step Toward a More Personalized Approach to Risk Prediction and Clinical Decision Making. *Circ Cardiovasc Imaging*. 2017 Jun;10(6):e006593. doi: 10.1161/CIRCIMAGING.117.006593.
237. Shannon CP, Balshaw R, Chen V, Hollander Z, Toma M, **McManus BM**, FitzGerald JM, **Sin DD**, **Ng RT**, **Tebbutt SJ**. Enumerateblood - an R package to estimate the cellular composition of whole blood from Affymetrix Gene ST gene expression profiles. *BMC Genomics*. 2017 Jan 6;18(1):43. doi: 10.1186/s12864-016-3460-1.
238. Sharma A, Kirkpatrick G, Chen V, Skolnik K, Hollander Z, Wilcox P, **Quon BS**. Clinical utility of C-reactive protein to predict treatment response during cystic fibrosis pulmonary exacerbations. *PLoS One*. 2017 Feb 8;12(2):e0171229. doi: 10.1371/journal.pone.0171229. eCollection 2017.
239. Sharma A, Yuen D, Huet O, Pickering R, Stefanovic N, **Bernatchez P**, de Haan JB. Corrigendum to "Lack of glutathione peroxidase-1 facilitates a pro-inflammatory and activated vascular endothelium" [*Vasc. Pharmacol*. 79 (2016) 32-42]. *Vascul Pharmacol*. 2017 Dec;99:83. doi: 10.1016/j.vph.2017.09.006. Epub 2017 Oct 6.
240. Shaw LJ, Blankstein R, Jacobs JE, **Leipsic JA**, Kwong RY, Taqueti VR, Beanlands RSB, Mieres JH, Flamm SD, Gerber TC, Spertus J, Di Carli MF; American Heart Association Cardiovascular Imaging and Intervention Subcommittee of the Council on Clinical Cardiology; Council on Cardiovascular Radiology and Intervention; Council on Cardiovascular and Stroke Nursing; Council on Cardiovascular Disease in the Young; and Council on Quality of Care and Outcomes Research. Defining Quality in Cardiovascular Imaging: A Scientific Statement From the American Heart Association. *Circ Cardiovasc Imaging*. 2017 Dec;10(12). pii: e000017. doi: 10.1161/HCI.0000000000000017. Review.
241. Shaw LJ, Villines T, Blankstein R, Abbara S, Weigold G, Slim A, **Leipsic J**. Coronary Computed Tomographic Angiography - The evidence dominates! *J Cardiovasc Comput Tomogr*. 2017 Jan - Feb;11(1):85. doi: 10.1016/j.jcct.2016.12.001. Epub 2016 Dec 12.
242. Shen WK, Sheldon RS, Benditt DG, Cohen MI, Forman DE, Goldberger ZD, Grubb BP, Hamdan MH, **Krahn AD**, Link MS, Olshansky B, Raj SR, Sandhu RK, Sorajja D, Sun BC, Yancy CW. 2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients With Syncope: Executive Summary: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *J Am Coll Cardiol*. 2017 Aug 1;70(5):620-663. doi: 10.1016/j.jacc.2017.03.002. Epub 2017 Mar 9.
243. Shen WK, Sheldon RS, Benditt DG, Cohen MI, Forman DE, Goldberger ZD, Grubb BP, Hamdan MH, **Krahn AD**, Link MS, Olshansky B, Raj SR, Sandhu RK, Sorajja D, Sun BC, Yancy CW. 2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients With Syncope: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *J Am Coll Cardiol*. 2017 Aug 1;70(5):e39-e110. doi: 10.1016/j.jacc.2017.03.003. Epub 2017 Mar 9.

244. Shen WK, Sheldon RS, Benditt DG, Cohen MI, Forman DE, Goldberger ZD, Grubb BP, Hamdan MH, **Krahn AD**, Link MS, Olshansky B, Raj SR, Sandhu RK, Sorajja D, Sun BC, Yancy CW. 2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients With Syncope: Executive Summary: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *Circulation*. 2017 Aug 1;136(5):e25-e59. doi: 10.1161/CIR.0000000000000498. Epub 2017 Mar 9. Review. Erratum in: *Circulation*. 2017 Oct 17;136(16):e269-e270.
245. Shen WK, Sheldon RS, Benditt DG, Cohen MI, Forman DE, Goldberger ZD, Grubb BP, Hamdan MH, **Krahn AD**, Link MS, Olshansky B, Raj SR, Sandhu RK, Sorajja D, Sun BC, Yancy CW. 2017 ACC/AHA/HRS Guideline for the Evaluation and Management of Patients With Syncope: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *Circulation*. 2017 Aug 1;136(5):e60-e122. doi: 10.1161/CIR.0000000000000499. Epub 2017 Mar 9. Review. Erratum in: *Circulation*. 2017 Oct 17;136(16):e271-e272.
246. Shen Y, Russo V, Zeglinski MR, Sellers SL, Wu Z, Oram C, Santacruz S, Merkulova Y, Turner C, Tauh K, Zhao H, Bozin T, Bohunek L, Zeng H, **Seidman MA**, Bleackley RC, **McManus BM**, Ruoslahti E, Järvinen TAH, **Granville DJ**. Recombinant Decorin Fusion Protein Attenuates Murine Abdominal Aortic Aneurysm Formation and Rupture. *Sci Rep*. 2017 Nov 20;7(1):15857. doi: 10.1038/s41598-017-16194-8.
247. Shen Y, Russo V, Zeglinski MR, Sellers SL, Wu Z, Oram C, Santacruz S, Merkulova Y, Turner C, Tauh K, Zhao H, Bozin T, Bohunek L, Zeng H, **Seidman MA**, Bleackley RC, **McManus BM**, Ruoslahti E, Järvinen TAH, **Granville DJ**. Recombinant Decorin Fusion Protein Attenuates Murine Abdominal Aortic Aneurysm Formation and Rupture. *Sci Rep*. 2017 Nov 20;7(1):15857. doi: 10.1038/s41598-017-16194-8.
248. Sima CA, Inskip JA, Sheel AW, **van Eeden SF**, Reid WD, **Camp PG**. The reliability of short-term measurement of heart rate variability during spontaneous breathing in people with chronic obstructive pulmonary disease. *Rev Port Pneumol (2006)*. 2017 Nov - Dec;23(6):338-342. doi: 10.1016/j.rppnen.2017.06.001. Epub 2017 Jul 8.
249. **Sin DD**, King GG. COPD: Lessons learned, forging a fantastic future. *Respirology*. 2017 May;22(4):632-633. doi: 10.1111/resp.13031. Epub 2017 Mar 24.
250. **Sin DD**, **Leung JM**, Wechsler ME. Concern of underdiagnosing asthma-COPD overlap syndrome if age limit of 40 years for asthma is used. *Eur Respir J*. 2017 Aug 3;50(2). pii: 1701120. doi: 10.1183/13993003.01120-2017. Print 2017
251. **Sin DD**. Asthma-COPD Overlap Syndrome: What We Know and What We Don't. *Tuberc Respir Dis (Seoul)*. 2017 Jan;80(1):11-20. doi: 10.4046/trd.2017.80.1.11. Epub 2016 Dec 30. Review.
252. Soon J, Pibarot P, Blanke P, Ohana M, **Leipsic J**. Multimodality Imaging for Planning and Follow-up of Transcatheter Aortic Valve Replacement. *Can J Cardiol*. 2017 Sep;33(9):1110-1123. doi: 10.1016/j.cjca.2017.03.024. Epub 2017 Apr 4. Review.
253. Stefanowicz D, Ullah J, Lee K, Shaheen F, Olumese E, Fishbane N, Koo HK, Hallstrand TS, Knight DA, **Hackett TL**. Epigenetic modifying enzyme expression in asthmatic airway epithelial cells and fibroblasts. *BMC Pulm Med*. 2017 Jan 31;17(1):24. doi: 10.1186/s12890-017-0371-0.
254. Stephenson AL, Sykes J, Stanojevic S, **Quon BS**, Marshall BC, Petren K, Ostrenga J, Fink AK, Elbert A, Goss CH. Survival Comparison of Patients With Cystic Fibrosis in Canada and the United States: A Population-Based Cohort Study. *Ann Intern Med*. 2017 Apr 18;166(8):537-546. doi: 10.7326/M16-0858. Epub 2017 Mar 14.
255. Sukma Dewi I, Celik S, Karlsson A, Hollander Z, Lam K, McManus JW, **Tebbutt S**, **Ng R**, Keown P, McMaster R, **McManus B**, Öhman J, Gidlöf O. Exosomal miR-142-3p is increased during cardiac allograft rejection and augments vascular permeability through down-regulation of endothelial RAB11FIP2 expression. *Cardiovasc Res*. 2017 Apr 1;113(5):440-452. doi: 10.1093/cvr/cvw244.
256. Sukma Dewi I, Gidlöf O, Hollander Z, Lam KK, Benson MD, Braun OO, Nilsson J, **Tebbutt SJ**, **Ng RT**, Öhman J, **McManus BM**, Smith JG. Immunological Serum Protein Profiles for Noninvasive Detection of Acute Cellular Rejection After Heart Transplantation. *J Am Coll Cardiol*. 2017 Dec 12;70(23):2946-2947. doi: 10.1016/j.jacc.2017.10.012.
257. Sukma Dewi I, Hollander Z, Lam KK, McManus JW, **Tebbutt SJ**, **Ng RT**, Keown PA, McMaster RW, **McManus BM**, Gidlöf O, Öhman J. Association of Serum MiR-142-3p and MiR-101-3p Levels with Acute Cellular Rejection after Heart Transplantation. *PLoS One*. 2017 Jan 26;12(1):e0170842. doi: 10.1371/journal.pone.0170842. eCollection 2017.

