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Wednesday, Feb 15, 2012
12:00pm
in LSC3

Life Sciences Centre
2350 Health Sciences Mall

“Control of fatty acid delivery to the heart after diabetes”

Heart has a limited potential to synthesize fatty acid (FA) and therefore FA is supplied from several sources: lipolysis of endogenous cardiac triglyceride (TG) stores, or from exogenous sources in the blood. Lipoprotein lipase (LPL), synthesized in cardiomyocytes, catalyzes the breakdown of the TG component of lipoproteins to provide FA to the heart. It is the vascular endothelial-bound LPL that determines the rate of plasma TG clearance and hence, it is also called heparin releasable (HR) “functional” LPL. Functional LPL is regulated by numerous dietary and hormonal factors, and is sensitive to pathophysiological alterations like those observed during diabetes. In this condition, absolute or relative lack of insulin impairs cardiac glucose transport and oxidation, resulting in FA becoming the preferred means of energy supply. To make available this increased requirement of the heart for FA, diabetic heart upregulates its luminal LPL activity by posttranslational mechanisms. Chronically elevated cardiac LPL can result in abnormal FA supply and utilization by the heart tissue that could potentially initiate and sustain cardiac dysfunction during diabetes.

In this seminar, the regulation of cardiac LPL will be discussed, and an attempt will be made to piece together how early metabolic changes could instigate diabetic heart disease.

This Seminar is sponsored by:



Host: Dr. Ed Prydzial, Clinical Professor Pathology and Laboratory Medicine & Centre for Blood Research



Refreshments will be served 10 minutes before the seminar
Seminar information: 604 822 7407

