

DANDRITE Lecture

Date: 26 August
Time: 13.15-14.15
Venue: 1871-120



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Targeting Dementia by Tackling Synaptic Tau

Synaptic dysfunction is an early pathological feature of neurodegenerative diseases associated with Tau, including Alzheimer's disease. Interfering with early synaptic dysfunction may be therapeutically beneficial to prevent cognitive decline and disease progression, but the mechanisms underlying synaptic defects associated with Tau are unclear. In disease conditions in patients and in animal Tau-disease-models, the protein mislocalizes into pre- and postsynaptic compartments, and we show that presynaptic Tau induces synaptic defects. I will present work showing that interfering with this synaptic function of Tau prevents Tau-induced synaptic loss and cognitive decline and discuss future plans on how this same process is also used under normal conditions to sculpt and protect the brain. Our work not only identifies new presynaptic roles for Tau, but it also opens a new therapeutic window to tackle early synaptic dysfunction and cognitive decline in neurodegenerative disease.

Patrik Verstreken is Scientific Director & Group Leader VIB-KU Leuven Center for Neuroscience, KU Leuven Department of Neurosciences, Laboratory for Neuronal Communication, Leuven Brain Institute

Host is Chao Sun, DANDRITE Group Leader.