258. Sulaiman N, Soon J, Park JK, Naoum C, Kueh SH, Blanke P, Murphy D, Ellis J, Hague CJ, **Leipsic J**. Comparison of low-dose coronary artery calcium scoring using low tube current technique and hybrid iterative reconstruction vs. filtered back projection. *Clin Imaging*. 2017 May - Jun;43:19-23. doi: 10.1016/j.clinimag.2017.01.017. Epub 2017 Feb 2.
259. Sun HL, McIntosh KA, Squire SJ, Yang M, Bartholomew C, Gue DS, **Camp PG**, Jackson SC. Patient powered prophylaxis: A 12-month study of individualized prophylaxis in adults with severe haemophilia A. *Haemophilia*. 2017 Nov;23(6):877-883. doi: 10.1111/hae.13319. Epub 2017 Aug 29.
260. Suzuki M, Sze MA, Campbell JD, Brothers JF 2nd, Lenburg ME, McDonough JE, Elliott WM, Cooper JD, Spira A, **Hogg JC**. The cellular and molecular determinants of emphysematous destruction in COPD. *Sci Rep*. 2017 Aug 25;7(1):9562. doi: 10.1038/s41598-017-10126-2.
261. Szilveszter B, Kolossváry M, Karády J, Jermendy ÁL, Károlyi M, Panajotu A, Bagyura Z, Vecsey-Nagy M, Cury RC, **Leipsic JA**, Merkely B, Maurovich-Horvat P. Structured reporting platform improves CAD-RADS assessment. *J Cardiovasc Comput Tomogr*. 2017 Nov;11(6):449-454. doi: 10.1016/j.jcct.2017.09.008. Epub 2017 Sep 18.
262. Tammemagi MC, Schmidt H, Martel S, McWilliams A, Goffin JR, Johnston MR, Nicholas G, Tremblay A, Bhatia R, Liu G, Soghrati K, Yasufuku K, Hwang DM, Laberge F, Gingras M, Pasian S, Couture C, Mayo JR, Nasute Fauerbach PV, Atkar-Khattra S, Peacock SJ, Cressman S, Ionescu D, English JC, Finley RJ, Yee J, Puksa S, Stewart L, Tsai S, Haider E, Boylan C, Cutz JC, Manos D, Xu Z, Goss GD, Seely JM, Amjadi K, Sekhon HS, Burrowes P, MacEachern P, Urbanski S, **Sin DD, Tan WC**, Leighl NB, Shepherd FA, Evans WK, Tsao MS, Lam S; PanCan Study Team. Participant selection for lung cancer screening by risk modelling (the Pan-Canadian Early Detection of Lung Cancer [PanCan] study): a single-arm, prospective study. *Lancet Oncol*. 2017 Nov;18(11):1523-1531. doi: 10.1016/S1470-2045(17)30597-1. Epub 2017 Oct 18.
263. **Tan WC**. Two Cs spell double trouble: COPD and CAP. *Int J Tuberc Lung Dis*. 2017 Feb 1;21(2):128. doi: 10.5588/ijtld.16.0896.
264. Tanabe N, Vasilescu DM, McDonough JE, Kinose D, Suzuki M, Cooper JD, **Paré PD, Hogg JC**. Micro-Computed Tomography Comparison of Preterminal Bronchioles in Centrilobular and Panlobular Emphysema. *Am J Respir Crit Care Med*. 2017 Mar 1;195(5):630-638. doi: 10.1164/rccm.201602-0278OC.
265. Tang AC, Saferali A, He G, **Sandford AJ**, Strug LJ, Turvey SE. Endoplasmic Reticulum Stress and Chemokine Production in Cystic Fibrosis Airway Cells: Regulation by STAT3 Modulation. *J Infect Dis*. 2017 Jan 15;215(2):293-302. doi: 10.1093/infdis/jiw516.
266. Tarlo SM, Malo JL, de Blay F, Le Moual N, Henneberger P, Heederik D, Raulf M, **Carlsten C**, Cartier A; ATS Assembly on Environmental, Occupational, and Population Health. An Official American Thoracic Society Workshop Report: Presentations and Discussion of the Sixth Jack Pepys Workshop on Asthma in the Workplace. *Ann Am Thorac Soc*. 2017 Sep;14(9):1361-1372. doi: 10.1513/AnnalsATS.201706-508ST.
267. Taylor CA, Gaur S, **Leipsic J**, Achenbach S, Berman DS, Jensen JM, Dey D, Bøtker HE, Kim HJ, Khem S, Wilk A, Zarins CK, Bezerra H, Lesser J, Ko B, Narula J, Ahmadi A, Øvrehus KA, St Goar F, De Bruyne B, Nørgaard BL. Effect of the ratio of coronary arterial lumen volume to left ventricle myocardial mass derived from coronary CT angiography on fractional flow reserve. *J Cardiovasc Comput Tomogr*. 2017 Nov;11(6):429-436. doi: 10.1016/j.jcct.2017.08.001. Epub 2017 Aug 3.
268. To T, Zhu J, **Carlsten C**, Larsen K, Ryckman K, Feldman LY, Crighton E, Loughheed MD, Liciskai C, Villeneuve PJ, Su Y, Sadatsafavi M, Gershon A; Canadian Respiratory Research Network. Do community demographics, environmental characteristics and access to care affect risks of developing ACOS and mortality in people with asthma? *Eur Respir J*. 2017 Sep 11;50(3). pii: 1700644. doi: 10.1183/13993003.00644-2017.
269. Toma M, Mak GJ, Chen V, Hollander Z, Shannon CP, Lam KKY, **Ng RT, Tebbutt SJ**, Wilson-McManus JE, Ignaszewski A, Anderson T, Dyck JRB, Howlett J, Ezekowitz J, **McManus BM**, Oudit GY. Differentiating heart failure phenotypes using sex-specific transcriptomic and proteomic biomarker panels. *ESC Heart Fail*. 2017 Aug;4(3):301-311. doi: 10.1002/ehf2.12136. Epub 2017 Mar 4.
270. Tran MM, Lefebvre DL, Dai D, Dharma C, Subbarao P, Lou W, Azad MB, Becker AB, Mandhane PJ, Turvey SE, Sears MR; **CHILD Study Investigators**. Timing of food introduction and development of food sensitization in a prospective birth cohort. *Pediatr Allergy Immunol*. 2017 Aug;28(5):471-477. doi: 10.1111/pai.12739. **D Daley, A Sandford, and S Tebbutt are CHILD Study Investigators**
271. Tu AW, Humphries KH, **Lear SA**. Longitudinal changes in visceral and subcutaneous adipose tissue and metabolic syndrome: Results from the Multicultural Community Health Assessment Trial (M-CHAT). *Diabetes Metab Syndr*. 2017 Dec;11 Suppl 2:S957-S961. doi: 10.1016/j.dsx.2017.07.022. Epub 2017 Jul 8.

