

Lausanne Integrative Metabolism and Nutrition Alliance (LIMNA) SEMINAR

Wednesday July 10, 2013

10.30am

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“Regulation of proteasome activity – the role of insulin/IGF-1 signaling”

Host : Johan Auwerx (for the LIMNA Alliance)

Conference Room: SV 1717A
EPFL - Lausanne

Abstract

The proteasome is responsible for the major part of controlled protein degradation in the cell, and impairments in its function have been associated with many severe, usually age-related disorders. By using *C. elegans* as model organism, we found that aging-related insulin/IGF-1 signaling (IIS) regulates proteasome activity through SKN-1 and DAF-16 transcription factors. Moreover, we discovered that DAF-16 regulates the expression of proteasome-associated deubiquitinating enzyme *ubh-4*, which we show functioning as a tissue-specific proteasome regulator. Altogether, our results establish a mechanism linking IIS to proteasome activity and add one more branch to IIS mediated maintenance of cellular protein homeostasis.

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