

Meet the Investigator Night

September 21, 2023

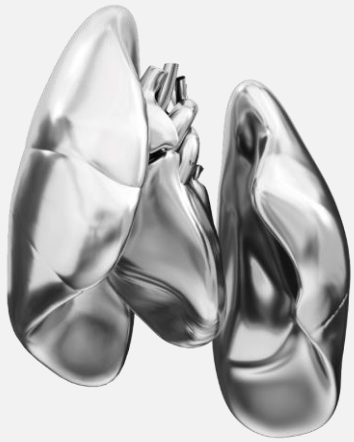


Medicine
UNIVERSITY OF TORONTO

RESPIROLOGY
50
YEARS OF EXCELLENCE

Respirology Domains

- Lung Transplantation
- Sleep
- Cystic Fibrosis
- Pulmonary Hypertension
- Airway and Fibrotic Lung Disease
- Physiology and Rehabilitation



Toronto
Lung
Transplant
Program

Together we could...

Hea**p**
Loads of
Abstracts!

Hel**p**
Lots of
Allosensitized patients!

Have
Lots of
Amusement!

- Peri-transplant desensitization
- De novo donor-specific antibodies
- Antibody-mediated rejection
- Work with TLTP database
- Good stats support
- Contact me!
meghan.aversa@uhn.ca

Lianne Singer

Transplantation and advanced lung disease

- Patient-reported outcomes
- Clinical outcomes
- Frailty and aging-associated syndromes

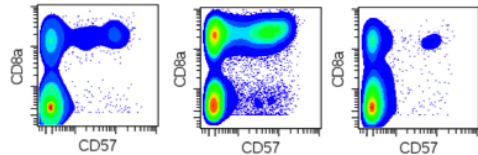
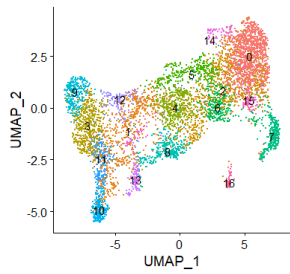
Cohort studies

Databases

Selected Respirology resident publications:

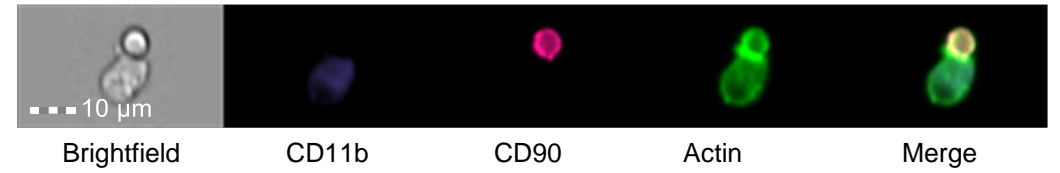
- **Martelli V**, Mathur S, Wickerson L, Gottesman C, Helm D, **Singer LG**, Rozenberg D. Impaired Cardiac Autonomic Response in Lung Transplant Patients: A Retrospective Cohort Study. Clin Transplant. 2019 PMID: 31132178.
- **Aversa M**, Chowdhury NA, Tomlinson G, **Singer LG**. Preoperative expectations for health-related quality of life after lung transplant. Clin Transplant. 2018 PMID: 30160803
- **Bhinder S**, Chen H, Sato M, Copes R, Evans GJ, Chow CW, **Singer LG**. Air pollution and the development of posttransplant chronic lung allograft dysfunction. Am J Transplant. 2014 PMID: 25358842.
- **Colman RE**, Curtis JR, Nelson JE, Efferen L, Hadjiliadis D, Levine DJ, Meyer KC, Padilla M, Streck M, Varkey B, **Singer LG**. Barriers to optimal palliative care of lung transplant candidates. Chest. 2013 PMID: 22922517.
- **Naraine VS**, Bradley TD, **Singer LG**. Prevalence of sleep disordered breathing in lung transplant recipients. J Clin Sleep Med. 2009 PMID: 19961029

Single-cell RNA sequencing of BAL and CLAD tissue

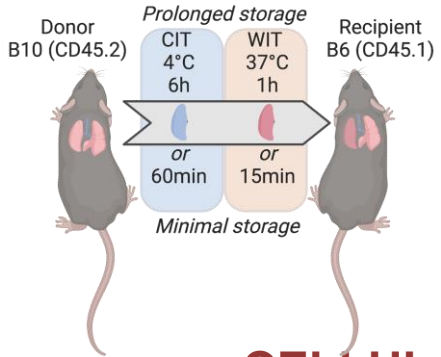


Mass cytometry of BAL cells

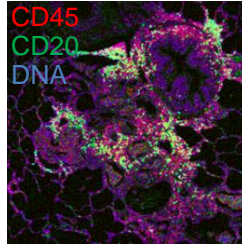
Imaging flow cytometry of T cell alloreactivity



