INSTITUTO CAJAL

SEMINARIO PRESENCIAL

Viernes, 06 de mayo de 2022
12:30 h. Instituto Cajal (CSIC) Madrid

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Retrieval can affect memories differently: inhibition and the no man's land

Abstract

Memories allows us to predict causal relationships between environmental stimuli or actions and positive or negative outcomes. Even though such memories increase fitness, surviving in an ever-changing environment requires that they are malleable in presence of new relevant information. Aberrantly persistent memories are key on psychiatric conditions such as anxiety disorders or drug addiction. Establishing the mechanism and effects of retrieval on memory persistence will be essential in developing new treatments for these disorders. In this talk, I will present behavioural, pharmacological, and molecular biological data demonstrating how different retrieval conditions determine persistence or inhibition of fear and reward-seeking memories. I will also present evidence of a novel retrieval-dependent memory phase arising from this multi-level experimental approach.

Affiliation and short bio

Emiliano studied Biology at the University of Buenos Aires. Then he completed a PhD at the same institution investigating the neurobiology of learning and memory in crabs. He moved to Cambridge with a grant from the Royal Society to research the effect of retrieval on the persistence of fear memories. He is now a lecturer at the University of Sussex and his research is focused on memory persistence mechanisms both in rats and humans. In rats, he uses a multilevel approach, analysing from molecules to neural activity to behaviours, to identify causal mechanisms. In humans, he is using behavioural and electroencephalographic analysis to widen the characterisation of these evolutionary conserved memory mechanisms and how they affect the persistence of memories.

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