

Neuroscience Seminar Series

Friday, January 27th, 2017 at 11:30

Salle des Conférences (R229)

Centre Universitaire des Saints-Pères

45 rue des Saints-Pères, 75006 Paris

Solange Brown

MD PhD

Department of Neuroscience, Johns Hopkins University, USA

Functional changes in neocortical neurons in a neurodegenerative disease, amyotrophic lateral sclerosis

Neocortical hyperexcitability is a prominent feature of inherited and sporadic amyotrophic lateral sclerosis (ALS) and is inversely correlated with patient survival. Cell-type specific changes in neuronal function have been proposed to underlie these functional abnormalities and contribute to the selective degeneration of corticospinal and spinal motor neurons in ALS. Using a commonly used mouse model of ALS, we analyzed the functional properties of different classes of neurons in the motor cortex using electrophysiological recordings, in vivo calcium imaging and RNA sequencing of purified populations of neurons. We found widespread, stage-dependent alterations in neuronal function and circuit organization in ALS mice that highlight the dynamic changes cortical circuits experience during neurodegeneration and expand potential therapeutic strategies for normalizing circuit function.

Those interested in meeting with the speaker please contact
daniel.zytnicki@parisdescartes.fr



UNIVERSITÉ
PARIS
DESCARTES

MEMBRE DE

U^SPC
Université Sorbonne
Paris Cité