272. Tun HM, Konya T, Takaro TK, Brook JR, Chari R, Field CJ, Guttman DS, Becker AB, Mandhane PJ, Turvey SE, Subbarao P, Sears MR, Scott JA, Kozyrskyj AL; **CHILD Study Investigators**. Exposure to household furry pets influences the gut microbiota of infant at 3-4 months following various birth scenarios. *Microbiome*. 2017 Apr 6;5(1):40. doi: 10.1186/s40168-017-0254-x. **D Daley, A Sandford, and S Tebbutt are CHILD Study Investigators**
273. Vasilescu DM, Phillion AB, Tanabe N, Kinose D, Paige DF, Kantrowitz JJ, Liu G, Liu H, Fishbane N, Verleden SE, Vanaudenaerde BM, Lenburg M, Stevenson CS, Spira A, Cooper JD, **Hackett TL, Hogg JC**. Nondestructive cryomicro-CT imaging enables structural and molecular analysis of human lung tissue. *J Appl Physiol* (1985). 2017 Jan 1;122(1):161-169. doi: 10.1152/jappphysiol.00838.2016. Epub 2016 Nov 17.
274. Vogelmeier CF, Criner GJ, Martínez FJ, Anzueto A, Barnes PJ, Bourbeau J, Celli BR, Chen R, Decramer M, Fabbri LM, Frith P, Halpin DM, López Varela MV, Nishimura M, Roche N, Rodríguez-Roisin R, **Sin DD**, Singh D, Stockley R, Vestbo J, Wedzicha JA, Agustí A. Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Lung Disease 2017 Report: GOLD Executive Summary. *Eur Respir J*. 2017 Mar 6;49(3). pii: 1700214. doi: 10.1183/13993003.00214-2017. Print 2017 Mar. Erratum in: *Eur Respir J*. 2017 Jun 22;49(6):.
275. Vogelmeier CF, Criner GJ, Martínez FJ, Anzueto A, Barnes PJ, Bourbeau J, Celli BR, Chen R, Decramer M, Fabbri LM, Frith P, Halpin DM, López Varela MV, Nishimura M, Roche N, Rodríguez-Roisin R, **Sin DD**, Singh D, Stockley R, Vestbo J, Wedzicha JA, Agustí A. Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Lung Disease 2017 Report. GOLD Executive Summary. *Am J Respir Crit Care Med*. 2017 Mar 1;195(5):557-582. doi: 10.1164/rccm.201701-0218PP.
276. Vogelmeier CF, Criner GJ, Martínez FJ, Anzueto A, Barnes PJ, Bourbeau J, Celli BR, Chen R, Decramer M, Fabbri LM, Frith P, Halpin DM, López Varela MV, Nishimura M, Roche N, Rodríguez-Roisin R, **Sin DD**, Singh D, Stockley R, Vestbo J, Wedzicha JA, Agustí A. Global Strategy for the Diagnosis, Management and Prevention of Chronic Obstructive Lung Disease 2017 Report: GOLD Executive Summary. *Respirology*. 2017 Apr;22(3):575-601. doi: 10.1111/resp.13012. Epub 2017 Mar 7.
277. Vogelmeier CF, Criner GJ, Martínez FJ, Anzueto A, Barnes PJ, Bourbeau J, Celli BR, Chen R, Decramer M, Fabbri LM, Frith P, Halpin DM, Varela MVL, Nishimura M, Roche N, Rodríguez-Roisin R, **Sin DD**, Singh D, Stockley R, Vestbo J, Wedzicha JA, Agustí A. Erratum to "Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Lung Disease 2017 Report: GOLD Executive Summary" [*Arch Bronconeumol*. 2017;53:128-49]. *Arch Bronconeumol*. 2017 Jul;53(7):411-412. doi: 10.1016/j.arbres.2017.06.001. English, Spanish.
278. Vogelmeier CF, Criner GJ, Martínez FJ, Anzueto A, Barnes PJ, Bourbeau J, Celli BR, Chen R, Decramer M, Fabbri LM, Frith P, Halpin DM, López Varela MV, Nishimura M, Roche N, Rodríguez-Roisin R, **Sin DD**, Singh D, Stockley R, Vestbo J, Wedzicha JA, Agustí A. Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Lung Disease 2017 Report: GOLD Executive Summary. *Arch Bronconeumol*. 2017 Mar;53(3):128-149. doi: 10.1016/j.arbres.2017.02.001. Epub 2017 Mar 6. English, Spanish.
279. Wain LV, Shrine N, Artigas MS, Erzurumluoglu AM, Noyvert B, Bossini-Castillo L, **Obeidat M**, Henry AP, Portelli MA, Hall RJ, Billington CK, Rimington TL, Fenech AG, John C, Blake T, Jackson VE, Allen RJ, Prins BP; Understanding Society Scientific Group, Campbell A, Porteous DJ, Jarvelin MR, Wielscher M, James AL, Hui J, Wareham NJ, Zhao JH, Wilson JF, Joshi PK, Stubbe B, Rawal R, Schulz H, Imboden M, Probst-Hensch NM, Karrasch S, Gieger C, Deary IJ, Harris SE, Marten J, Rudan I, Enroth S, Gyllenstein U, Kerr SM, Polasek O, Kähönen M, Surakka I, Vitart V, Hayward C, Lehtimäki T, Raitakari OT, Evans DM, Henderson AJ, Pennell CE, Wang CA, Sly PD, Wan ES, Busch R, Hobbs BD, Litonjua AA, Sparrow DW, Gulsvik A, Bakke PS, Crapo JD, Beaty TH, Hansel NN, Mathias RA, Ruczinski I, Barnes KC, Bossé Y, Joubert P, van den Berge M, Brandsma CA, **Paré PD, Sin DD**, Nickle DC, Hao K, Gottesman O, Dewey FE, Bruse SE, Carey DJ, Kirchner HL; Geisinger-Regeneron DiscovEHR Collaboration, Jonsson S, Thorleifsson G, Jonsdottir I, Gislason T, Stefansson K, Schurmann C, Nadkarni G, Bottinger EP, Loos RJ, Walters RG, Chen Z, Millwood IY, Vaucher J, Kurmi OP, Li L, Hansell AL, Brightling C, Zeggini E, Cho MH, Silverman EK, Sayers I, Trynka G, Morris AP, Strachan DP, Hall IP, Tobin MD. Genome-wide association analyses for lung function and chronic obstructive pulmonary disease identify new loci and potential druggable targets. *Nat Genet*. 2017 Mar;49(3):416-425. doi: 10.1038/ng.3787. Epub 2017 Feb 6.
280. Walker BB, Schuurman N, Auluck A, **Lear SA**, Rosin M. Socioeconomic disparities in head and neck cancer patients' access to cancer treatment centers. *Rural Remote Health*. 2017 Jul-Sep;17(3):4210. doi: 10.22605/RRH4210. Epub 2017 Aug 31.
281. **Walley KR**. New Approaches to Modifying Inotropy in Sepsis-Induced Myocardial Dysfunction. *Crit Care Med*. 2017 Apr;45(4):754-756. doi: 10.1097/CCM.0000000000002126.

