

CARNEGIE MELLON UNIVERSITY BME SEMINAR SERIES 2019-2020

Leukocytes of the innate arm of the immune system as vehicles and targets to modify the progression of diabetes mellitus



PRESENTED BY

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SCHEDULE AND LOCATION

Thursday, March 26
(10:30 AM-11:30AM)

Diabetes mellitus is the clinical consequence of a chronic inflammatory process that targets the pancreas and the glucose-utilizing tissues in the body. The pathological features as well as the commonly-accepted mechanistic understanding of the disease has compelled its categorization into three distinct conditions. While each of these three conditions (type 1, type 2, and type 3c diabetes) is distinguishable based on the targets and progression of the inflammatory process, emerging evidence indicates common shared features and potentially a common inflammatory basis. The cells of the innate arm of the immune system appear to be critical responders to intrinsic damage that triggers the inflammatory process. Understanding the pressure points that can delay or short-circuit the progression early on, together with exploiting certain beneficial features of some of these cells offers opportunities to intervene in the progression in terms of therapeutic options. Dr. Giannoukakis will present an overview of this process, potential points of common etiopathogenesis, as well as his work in the space of dendritic cells as therapeutic vehicles for type 1 diabetes, and modulation of neutrophil activity to modify the progression of type 2 diabetes and associated co-morbidities.



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