Mouse lung transplant



Imaging mass cytometry of CLAD tissue



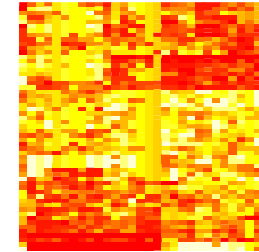
Basic and Translational Research in Chronic Lung Allograft Dysfunction

We would be CLAD to have you!

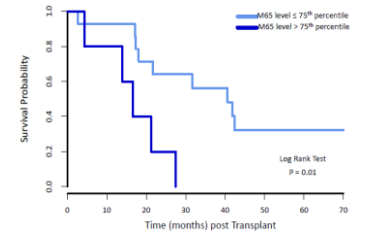
Stephen.juvel@uhn.ca
Tereza.martinu@uhn.ca



BAL biomarkers



BAL epithelial cell death marker

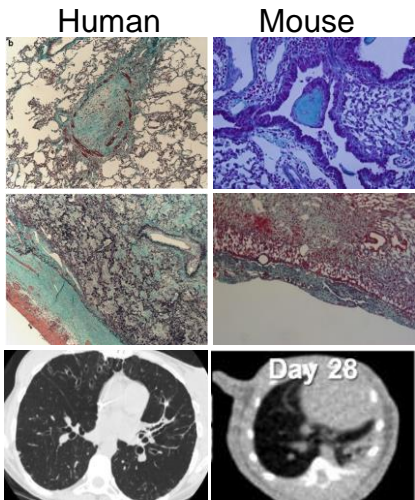


CELLULAR MECHANISMS

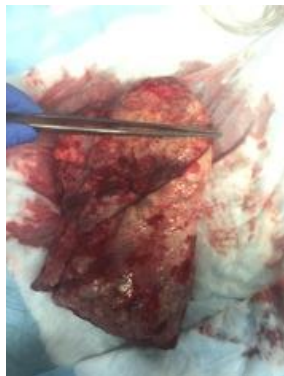
DIAGNOSTICS / BIOMARKERS

MECHANISTIC HUMAN-MOUSE CORRELATES

LUNG-DIRECTED THERAPY



Human CLAD explant

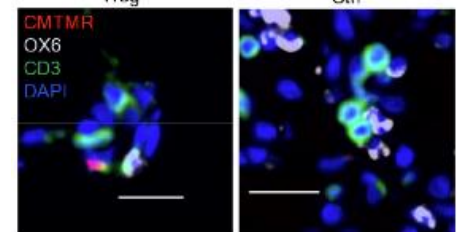
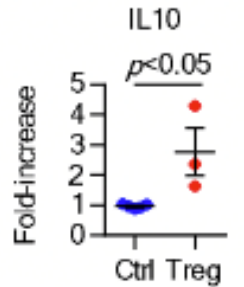
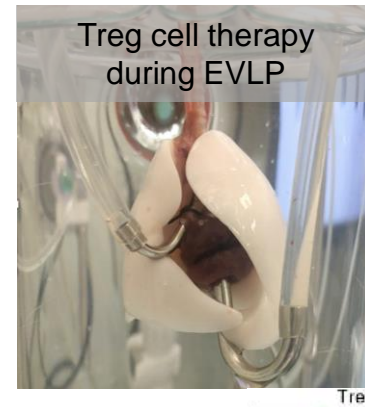
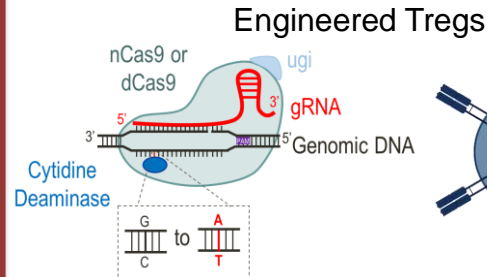