282. Walsh SLF, Maher TM, Kolb M, Poletti V, Nusser R, Richeldi L, Vancheri C, Wilsher ML, Antoniou KM, Behr J, Bendstrup E, Brown K, Calandriello L, Corte TJ, Cottin V, Crestani B, Flaherty K, Glaspole I, Grutters J, Inoue Y, Kokosi M, Kondoh Y, Kouranos V, Kreuter M, Johansson K, Judge E, Ley B, Margaritopoulos G, Martinez FJ, Molina-Molina M, Morais A, Nunes H, Raghu G, **Ryerson CJ**, Selman M, Spagnolo P, Taniguchi H, Tomassetti S, Valeyre D, Wijsenbeek M, Wuyts W, Hansell D, Wells A; IPF Project Consortium. Diagnostic accuracy of a clinical diagnosis of idiopathic pulmonary fibrosis: an international case-cohort study. *Eur Respir J*. 2017 Aug 31;50(2). pii: 1700936. doi: 10.1183/13993003.00936-2017. Print 2017 Aug.
283. Wan D, Tsui C, Kiess M, Grewal J, **Krahn AD**, Chakrabarti S. Anticoagulation for Thromboembolic Risk Reduction in Adults With Congenital Heart Disease. *Can J Cardiol*. 2017 Dec;33(12):1597-1603. doi: 10.1016/j.cjca.2017.08.009. Epub 2017 Aug 19. Review.
284. Wang F, Qiu Y, Zhang HM, Hanson P, Ye X, Zhao G, Xie R, Tong L, **Yang D**. Heat shock protein 70 promotes coxsackievirus B3 translation initiation and elongation via Akt-mTORC1 pathway depending on activation of p70S6K and Cdc2. *Cell Microbiol*. 2017 Jul;19(7). doi: 10.1111/cmi.12725.
285. Wang Y, Xiang X, Wu SQ, Chen G, Zhang MM, Wang MG, Wang FJ, **Sandford AJ**, He JQ. Association of CYP2B6 gene polymorphisms and anti-tuberculosis drug-induced hepatotoxicity in a Chinese population. *Infect Genet Evol*. 2017 Jul;51:198-202. doi: 10.1016/j.meegid.2017.04.001.
286. Washko GR, **Coxson HO**, O'Donnell DE, Aaron SD. CT imaging of chronic obstructive pulmonary disease: insights, disappointments, and promise. *Lancet Respir Med*. 2017 Nov;5(11):903-908. doi: 10.1016/S2213-2600(17)30345-4.
287. Watt DG, Ramanathan ML, McSorley ST, **Walley K**, Park JH, Horgan PG, McMillan DC. Clinicopathological Determinants of an Elevated Systemic Inflammatory Response Following Elective Potentially Curative Resection for Colorectal Cancer. *Ann Surg Oncol*. 2017 Sep;24(9):2588-2594. doi: 10.1245/s10434-017-5987-z.
288. Webb JG, Mack MJ, White JM, Dvir D, Blanke P, Herrmann HC, **Leipsic J**, Kodali SK, Makkar R, Miller DC, Pibarot P, Pichard A, Satler LF, Svensson L, Alu MC, Suri RM, Leon MB. Transcatheter Aortic Valve Implantation Within Degenerated Aortic Surgical Bioprostheses: PARTNER 2 Valve-in-Valve Registry. *J Am Coll Cardiol*. 2017 May 9;69(18):2253-2262. doi: 10.1016/j.jacc.2017.02.057.
289. Weidner J, Jarenbäck L, de Jong K, Vonk JM, van den Berge M, Brandsma CA, Boezen HM, **Sin D**, Bossé Y, Nickle D, Ankerst J, Bjermer L, Postma DS, Faiz A, Tufvesson E. Sulfatase modifying factor 1 (SUMF1) is associated with Chronic Obstructive Pulmonary Disease. *Respir Res*. 2017 May 2;18(1):77. doi: 10.1186/s12931-017-0562-5.
290. Wilson M, Mazowita G, Ignaszewski A, Levin A, Barber C, Thompson D, Barr S, **Lear S**, Levy RD. Family physician access to specialist advice by telephone: Reduction in unnecessary specialist consultations and emergency department visits. *Can Fam Physician*. 2016 Nov;62(11):e668-e676.
291. Wiskar K, Celi LA, **Walley KR**, Fruhstorfer C, Rush B. Inpatient palliative care referral and 9-month hospital readmission in patients with congestive heart failure: a linked nationwide analysis. *J Intern Med*. 2017 Nov;282(5):445-451. doi: 10.1111/joim.12657.
292. Wong A, Tavakoli H, Sadatsafavi M, **Carlsten C**, FitzGerald JM. Asthma control and productivity loss in those with work-related asthma: A population-based study. *J Asthma*. 2017 Jun;54(5):537-542. doi: 10.1080/02770903.2016.1220011. Epub 2016 Aug 5.
293. Wong WD, Wang L, **Paré PD**, **Seow CY**. Bronchodilatory effect of deep inspiration in freshly isolated sheep lungs. *Am J Physiol Lung Cell Mol Physiol*. 2017 Feb 1;312(2):L178-L185. doi: 10.1152/ajplung.00321.2016. Epub 2016 Dec 2.
294. Woodruff PG, van den Berge M, Boucher RC, Brightling C, Burchard EG, Christenson SA, Han MK, Holtzman MJ, Kraft M, Lynch DA, Martinez FD, Reddel HK, **Sin DD**, Washko GR, Wenzel SE, Punturieri A, Freemer MM, Wise RA. American Thoracic Society/National Heart, Lung, and Blood Institute Asthma-Chronic Obstructive Pulmonary Disease Overlap Workshop Report. *Am J Respir Crit Care Med*. 2017 Aug 1;196(3):375-381. doi: 10.1164/rccm.201705-0973WS.
295. Writing Committee Members, Shen WK, Sheldon RS, Benditt DG, Cohen MI, Forman DE, Goldberger ZD, Grubb BP, Hamdan MH, **Krahn AD**, Link MS, Olshansky B, Raj SR, Sandhu RK, Sorajja D, Sun BC, Yancy CW. 2017 ACC/AHA/HRS guideline for the evaluation and management of patients with syncope: A report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *Heart Rhythm*. 2017 Aug;14(8):e155-e217. doi: 10.1016/j.hrthm.2017.03.004.

