

Einladung zum Vortrag
im Rahmen des gemeinsamen Kolloquiums des Instituts für Biologie und
Umweltwissenschaften und des Departments für Neurowissenschaften

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Olfaction and Neurodegeneration

Olfactory loss is associated with a wide range of neurodegenerative diseases such as Alzheimer's disease, idiopathic Parkinson's disease (IPD), Huntington disease, and a series of rare diseases. For example, hyposmia precedes motor symptoms in IPD by at least 2-5 years.

This talk will give an overview of the exceptional neuroregenerative capacity of olfactory neuroepithelium and some central olfactory structures. Further, some animal models will be presented, in which the relationship between the structural integrity as well as presence of tissue-related key markers and olfactory perception can be demonstrated.

Own research on a well-established animal model for IPD, the 6-OHDA lesion of the medial forebrain bundle in rats, shows that in spite of IPD-like movement disorders no olfactory dysfunction can be induced. Another example for the close relationship between general neurodegeneration and specific olfactory dysfunction can be shown in a rare lysosomal lipid storage disease, Niemann-Pick disease type C1.

As a practical consequence for human affairs, it should be distinguished between normal age-related olfactory loss and pathologic neurodegeneration.

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