

GEORGE MASON UNIVERSITY
COLLEGE OF SCIENCE
BIOLOGY DEPARTMENT SEMINAR
Spring 2015

Jerry L. Nadler, MD, FAHA, MACP
Mansbach Professor and Chair, Department of Medicine
Vice Dean for Research
Eastern Virginia Medical School

“Islet β cell Dysfunction in Diabetes: The role of 12-Lipoxygenase”

Diabetes rates are at epidemic proportions in the US and Worldwide. The seminar will cover a discussion of the two major forms of diabetes and some aspects of key mechanisms leading to this disease. The focus will be on the pancreatic beta cell given its major role in the pathology of both forms of diabetes. Our lab is focused on identifying the key mechanisms leading to functional beta cell loss and also developing new therapeutics to combat the disease.

One key pathway we are focused on is the 12-Lipoxygenase (12LO) enzyme that reacts with fatty acids to produce highly pre-inflammatory lipids. We have produced mice with targeted deletion of 12LO and show they are protected from diabetes development. We are now collaborating with investigators at the NIH and University of California to produce new highly specific small molecule inhibitors of 12LO. So far, these show promise *in vitro*.

The studies are funded by the NIH and JDRF.

Tuesday, March 31, 2015

3:30-4:15 PM

Exploratory Hall Room 3301