296. Writing Committee Members, Shen WK, Sheldon RS, Benditt DG, Cohen MI, Forman DE, Goldberger ZD, Grubb BP, Hamdan MH, **Krahn AD**, Link MS, Olshansky B, Raj SR, Sandhu RK, Sorajja D, Sun BC, Yancy CW. 2017 ACC/AHA/HRS guideline for the evaluation and management of patients with syncope: Executive summary: A report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines and the Heart Rhythm Society. *Heart Rhythm*. 2017 Aug;14(8):e218-e254. doi: 10.1016/j.hrthm.2017.03.005. Epub 2017 Mar 9.
297. Xie JX, Eshtehardi P, Varghese T, Goyal A, Mehta PK, Kang W, **Leipsic J**, Ó Hartaigh B, Bairey Merz CN, Berman DS, Gransar H, Budoff MJ, Achenbach S, Callister TQ, Marques H, Rubinshtein R, Al-Mallah MH, Andreini D, Pontone G, Cademartiri F, Maffei E, Chinnaiyan K, Raff G, Hadamitzky M, Hausleiter J, Feuchtner G, Kaufmann PA, Villines TC, Chow BJW, Min JK, Shaw LJ. Prognostic Significance of Nonobstructive Left Main Coronary Artery Disease in Women Versus Men: Long-Term Outcomes From the CONFIRM (Coronary CT Angiography Evaluation For Clinical Outcomes: An International Multicenter) Registry. *Circ Cardiovasc Imaging*. 2017 Aug;10(8). pii: e006246. doi: 10.1161/CIRCIMAGING.117.006246.
298. Yang CX, Singh A, Kim YW, Conway EM, **Carlsten C, Tebbutt SJ**. Diagnosis of Western Red Cedar Asthma Using a Blood-based Gene Expression Biomarker Panel. *Am J Respir Crit Care Med*. 2017 Dec 15;196(12):1615-1617. doi: 10.1164/rccm.201608-1740LE.
299. Yasmin F, Tun HM, Konya TB, Guttman DS, Chari RS, Field CJ, Becker AB, Mandhane PJ, Turvey SE, Subbarao P, Sears MR; **CHILD Study Investigators**, Scott JA, Dinu I, Kozyrskyj AL. Cesarean Section, Formula Feeding, and Infant Antibiotic Exposure: Separate and Combined Impacts on Gut Microbial Changes in Later Infancy. *Front Pediatr*. 2017 Sep 26;5:200. doi: 10.3389/fped.2017.00200. eCollection 2017. **D Daley, A Sandford, and S Tebbutt are CHILD Study Investigators**
300. Yoon SH, Bleiziffer S, De Backer O, Delgado V, Arai T, Ziegelmueller J, Barbanti M, Sharma R, Perlman GY, Khalique OK, Holy EW, Saraf S, Deuschl F, Fujita B, Ruile P, Neumann FJ, Pache G, Takahashi M, Kaneko H, Schmidt T, Ohno Y, Schofer N, Kong WKF, Tay E, Sugiyama D, Kawamori H, Maeno Y, Abramowitz Y, Chakravarty T, Nakamura M, Kuwata S, Yong G, Kao HL, Lee M, Kim HS, Modine T, Wong SC, Bedgoni F, Testa L, Teiger E, Butter C, Ensminger SM, Schaefer U, Dvir D, Blanke P, **Leipsic J**, Nietlispach F, Abdel-Wahab M, Chevalier B, Tamburino C, Hildick-Smith D, Whisenant BK, Park SJ, Colombo A, Latib A, Kodali SK, Bax JJ, Søndergaard L, Webb JG, Lefèvre T, Leon MB, Makkar R. Outcomes in Transcatheter Aortic Valve Replacement for Bicuspid Versus Tricuspid Aortic Valve Stenosis. *J Am Coll Cardiol*. 2017 May 30;69(21):2579-2589. doi: 10.1016/j.jacc.2017.03.017. Epub 2017 Mar 18.
301. Zafari Z, Bryan S, **Sin DD**, Conte T, Khakban R, Sadatsafavi M. A Systematic Review of Health Economics Simulation Models of Chronic Obstructive Pulmonary Disease. *Value Health*. 2017 Jan;20(1):152-162. doi: 10.1016/j.jval.2016.08.003. Epub 2016 Oct 10. Review.



