

# Neuroscience Seminar

Thursday 25 April 2019  
11.00 – 12.00

Fysiologi Auditorium A, building 1162, room 013  
Ole Worms Allé, 8000 Aarhus C

## Professor Chris Meisinger:

ZBMZ, Institute of Molecular Medicine and Cell Research, Faculty of Medicine, University of Freiburg, Germany

### Title of talk:

**“Signalling pathways targeting the mitochondrial import machinery: control of cell cycle, metabolism and oncogenesis”**

### Abstract:

Mitochondria have to import more than 1000 different proteins from the cytosol to fulfill a multitude of functions. Sophisticated import machineries mediate targeting, translocation and suborganellar sorting. They have been considered for a long time to be static and constitutively active. However, we found that the protein entry gate of the outer membrane is highly phosphorylated and targeted by several cytosolic signalling cascades that dynamically regulate protein import to adjust the mitochondrial proteome to changing cellular demands. These include metabolic switches, various cell cycle stages and metabolic reprogramming during oncogenesis.

## Dr. Nora Vögtle:

ZBMZ, Institute of Molecular Medicine and Cell Research, Faculty of Medicine, University of Freiburg, Germany

### Title of talk:

**“Quality control by the mitochondrial presequence processing machinery in health and disease”**

### Abstract:

The mitochondrial presequence processing machinery plays an essential role in protein biogenesis and proteostasis: the proteases cleave N-terminal targeting peptides for protein maturation, remove destabilizing residues to increase the half-life and degrade toxic cleaved presequences. Their dysfunction results in an imbalanced mitochondrial proteome and mutations have been linked to neurodegeneration and cardiomyopathy. We have identified novel components and functions of these proteases and now investigate the impact of disease-related mutations on mitochondrial function and metabolism in human cells.

If anybody want to meet the speaker in the afternoon individually or in groups after 14.00, please contact Marianne Rasmussen [mr@biomed.au.dk](mailto:mr@biomed.au.dk) and Poul Henning Jensen [phj@biomed.au.dk](mailto:phj@biomed.au.dk)

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