



Friday, March 27, 2026



12.00 o'clock



Inselspital, Kursraum
Neurologie
INO B118, Entrance 34
Rosenbühlgasse 25 3010 Bern



[Link here](#)

Hijacked NAD⁺ metabolism in axon- and neurodegeneration

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Fundamental Neurosciences
University of Lausanne



Axon loss is an early and often irreversible feature of injury and neurodegenerative disease. Programmed axon degeneration (PAXD) is a conserved molecular self-destruction pathway that drives this process. PAXD can be activated by axonal injury (axotomy), toxins, and disease-associated stress. Central to this pathway is nicotinamide adenine dinucleotide (NAD⁺) metabolism, positioning PAXD at the crossroads of aging, longevity, and neurodegeneration. Its evolutionary conservation enables powerful mechanistic studies in *Drosophila* with strong translational relevance to human health.

The Neukomm lab investigates the molecular and metabolic control of PAXD using advanced genetics, metabolic profiling, sparse neuronal labeling, and automated behavioral analyses. We will present new insights into how NAD⁺ metabolism maintains PAXD in an inactive state in neurons and their axons, and how its misregulation actively drives neurodegenerative processes.

Chair: Prof. Antoine Adamantidis