## E Published in 2017

302. Amaral AFS, Patel J, Kato BS, Obaseki DO, Lawin H, **Tan WC**, Juvekar SK, Harrabi I, Studnicka M, Wouters EFM, Loh LC, Bateman ED, Mortimer K, Buist AS, Burney PGJ; BOLD Collaborative Research Group. Airflow Obstruction and Use of Solid Fuels for Cooking or Heating: BOLD Results. *Am J Respir Crit Care Med*. 2017 Sep 12. doi: 10.1164/rccm.201701-0205OC. [Epub ahead of print]
303. Bom MJ, Driessen RS, Stuijzand WJ, Raijmakers PG, Van Kuijk CC, Lammertsma AA, van Rossum AC, van Royen N, Knuuti J, Mäki M, Nieman K, Min JK, **Leipsic JA**, Danad I, Knaapen P. Diagnostic Value of Transluminal Attenuation Gradient for the Presence of Ischemia as Defined by Fractional Flow Reserve and Quantitative Positron Emission Tomography. *JACC Cardiovasc Imaging*. 2017 Dec 8. pii: S1936-878X(17)30990-7. doi: 10.1016/j.jcmg.2017.10.009. [Epub ahead of print]
304. de Vries M, Faiz A, Woldhuis RR, Postma DS, de Jong TV, **Sin DD**, Bossé Y, Nickle DC, Guryev V, Timens W, van den Berge M, Brandsma CA. Lung tissue gene-expression signature for the ageing lung in COPD. *Thorax*. 2017 Dec 6. pii: thoraxjnl-2017-210074. doi: 10.1136/thoraxjnl-2017-210074. [Epub ahead of print]
305. Du Plessis JP, Fernandes S, Jamal R, **Camp P**, Johannson K, Schaeffer M, Wilcox PG, **Guenette JA**, **Ryerson CJ**. Exertional hypoxemia is more severe in fibrotic interstitial lung disease than in COPD. *Respirology*. 2017 Nov 28. doi: 10.1111/resp.13226. [Epub ahead of print]
306. Goss CH, Sykes J, Stanojevic S, Marshall B, Petren K, Ostrenga J, Fink A, Elbert A, **Quon BS**, Stephenson AL. Comparison of Nutrition and Lung Function Outcomes in Patients with Cystic Fibrosis Living in Canada and the United States. *Am J Respir Crit Care Med*. 2017 Nov 3. doi: 10.1164/rccm.201707-1541OC. [Epub ahead of print]
307. Han D, Hartaigh BÓ, Gransar H, Lee JH, Rizvi A, Baskaran L, Schulman-Marcus J, Dunning A, Achenbach S, Al-Mallah MH, Berman DS, Budoff MJ, Cademartiri F, Maffei E, Callister TQ, Chinnaiyan K, Chow BJW, DeLago A, Hadamitzky M, Hausleiter J, Kaufmann PA, Raff G, Shaw LJ, Villines TC, Kim YJ, **Leipsic J**, Feuchtner G, Cury RC, Pontone G, Andreini D, Marques H, Rubinshtein R, Hindoyan N, Jones EC, Gomez M, Lin FY, Chang HJ, Min JK. Incremental prognostic value of coronary computed tomography angiography over coronary calcium scoring for major adverse cardiac events in elderly asymptomatic individuals. *Eur Heart J Cardiovasc Imaging*. 2017 Jul 20. doi: 10.1093/ehjci/jex150. [Epub ahead of print]
308. Jensen JM, Bøtker HE, Mathiassen ON, Grove EL, Øvrehus KA, Pedersen KB, Terkelsen CJ, Christiansen EH, Maeng M, **Leipsic J**, Kaltoft A, Jakobsen L, Sørensen JT, Thim T, Kristensen S, Krusell LR, Nørgaard BL. Computed tomography derived fractional flow reserve testing in stable patients with typical angina pectoris: influence on downstream rate of invasive coronary angiography. *Eur Heart J Cardiovasc Imaging*. 2017 Apr 20. doi: 10.1093/ehjci/jex068. [Epub ahead of print]
309. Joseph P, Yusuf S, Lee SF, Ibrahim Q, Teo K, Rangarajan S, Gupta R, Rosengren A, **Lear SA**, Avezum A, Lopez-Jaramillo P, Gulec S, Yusufali A, Chifamba J, Lanan F, Kumar R, Mohammadifard N, Mohan V, Mony P, Kruger A, Liu X, Guo B, Zhao W, Yang Y, Pillai R, Diaz R, Krishnapillai A, Iqbal R, Yusuf R, Szuba A, Anand SS; PURE INVESTIGATORS. Prognostic validation of a non-laboratory and a laboratory based cardiovascular disease risk score in multiple regions of the world. *Heart*. 2017 Oct 24. pii: heartjnl-2017-311609. doi: 10.1136/heartjnl-2017-311609. [Epub ahead of print]
310. Karur GR, Wald R, Goldstein MB, Wald R, Jimenez-Juan L, Kiaii M, **Leipsic J**, Kirpalani A, Bello O, Barthur A, Ng MY, Deva DP, Yan AT. Association between conversion to in-center nocturnal hemodialysis and right ventricular remodeling. *Nephrol Dial Transplant*. 2017 Aug 3. doi: 10.1093/ndt/gfx232. [Epub ahead of print]
311. Kearns MJ, **Walley KR**. Tamponade: Hemodynamic and Echocardiographic Diagnosis. *Chest*. 2017 Nov 11. pii: S0012-3692(17)33071-4. doi: 10.1016/j.chest.2017.11.003. [Epub ahead of print] Review.
312. Leitao Filho FS, Ra SW, Mattman A, **Schellenberg RS**, **Sin DD**. Reply. *J Allergy Clin Immunol*. 2017 Dec 5. pii: S0091-6749(17)31670-6. doi: 10.1016/j.jaci.2017.10.013. [Epub ahead of print].
313. McIntyre LA, Stewart DJ, Mei SHJ, Courtman D, Watpool I, Granton J, Marshall J, Dos Santos C, **Walley KR**, Winston BW, Schlosser K, Fergusson DA; Canadian Critical Care Trials Group and the Canadian Critical Care Translational Biology Group. Cellular Immunotherapy for Septic Shock (CISS): A Phase I Clinical Trial. *Am J Respir Crit Care Med*. 2017 Sep 29. doi: 10.1164/rccm.201705-1006OC. [Epub ahead of print]
314. Parkash R, Thibault B, Philippon F, Mangat I, Coutu B, Bennett M, Crystal E, Healey J, Verma A, Sandhu R, Cameron D, Ayala-édes F, Sterns L, Essebag V, Sturmer M, Nery P, Wells G, **Krahn A**. Canadian Registry of Implantable Electronic Device Outcomes: Longer Term Follow up of the Riata Lead Under Advisory. *Heart Rhythm*. 2017 Nov 30. pii: S1547-5271(17)31420-0. doi: 10.1016/j.hrthm.2017.11.033. [Epub ahead of print]

