EXTERNAL SEMINAR

INMED Conference Room

Monday, 6th March 2017 - 11 a.m.

Dr Laure VERRET

Invited by: Julie KOENIG

Centre de Recherches sur la Cognition Animale
CNRS UMR5169
Université Paul Sabatier
118 route de Narbonne
31062 Toulouse

laure.verret@univ-tlse3.fr

Social memory impairments and area CA2 modifications in a mouse model of Alzheimer's disease

Among the cognitive impairments observed in Alzheimer's disease (AD) patients, one of the most excruciating is their inability to recognize or remember other people. Distressingly, social memory and recognition have been barely investigated in AD mouse models, and little is known about the neural substrates of social memory impairments in AD. Very recently, it has been demonstrated that inactivation of area CA2 pyramidal neurons induces specific social memory impairments (Hitti & Siegelbaum 2014), and this hippocampal structure is now considered as a critical hub for sociocognitive memory processing (Chevaleyre & Piskorowski 2016). Thus, we hypothesized that social memory impairments in AD mouse models could be mediated by area CA2 dysfunction. We observed anatomical modifications in the area CA2 of AD mice, which are inducing decreased inhibitory control of CA2 pyramidal cells, and are associated with social recognition and social memory impairments. We are now exploring whether there is a causal link between these anatomical alterations in area CA2 and social memory deficits in the context of AD.

Parc Scientifique de Luminy
163 Avenue de Luminy
13273 MARSEILLE Cedex 09

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