

Département de psychiatrie Centre de neurosciences psychiatriques Site de Cery CH-1008 Prilly - Lausanne

Centre de Neurosciences Psychiatriques CNP SEMINAR ANNOUNCEMENT

Thursday, November 19th, 2015, 11 a.m.

"Tau proteins and Tauopathies"

Prof Luc BUEE

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> Invited by Beat Riederer (<u>Beat.Riederer@chuv.ch</u>)

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Proteinopathies are known as conformational diseases, or **foldopathies** in which specific proteins accumulate in form of aggregates or inclusion bodies in cells and tissues. They comprise clinically and pathologically diverse disorders, including Alzheimer's disease, Parkinson's disease, Huntington disease, systemic amyloidosis, amyotrophic lateral sclerosis, prion disease and many more. In several neurodegenerative diseases, tau proteins play an important role and are summarized as **tauopathies**. Tau proteins are microtubule-associated proteins and essential for the function of the cytoskeleton. In Alzheimer's disease these proteins are present in tangles, hallmark structures of the disease. Tau proteins are promising in new diagnostic and therapeutic strategies in Alzheimer's disease and related disorders.

Selected Publications:

- 1. Blum et al. (in press) Mutant huntingtin alters Tau phosphorylation and subcellular distribution. *Hum Mol Genet*. 2014 Aug 20. pii: ddu421..
- 2. Ahmed et al. (2014) Cognition and hippocampal synaptic plasticity in mice with a homozygous tau deletion Neurobiology of Aging 35(11):2474-8
- Laurent C, Burnouf S, et al. (in press) A_{2A} adenosine receptor deletion is protective in a mouse model of Tauopathy. Mol Psychiatr *published online on December 2, 2014*.
- 4. Dujardin S, et al. (2014) Neuron-to-neuron wild-type Tau protein transfer through a trans-synaptic mechanism: relevance to sporadic tauopathies. Acta Neuropathol Commun 2(1):14.
- 5. Gabelle A, et al. (2014) Plasma β -amyloid 40 levels are positively associated with mortality risks in the elderly. Alzheimers & Dementia, pii: S1552-5260(14)00643-8