315. Piyadasa H, Hemshekhar M, **Carlsten C**, Mookherjee N. Inhaled Diesel Exhaust Decreases Antimicrobial Peptides Alpha-defensin and S100A7 in Human Bronchial Secretion. *Am J Respir Crit Care Med*. 2017 Dec 15. doi: 10.1164/rccm.201708-1714LE. [Epub ahead of print]
316. Roberts JM, Dai DLY, Hollander Z, **Ng RT, Tebbutt SJ**, Wilcox PG, **Sin DD, Quon BS**. Multiple reaction monitoring mass spectrometry to identify novel plasma protein biomarkers of treatment response in cystic fibrosis pulmonary exacerbations. *J Cyst Fibros*. 2017 Nov 21. pii: S1569-1993(17)30950-5. doi: 10.1016/j.jcf.2017.10.013. [Epub ahead of print]
317. Roston TM, Dewar L, Franciosi S, Hathaway J, Bartels K, Cunningham T, Gibbs KA, Sheps S, **Laksman ZWM**, Sanatani S, Krahn AD. The accessibility and utilization of genetic testing for inherited heart rhythm disorders: a Canadian cross-sectional survey study. *J Community Genet*. 2017 Nov 23. doi: 10.1007/s12687-017-0348-y. [Epub ahead of print]
318. Ruiz CE, Hahn RT, Berrebi A, Borer JS, Cutlip DE, Fontana G, Gerosa G, Ibrahim R, Jelnin V, Jilaihawi H, Jolicoeur EM, Kliger C, Kronzon I, **Leipsic J**, Maisano F, Millan X, Nataf P, O'Gara PT, Pibarot P, Ramee SR, Rihal CS, Rodes-Cabau J, Sorajja P, Suri R, Swain JA, Turi ZG, Tuzcu EM, Weissman NJ, Zamorano JL, Serruys PW, Leon MB; of the Paravalvular Leak Academic Research Consortium. Clinical Trial Principles and Endpoint Definitions for Paravalvular Leaks in Surgical Prosthesis: An Expert Statement. *Eur Heart J*. 2017 Apr 18. doi: 10.1093/eurheartj/ehx211. [Epub ahead of print]
319. Rush B, Wiskar K, Celi LA, **Walley KR, Russell JA**, McDermid RC, **Boyd JH**. Association of Household Income Level and In-Hospital Mortality in Patients With Sepsis: A Nationwide Retrospective Cohort Analysis. *J Intensive Care Med*. 2017 Jan 1:885066617703338. doi: 10.1177/0885066617703338. [Epub ahead of print]
320. Rush B, **Walley KR**, Celi LA, Rajoriya N, Brahmania M. Reply to: HEP-17-1544. *Hepatology*. 2017 Sep 18. doi: 10.1002/hep.29534. [Epub ahead of print] No abstract available.
321. Teboul JL, Duranteau J, **Russell JA**. Intensive care medicine in 2050: vasopressors in sepsis. *Intensive Care Med*. 2017 Aug 31. doi: 10.1007/s00134-017-4909-7. [Epub ahead of print] No abstract available.
322. Turner CT, Lim D, **Granville DJ**. Granzyme B in skin inflammation and disease. *Matrix Biol*. 2017 Dec 14. pii: S0945-053X(17)30335-9. doi: 10.1016/j.matbio.2017.12.005. [Epub ahead of print] Review.
323. Vanderstocken G, Dvorkin-Gheva A, Shen P, Brandsma CA, **Obeidat M**, Bossé Y, Hassell JA, Stampfli MR. Identification of Drug Candidates to Suppress Cigarette Smoke-induced Inflammation via cMap Analyses. *Am J Respir Cell Mol Biol*. 2017 Dec 19. doi: 10.1165/rcmb.2017-0202OC. [Epub ahead of print]

## APPENDIX C: CENTRE FOR HEART LUNG INNOVATION 2017 SEMINAR SERIES

Month	Day	Speaker	Host	Title of Lecture
January	13	<b>Martin Kolb</b>	Chris Ryerson	Progression of IPF – How breathing more makes things get worse
	20	<b>Tony Hu</b>	Mari DeMarco	When Less is More – Nanotech – enabled discovery and Quantification of Blood Biomarkers
	27	<b>Zachary Laksman</b>	HLI	Personalized Medicine for Heart Rhythm Disorders and Drug Screening; From Bedside to Bench
February	3	<b>Thibault Mayor</b>	Mari DeMarco	License to Kill: The Clearance of Cytosolic Misfolded Proteins
	10	<b>Pascal Bernatchez</b>	HLI	The Unexpected Contribution of the Vascular Endothelium in Aortic Wall Remodeling and Muscle Disorders in Childhood
	17	<b>Craig Galban</b>	Jim Hogg	Quantification of Small Airways Disease by Parametric Response Mapping
	24	<b>Benjamin Smith</b>	Wan Tan	Conquering Chronic Obstructive Pulmonary Disease in the 21st Century – it will take a village
March	3	<b>Teresa To</b>	Wan Tan	What Do We Know about the Risk of
	10	<b>Barry Gumbiner</b>	Tillie Hackett	Cadherin Regulation in Development and Disease
	17	<b>FEST</b>		
	24	<b>Tania Bubela</b>	Don Sin	Priming Systems for Development, Implementation, and Evaluation of Precision Health Technologies: Lessons from Alberta
	31	<b>Mark Larché</b>	Scott Tebbutt	The Role of T cells in the Pathogenesis of Allergy & Asthma: Manipulating Immune Responses with T cell Epitopes

April	7	<b>Mathieu Morissette</b>	Chris Carlsten	Interplay Between Smoking and Pulmonary Lipid Homeostasis: Implications for New Pathological Mechanisms, Therapies and Biomarkers
	14	<b>GOOD FRIDAY</b>		
	21	<b>Tzung Hsiai</b>	Ying Wang	A Journey of Blood Flow: From Cardiac Development to Atherosclerosis
	28	<b>Michelle Tallquist</b>	David Granville	Regulation of Lung Fibroblast Development
May	5	<b>Janice Leung</b>	HLI	The Aging HIV Lung: From Dysbiosis to Disease
	12	<b>Rebecca Kusko</b>	Maen Obeidat	Integrative Transcriptomics in Smoking Related Lung Diseases
	19	<b>ATS</b>		
	26	<b>Gordon Francis</b>	HLI	The Unrecognized Importance of Smooth Muscle Cells in Atherosclerotic Foam Cell Formation in Humans and Mice
June	2	<b>Peter Backx</b>	Zachary Laksman	Mechanisms of Atrial Fibrillation Revealed by the Atria Changes Induced by Intense Endurance Exercise
	9	<b>Mohsen Sadatsafav</b>	Wan Tan	The Economic Burden of Asthma (EBA) study: a review of findings
	16	<b>Sara Vasconcelos</b>	Zachary Laksman	Engineering Microenvironments for Biological Discovery and Cardiovascular Regeneration
	23	<b>Steven An</b>	Chun Seow	Re-engineering the Sensory Array of Airway Smooth Muscle to Discover Novel Chemo-mechanical Signaling Node against Obstructive Lung Disease
	30	<b>Geoffrey Maksym</b>	Chun Seow	Oscillometry and Imaging to Understand Small Airway Disease – Examples from Asthma and Obesity
July - August	<b>Summer Hiatus</b>			
September	15	<b>Wayne Mitzner</b>	Don Sin/Peter Paré	Development of Lung Anatomy, Physiology, and Pathology
	22	<b>Junyan Shi</b>	Mari DeMarco	Quantitation of C-reactive Protein by Mass Spectrometry for Better Clinical and Research Applications
	29	<b>Karin Humphries</b>	HLI	Sex differences in high-sensitivity cardiac troponin levels - Stepped wedge RCT to evaluate impact on outcomes

