McGill University Health Centre Adult Respiratory Medicine

36th Doctor Dorothy Wiselberg Seminar
AI and Wearables in Respiratory Medicine
June 5, 2026: 8:00 AM – 3:30 PM
Hybrid: MUHC Glen Cruess Amphitheatre ES1-1129 & Zoom

Dear Colleagues,

We are delighted to invite you to McGill University-MUHC Adult Respiratory Medicine Division **36th Doctor Dorothy Wiselberg Seminar** which will take place **June 5, 2026.**

This is a free, endowed conference in respiratory diseases in memory of Dr Dorothy Wiselberg. One of the first female physicians to work in the area of pulmonary diseases in Montreal, she was based at Montreal Chest Hospital - now Montreal Chest Institute - where her work focused on tuberculosis.

Wiselberg 2026 is dedicated to **AI and Wearables in Respiratory Medicine**

General Objectives

Participants will be able to:

- explain how AI can be used in translational science to identify biomarkers and therapeutics
- describe how AI can help optimize clinical management
- summarize different AI uses in chest imaging
- recognize the pros and cons of wearables as diagnostic tools
- discuss how AI can support personalized approaches to sleep medicine

Anticipated Practice Outcomes

Participants will be able to:

- obtain insight in AI applications for respiratory disease diagnosis beyond imaging
- obtain insight on AI for therapeutic management
- learn how mechanical cardiopulmonary interactions during exercise, with and without expiratory flow limitation, can be measured and what they tell us
- learn how lab-based measurements of breathing can be translated into wearable technology to allow monitoring of breathing in real life
- review evidence from recent trials showing how machine learning models - using biometrics like heart rate, heart rate variability, respiratory rate, and skin temperature collected using wearable biosensors - can predict inflammatory surges 24–96 hours before symptom onset
- learn how to integrate objective bio-physiological data with traditional daily symptom tracking to shift from a reactive to a proactive AECOPD care model, aimed at reducing recovery duration and increasing exacerbation-free days
- evaluate the role of artificial intelligence in imaging-based lung cancer detection, with a focus on pulmonary nodule identification and characterization
- examine the application of AI in extracting imaging biomarkers beyond discrete nodules for the purpose of lung cancer risk stratification
- comprehend the evidence base supporting use of AI imaging analysis for TB
- list at least three different digital adherence technology-based strategies for supporting tuberculosis medication adherence and explain how each technology's effectiveness may be influenced by the context in which it is being implemented
- explain how deep generative artificial intelligence frameworks can model cellular dynamics and simulate disease progression at single-cell resolution
- evaluate the application of in-silico perturbation approaches for identifying candidate therapeutics and biomarkers in fibrotic lung diseases
- identify the key physiological traits contributing to sleep apnea that can now be quantified from routine sleep studies
- identify metrics associated with improved sleep apnea–related clinical outcomes

We look forward to seeing you June 5, 2026 at the 36th Dr Dorothy Wiselberg Seminar, MUHC-Glen Cruess Amphitheatre : ES1-1129; 1001 Decarie, Montreal QC H4A 3J1

2026 Wiselberg Seminar Organizing Committee:

Dr. Basil Petrof, Director, McGill Division of Adult Respiratory Medicine,
Dr. Marta Kaminska, Director, MUHC Division of Adult Respiratory Medicine

Information: esther.tomkee@muhc.mcgill.ca
Seminar is free but **registration required** by June 1, 2026

2026 June 5 : 36th Wiselberg Seminar AI and Wearables in Respiratory Medicine – Fill out form

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This activity is accredited by the Office for Continuing Professional Development, Faculty of Medicine and Health Sciences, McGill University, which is accredited by the Committee on Accreditation of Canadian Medical Education (CACME) of which the Collège des médecins du Québec (CMQ) is a partner.

This Group Learning program meets the accreditation criteria as defined by the Maintenance of Certification program of the Royal College of Physicians and Surgeons of Canada and has been approved for up to 5.5 MOC Section 1 credits/hours.

Through an agreement between the Royal College of Physicians and Surgeons of Canada and the American Medical Association, physicians may convert Royal College MOC credits to AMA PRA Category 1 Credits™. Information on the process to convert Royal College MOC credit to AMA credit can be found at: https://edhub.ama-assn.org/pages/applications

08:00	REGISTRATION AND COFFEE
08:25	Welcome and Introduction
08:30	From nodule detection to whole-image intelligence: AI and expanded risk assessment in lung imaging Dr. Nicole Ezer, McGill University
09:00	From our mouths (and desktops) to Claude's ears: AI in the TB clinic Dr. Faiz Ahmad Khan, McGill University
09:30	The challenge of tuberculosis medication adherence in the digital era Dr. Ramnath Subbaraman, Tufts University
10:10	HEALTH BREAK
10:40	Virtual cell and disease modeling for in-silico drug discovery in idiopathic pulmonary fibrosis Dr. Jun Ding, McGill University
11:10	**2026 Christie Memorial Lecture** Measuring breathing: From the Lab to real life Dr. Andrea Aliverti, Politecnico di Milano
12:10	LUNCH
13:10	Ahead of the flare: Using AI and wearables to close the AECOPD detection gap Dr. Dennis Jensen, McGill University
13:40	Technological advances in sleep-disordered breathing assessment for future patient care Dr. Scott Sands, Harvard University
14:20	**2026 Wiselberg Lecture** Use of AI in diagnosis and management of respiratory diseases Dr. Wim Janssens, KU Leuven
15:20	CLOSING REMARKS