Database



TLTP Research General Applications

Macrophage-targeted lipid nanoparticles



Current Trainees

Allen Duong
Julie Semenchuk
Christina Lam
Sumi Karagunaran
Ankita Burman
Rayoun Ramendra
Ke Bei
Wenshan Zhong
Daniel Vosoughi
Reese Whittaker
Zoeen Carter

Mili Dianti
Tsukasa Ishiwata
David Sebben
Yamato Suzuki
Nicole Chrysler
Felix Liu
Abbie Lo



Staff

Sajad Moshkelgosha
Betty Joe
Rachel Stoneham
Amit Patel

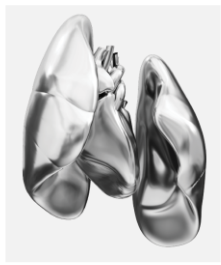


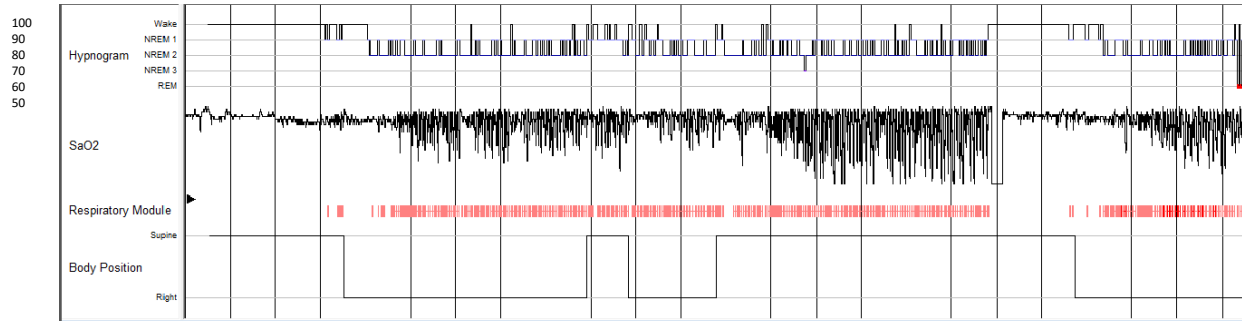
Previous Trainees

Melissa Brijbassi – *U of T respirology resident 2016*

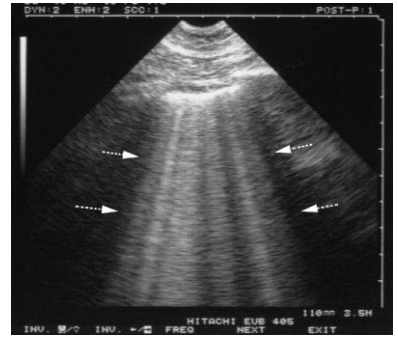
Liran Levy
Benjamin Renaud-Picard
Gregory Berra
Peter Riddell
David Darley
Sri Rajagopala
Musawir Ahmed
Jan Havlin
Mitsuaki Kawashima
Tatsuaki Watanabe
Tina Daigneault
Zonelle Wijesinha
Akihiro Takahagi
Ei Miyamoto
Gafoor Puthiyaveetil
Matthew White
Kevin Zhang
Alex Tigert
David Putman
Jacob Pelling
Goodness Madu
Hisashi Oishi
Nancy Zhao
Jamal Al-Rafae
Samuel Beber
Alex Xiang
Alefiyah Bahrainwala
Vanessa Man
Hawwa Chakera
Pavani Beesetty
Olivia Mekhael

*****BOLD** = respirologists!





1



Dr. Owen Lyons
 Clinician-Investigator
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2



Paediatric Transition

PAP Adherence

Cardiopulmonary interactions

- Haemodynamic Effects of CPAP on Right Heart
- Clinical Pathway for the Initiation of PAP in Fontan's Circulation

Current Resident Research

- PAP usage in the Lung Transplant Population
- Long term PAP adherence in Youth

Respiratory Dysfunction and Disease

Sleep Research



ORCID: <https://orcid.org/0000-0002-2372-965X>

ST. MICHAEL'S HOSPITAL Peter Gilgan Professor

Let's work together!

People

Dr. Anne Stephenson

Canada Trumps U.S in CF Survival!

**“Modulators Are Game Changers”
-Dr. Kawala**

DR. JAD & BONE LOSS. HOW MUCH IS TOO MUCH?

**NO DATA COLLECTION!
NATIONAL DATA NOW!**

SEPTEMBER 2022



THE TORONTO FOREIGN LUNG ASSOCIATION

**GOLDEN LOBE AWARDS
2023**



Presented as a part of the
U. of T. Division of Respiriology
50th Anniversary Dinner
on June 8, 2023.