October	13	<b>Ed Pryzdial</b>	Honglin Luo	Virus Impact on Hemostasis: Diabolical Dengue, Heinous Herpes
	20	<b>Azadeh Yadollahi</b>	Don Sin/Peter Paré	Rostral fluid shift and airway narrowing in asthma
	27	<b>Stacey Skoretz</b>	Keith Walley	Investigating the link between breathing and swallowing following mechanical ventilation
November	3	<b>Andrew Thamboo</b>	Keith Walley	How does a Rhinologist Fit within HLI?
	10	<b>Jordan Guenette</b>	HLI	Sex differences in respiratory exercise physiology: from elite athletes to COPD
	17	<b>Aleks Leligdowicz</b>	John Boyd	Endothelial Injury in Early Sepsis
	24	<b>John Hanrahan</b>	Bradley Quon	CFTR in airway defense
December	1	<b>Peter Zandstra</b>	Keith Walley	Canceled
	8	<b>Brian Rodrigues</b>	Honglin Luo	Endothelial cell-cardiomyocyte cross talk in providing fatty acids to the diabetic heart

## APPENDIX D: CENTRE FOR HEART LUNG INNOVATION 2017 RESEARCH IN PROGRESS SEMINARS

Month	Day	Speaker	Title of Lecture
January	9	<b>Luka Culibrk</b>	WASP-mediated Actin polymerization as a host factor in <i>Aspergillus fumigatus</i> infection
	16	<b>Ying Wang</b>	Macrophages are not the main source of foam cells in Apolipoprotein E-deficient mice
	23	<b>Yasir Mohamud</b>	Coxsackievirus subversion of the autophagy pathway
	30	<b>Emma Zheng</b>	Manipulating trypsin digestion conditions to accelerate proteolysis and simplify digestion workflows in development of protein mass spectrometric assays for the clinical laboratory
February	6	<b>Kimia Shahangian</b>	Investigations into the H1N1 Pandemic: Why did Asthmatics Experience Greater Morbidity and Mortality?
	13	Family Day – No Lecture	
	20	<b>Ori Benari</b>	Beyond Dissemination: A Knowledge Translation Study to Implement and Evaluate a Tool to Support Safe and Effective Activity in AECOPD (AECOPD-Mob)
	27	<b>Konesuke Moritani</b>	The objective is to investigate the potential value of using RF to selectively eliminate the diseased regions of the lungs. The potential value is that if this technology can be safely translated to clinical application, many patients with severe emphysema could survive without invasive surgery
March	6	<b>Cody Lo</b>	The Role of Genetics in Modulating HDL Levels during Sepsis
	13	<b>Josh Dubland</b>	Lysosomal Lipid Accumulation and Dysregulation of Downstream Cholesterol Homeostasis in Human Arterial Smooth Muscle Cells
	20	<b>Julia Yang</b>	Comparison of Microbial Communities in the Gut-Lung Axis of HIV Donors
	27	<b>Kei Yamasaki</b>	Decreased Particulate Matter (PM) Phagocytic Activity of Type M2-Monocyte Derived Macrophages
April	3	<b>Effe Christidi</b>	Modeling Doxorubicin-Induced Cardiotoxicity in Induced Pluripotent Stem Cell Derived-Cardiomyocytes
	10	<b>Emmanuel Osei</b>	The Role of Interleukin-1 in Driving Inflammation and Repair in the Asthmatic EMTU
	17	Easter Monday – No lecture	
	24	<b>Sami ( Habibur Rahman )</b>	Association between Prednisone Administration and DNA Methylation in Stable COPD Patients

May	1	<b>Ye Qui</b>	Modulation and Roles of Cellular Stress-Responsive Proteins in Coxsackievirus Infection
	8	<b>Haojun Huang (Margaret)</b>	CRISPRCas9-Based Genome Editing to Investigate Functional Impact of Genetic Variants Associated With Doxorubicin-Induced Cardiotoxicity
	15	<b>Arash Tehrani</b>	The Role of Endothelial Mechano-sensing in the Disproportionate Incidence of Atherosclerosis
	22	VICTORIA DAY & ATS – No lecture	
	29	<b>Zoe White</b>	Vascular Therapies in Marfan Syndrome
June	5	<b>Nawaf Alotaibi</b>	Phenotyping COPD Exacerbations Using Imaging, Blood-Based Biomarkers, and Sputum
	12	<b>Minhee Jin</b>	The Relationship of Absolute Telomere Length with Quality of Life, Exacerbations and Mortality in COPD
September	4	LABOUR DAY – No lecture	
	11	<b>Tim Xue</b>	Virus, An Unexpected Cause of Amyotrophic Lateral Sclerosis
	18	<b>Tony Yang (PAC)</b>	Computational Biology, Target Validation, and Microfluidic Approaches to Uncover COPD Therapeutic Targets
	25	<b>Yasir Mohamud</b>	Enterovirus Subversion of Autophagy Provides a Novel Disease Mechanism
October	2	<b>Amreen Toor</b>	Interaction of Aspergillus fumigatus Conidia with Human Bronchial Epithelial Cells
	9	THANKSGIVING – No lecture	
	16	<b>Alex Leung</b>	Reduced PCSK9 function increases LTA clearance and improves outcomes in gram positive septic shock patients
	23	<b>Guangze Zhao</b>	Disruption of Intercalated Disc Component Proteins in Coxsackievirus B3 Infection
	30	<b>Serena Singh</b>	Alpha-synuclein post-translational modifications: Towards the development of in vivo diagnostics for dementia with Lewy bodies
November	6	<b>Eric Deng</b>	CVB3 is an oncolytic virus against KRAS-mutant Non-Small-Cell-Lung-Cancer
	13	REMEMBRANCE DAY – No lecture	
	20	<b>Mary Zhang</b>	Heat shock protein 70 promotes coxsackievirus B3 translation via the Akt-mTORC1 pathway
	27	<b>Aaron Barlow</b>	Revealing Fine Structure of Fibrillar Collagen Using Super-Resolution Second Harmonic Generation Microscopy
December	4	<b>Julia Yang</b>	Comparison of Microbial Communities in the Gut-Lung Axis of HIV Donors
	11	<b>Steve Booth</b>	Profiling the molecular and cellular landscape of emphysema & small airways disease in Mild/Moderate COPD



Centre for  
**Heart Lung Innovation**  
UBC and St. Paul's Hospital

The Centre for Heart Lung Innovation  
St. Paul's Hospital  
Room 166 – 1081 Burrard Street  
Vancouver, British Columbia, V6Z 1Y6  
Tel: 604.806.8346 / Fax: 604.806.8351  
[info@hli.ubc.ca](mailto:info@hli.ubc.ca) / [www.hli.ubc.ca](http://www.hli.ubc.ca)

Follow us on



**a place of mind**  
THE UNIVERSITY OF BRITISH COLUMBIA



PROVIDENCE HEALTH CARE  
**Research Institute**