



**Liset MENENDEZ de la PRIDA**  
Laboratorio de Circuitos Neuronales  
Neurobiología Funcional y de Sistemas  
Instituto Cajal, Madrid – Spain

***Deep-superficial perspectives of hippocampal function in health and disease***

Over decades, a modified tri-synaptic circuit was useful to understand how neuronal activity flows along the entorhinal-hippocampal system by accomodating a proximo-distal and dorso-ventral organization.

Recently, we disclosed a gradient of CA1 neuronal firing during memory processes in deep and superficial CA1 pyramidal cells of the hippocampus. Supported by cell-type specific microcircuits, different coding strategies may operate in parallel across the structure.

We will discuss how using a combination of techniques is helping us to dissect a traditionally neglected axis of hippocampal function and dysfunction.