Nominees have been finalized for
Award Categories such as:

- Most Widely Published
- Best Dressed Doc
- and many more!

Hosted by Drs. Stephenson & Tullis

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THE TORONTO FOREIGN LUNG ASSOCIATION



Additional reasons to work with us!



1. Registry **data are available** (no primary data collection!)
2. Opportunity to answer important questions that can **change care and impact policy**
3. Expand on extra-pulmonary disease (diabetes, liver disease, infections)...the **possibilities are endless!**
4. Focus on **teaching**, improve presentation & writing **skills**, **critical appraisal** peer-review
5. You could be nominated for a **GOLDEN LOBE AWARD!**

TEXT OR EMAIL ME!

647-889-8162 anne.stephenson@unityhealth.to

Pulmonary Hypertension Program

Oh, the Places

You'll
Go!



By
Dr. Seuss

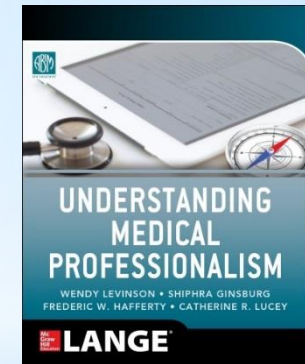
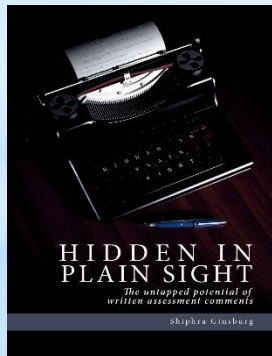
Research streams

- Physiological. Mak lab
- Translational. UHN / HSC
- Interventional. Medical and surgical
- Outcomes based. Interdisciplinary



John.granton@uhn.ca

- * Internal Medicine CTU and Respirology clinic at Sinai Health
- * Canada Research Chair in Health Professions Education
- * Scientist, Wilson Centre for Research in Education
- * Research in: assessment, feedback, clinical competence, entrustment, professionalism, EPAs, ITERs, CTU resident experience, teacher assessment, gender issues in med ed ...
 - * Mostly qualitative and mixed methods
 - * I supervise +++ resident/student projects



* Shiphra Ginsburg Clinician-Scientist (Education)





Matthew B. Stanbrook, MD PhD FRCPC

Asthma & Airways Centre, Toronto Western Hospital

7th Floor, East Wing, Room 450

Toronto, Ontario M5T 2S8

Phone: 416-603-5767

Fax: 416-603-5375

E-mail: matthew.stanbrook@uhn.ca

Twitter: [@drstanbrook](https://twitter.com/drstanbrook)



- Affiliated with UHN Asthma & Airways Centre, TGRI, IHPME, ICES, CMAJ
- Research type: clinical, epi
- Research interests:
 - COPD, asthma-COPD overlap
 - e-cigarettes, other alternative tobacco products
 - respiratory health effects of cannabis

Current/recent trainees

Tyler Pitre
Reuben Gurupatham
Alina Blazer
Nermin Diab
Fatimah Alfaraj
Jane Kobylanskii
Andrew Kouri
Hashim Khan
Jason Rajchgot

Chow Group: Lung Physiology, AI & Datascience

chung-wai.chow@uhn.ca

Oscillometry



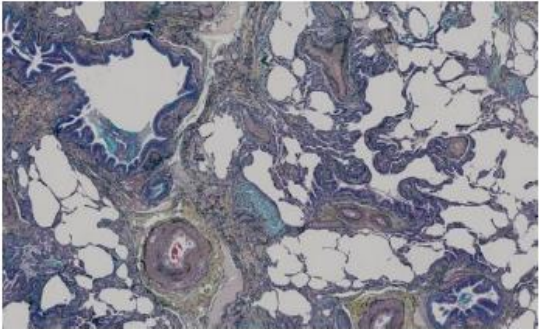
Lung Tx



Rare Lung Disease



ILD



AI: Machine Learning



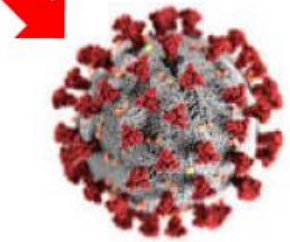
CHF & Heart Transplant



Air Pollution - Wildfires



Vaping and THC



COVID-19

Andrew Kouri – Digital health in airways disease

Andrew.kouri@wchospital.ca or Andrew.kouri@unityhealth.to

My Lung Health Coach:

