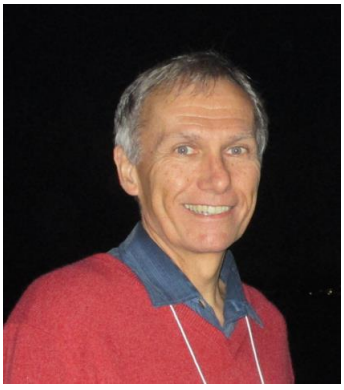
Guest lecture

"New roles for SREBPs in Physiology and Metabolism"

13 January 2017

11 AM in the BMB seminar room



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Abstract: Lipids are essential for cell viability and a sensitive and robust mechanism has evolved to adapt to dynamic variations in lipid availability. A major level of control is the regulation of genes required to synthesize important lipids from simple precursors. The Sterol Regulatory Element Binding Proteins (SREBPs) are a unique sub-family of b-HLH transcription factors that have evolved as part of a complex multi-step regulated process to ensure enzymes required to make lipids are properly expressed as lipid

demands change. Normally, the SREBPs accumulate in the nucleus only when new cellular lipid is required. However, aberrant SREBP nuclear accumulation is associated with metabolic diseases where excess lipid accumulate ectopically and with many malignancies where high capacity lipid synthesis is required to support uncontrolled cell growth. Thus, strategies to limit excess nuclear SREBP may be clinically effective for metabolic diseases and cancer. We have developed an experimental platform to identify and evaluate the mechanism of action of novel small molecules that modulate the activity of nuclear SREBPs. These efforts will be discussed.

Host: Professor Susanne Mandrup, Department of Biochemistry and Molecular Biology, SDU.