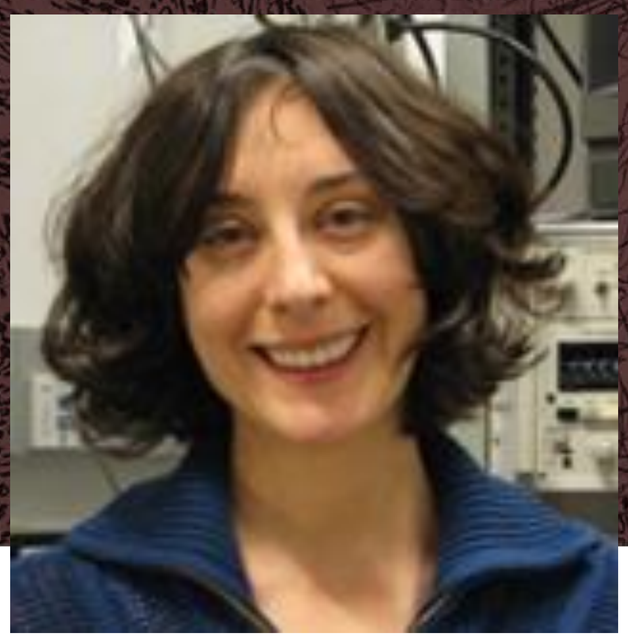
INSTITUTO CAJAL

SEMINARIO PRESENCIAL

Viernes, 03 de marzo de 2022
12:30 h. Instituto Cajal (CSIC) Madrid



DRA. SANDRA JURADO

INSTITUTO DE NEUROCIENCIAS

Alicante

Development, Plasticity and Degeneration of Hypothalamic Circuits

Abstract

I will provide an overview of the latest advances of our laboratory, focused in dissecting the molecular apparatus that underlies information processing and storage in the brain. In particular, our research seeks to elucidate the role of neuromodulatory substances such as oxytocin and vasopressin, two major regulators of homeostatic functions and complex behaviors like social interaction. We combine behavioral testing, electrophysiology, live cell imaging and 3D ultraresolution circuit mapping to explore the function and formation of neuropeptidergic systems in the CNS. We aim to understand their role inn regulating synaptic transmission and plasticity and their adaptations during healthy and pathological aging.

Affiliation and short bio

Sandra obtained a Ph.D. in the Department of Biochemistry and Molecular Biology at the Universidad Complutense in 2005. Her interest in synaptic function led her to undertake postdoctoral training in the laboratory of Dr. Jose Esteban at the University of Michigan, where she exposed a new role of the tumor suppressor phosphatase PTEN in hippocampal plasticity (*EMBO Journal,* 2010). She then obtained a Ramon Areces Fellowship to pursue postdoctoral training at at the laboratory of Dr. Robert Malenka. At Stanford, she made important contributions to the field of neuronal plasticity with publications in high impact journals (*Nat Neuroscience*, *Neuron, Science*). She collaborated with Dr. Thomas Südhof to identify the postsynaptic SNARE fusion machinery involved in AMPAR insertion during LTP (Jurado et al., *Neuron* 2013). These discoveries inspired her to explore alternative forms of neuronal exocytosis in her independent laboratory at the University of Maryland, where she initiated a novel research program funded by the NIH and the NARSAD Foundation. She joined The Instituto de Neurociencias (Alicante) in 2017 where she leads the Synaptic Neuromodulation Lab. She is currently the Head of the Cellular and Systems Neurobiology Department and the Coordinator of the Equality Commission at the IN.