

# IMEG Seminar Series

The road to global science



***Dr. Maziar Divangahi***

**Professor, Department of Medicine, McGill University**

**March 13th, 2024, 9:00-10:00**

**Training Lungs against Infectious Diseases**

This seminar series is open to all students and researchers in Kumamoto University.

**The Zoom ID and passcode were sent via email.** Check your inbox!

The constant exposure of humans to potentially life-threatening respiratory challenges pose a major public health problem, with an estimated 20% of all deaths annually worldwide resulting from lung diseases. The lungs, which are constantly exposed to the outside environment, can become a “portal” entry to infectious agents, toxic gases, and particulate matters as we breath approximately 11,000 liters of air every day. To overcome these environmental insults lung innate immune defense system must be tightly regulated; eliminating invading pathogen, minimizing collateral damage and preserving lung physiology to perform its main task of gas-exchange. These wide range of innate regulatory circuits also promote lung adaptation while individuals are exposed to high or low levels of pollutants / microorganisms. Understanding the long-term impacts of constant exposure to environmental challenges, vaccines, the on/off inflammation on the lung regulatory networks, and subsequently the generation of “lung memory” at the population levels is crucial for developing novel therapeutic interventions.