A virtual COPD self-mgmt. support program co-developed with the LHF
- Feasibility study at WCH

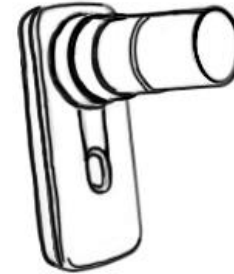
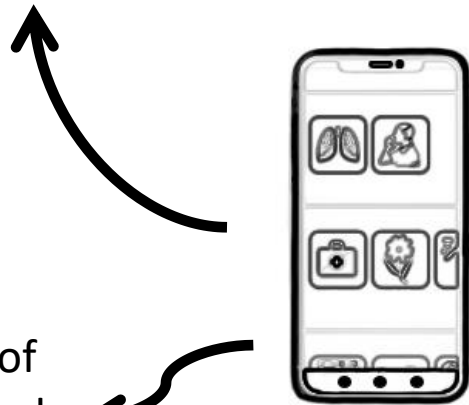
DoM Relationship Status: Clinician/Scientist

Oscillometry to Dx COPD in CHF:

Funded/approved study at WCH and UHN, pending recruitment


Other ideas?

- Scoping rev of all asthma and COPD mHealth
- Qual work in older adults



Digital inhale
Collab with C
WCH to integ
data into Epic and build a
dig inh research cohort



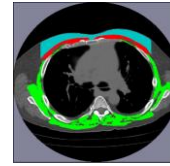
Asthma  ometry:
QI study at SMH during COVID
33 patients, tracking HS use
- Survey of patients and providers



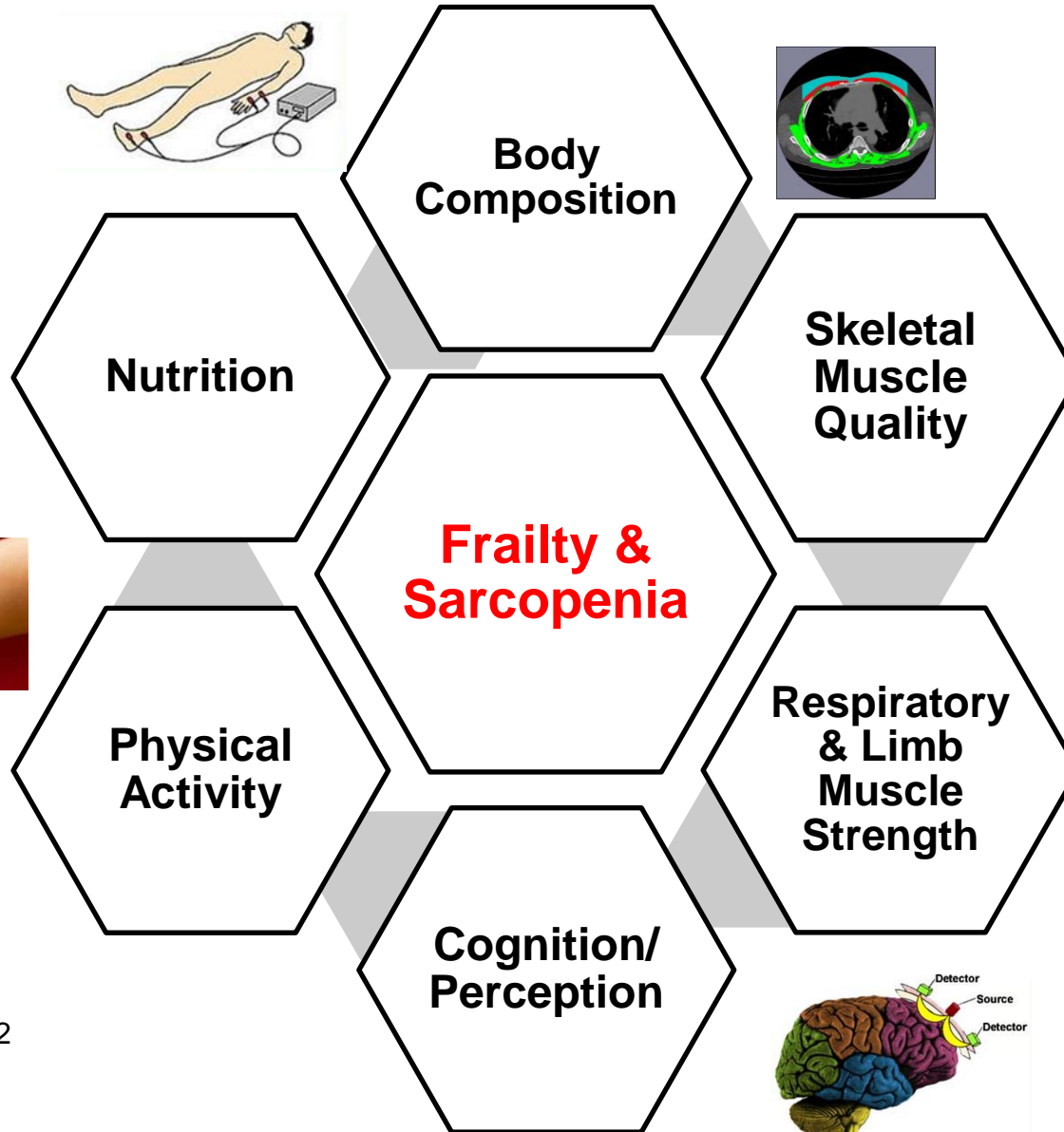
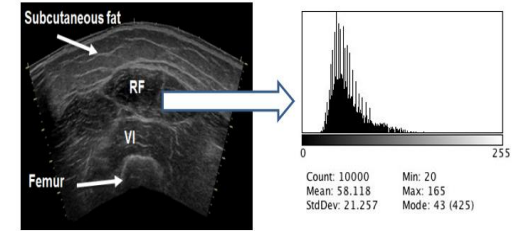
Physiological Assessments & Rehabilitation Strategies

