Cystic Fibrosis Translational Research CENTRE de Recherche Translationnelle sur la Fibrose Kystique

McGill School of Biomedical Sciences | École des sciences biomédicales

CFTRc Seminar Series

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Islet function in the pathogenesis of cystic fibrosis-related diabetes

Cystic fibrosis-related diabetes (CFRD) is the most common co-morbidity in cystic fibrosis (CF). CF is caused by mutations in the cystic fibrosis transmembrane conductance regulator gene (*CFTR*), which leads to aberrant luminal fluid secretions in organs such as the lungs and pancreas. CF patients have altered insulin secretion and glucose homeostasis, showing reduced first-phase insulin secretion. Both intrinsic effects of dysfunctional CFTR in hormone secreting cells of the islets and effects of exocrine damage have been proposed. Here, I will present data showing that defective CFTR in β-cells cause impaired processing and release of insulin. Moreover, we have shown that inhibition of CFTR in human islets effects glucagon secretion. Finally, we have preliminary data from resent work indicating that both these intrinsic effects and the crosstalk from a damage exocrine tissue in the pancreas will influence insulin secretion from the islet β-cells.

Date: **Thursday, April 27, 2023**

Time: **11:00 a.m.**

Online via Zoom:

https://mcgill.zoom.us/j/83775146579?pwd=RFRYU3Bic1BMTjRhdEc2M0FwbmYrdz09

Meeting ID: 837 7514 6579

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