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Hosted by: Dr. Dieter Reinhardt



Wednesday, November 13, 2019

11:30 am

Room 1/12

**Strathcona Anatomy Building
3640 University Street**

“Balancing metabolic and inflammatory responses in the liver”

Liver is regularly exposed to ever-changing metabolic and inflammatory environments. It must sense and adapt to energy need while balancing resources required to protect itself from insult. Peroxisome proliferator-activated receptor gamma coactivator 1-alpha (PGC-1 α) is a transcriptional coactivator that both coordinates metabolic adaptation to diverse stimuli and protects against inflammation. Using cell and animal models, we are investigating mechanistic links between this transcriptional regulator and metabolic diseases. Low levels of PGC-1 α in liver are associated with hepatic steatosis and insulin resistance, hallmarks of fatty liver disease and the metabolic syndrome. We are investigating how the PGC-1 α coactivator family controls the liver's response to insulin, while simultaneously coordinating genes programs of mitochondrial metabolism and inflammation in hepatocytes. We hope that delineating the complex biology of PGC-1 α in cells will help to better understand the consequences of disrupted PGC-1 α activity in metabolic disease.