Dmitry Rozenberg MD PhD FRCPC

Dmitry.Rozenberg@uhn.ca



- Advanced Lung Disease
- Ehlers Danlos Syndrome
- Lung Transplantation
- Solid-Organ Transplantation



Resp-Medicine Trainees:

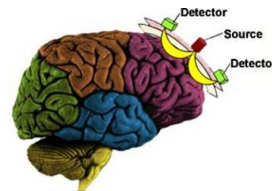
- Gabe Burke
- Brandon Luu
- Maha Munawar
- Kimia Sheikholeslami
- Flora Jung

Previous Resp Trainees:

- Leigh Minuk
- Julie Semenchuk
- Vanessa Martelli
- Andrei Vagaon

Trainee Publications:

- Minuk L, Ann Palliative Med 2023
- Da Silva T. Chronic Resp Disease 2023
- Nicholson M, Chronic Resp Disease 2022
- Balki. Annals of Thoracic Surgery 2021
- Miles. Chronic Resp Disease. 2021
- Chohan. CRD 2021 and Transplantation Direct 2020
- Martelli. Clin Transplant. 2019.





Andrea Gershon

andrea.gershon@sunnybrook.ca



Research type

'Big Data', Population Health with a clinical focus, Health Services Research, Machine learning



Research interests

COPD, Asthma, COVID, Health disparities, Quality of Care, Medication effectiveness and safety, virtual care



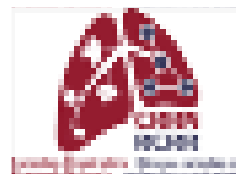
Previous and current trainees

Yaj Shukla, Tetyana Kendzerska, Jolene Fischer, Eunice Cho, Lee Fidler, Alina Blazer, Jesse Lu, Nermin Diab, Jordan Sugarman (and many graduate students)

Examples of Research Studies

- ☆ • Trends in chronic obstructive pulmonary disease prevalence, incidence, and health services use in younger adults in Ontario, Canada, 2006 to 2016
- ☆ • Effect of type and dosage of newly prescribed inhaled corticosteroids on obstructive lung disease and pneumonia hospitalizations in older individuals with asthma, COPD or both
- ☆ • Influenza vaccine effectiveness in preventing Hospitalizations in older patients with COPD.
- ☆ • Which physicians are taking care of people with COPD?
- ☆ • End of Life Strategies among Patients with Advanced COPD
- PFT in COPD decreases death and COPD hospitalization ☆ - Trainee Projects
- LABA/ICS combination more effective than LABA alone in patients with COPD
- 1 in 4 people develop COPD in their lifetime

☆ - Trainee Projects



Thank You!!



Medicine
UNIVERSITY OF TORONTO

