SFB 1315
Mechanisms and Disturbances in Memory Consolidation:
From synapses to systems

Tuesday

JAN 13, 2026
4:00 pm

BCCN Lecture Hall
Philippstraße 13/Haus 6
10115 Berlin
Meeting-ID: 775 491 0236
sfb1315.ifb@hu-berlin.de

SFB 1315 LECTURE SERIES 2026

DENDRITIC AXON ORIGINS IN CORTICAL NEURONS FROM MOUSE TO MAN

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DFG Deutsche Forschungsgemeinschaft
German Research Foundation

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In certain subtypes of cortical neurons, axons originate from basal dendrites, resulting in an axon-carrying dendrite branch with unique functional characteristics (AcD cells). This type of neuron has been known since the days of Raymon y Cajal, however, it remained a somewhat non-canonical morphology that was overlooked for decades.

Recently, new data from the murine hippocampus has shown that this morphological configuration allows for the selective recruitment of pyramidal cells into patterned network activity. During ripple oscillations in awake mice, spiking is much more likely in AcD cells. High-resolution recordings and computer modeling indicate that these spikes are elicited by synaptic input to the axon-carrying dendrite and thus effectively escape perisomatic inhibition.

The talk will then focus on two aspects of AcD biology that are currently under investigation: How do AcD neurons develop and do they occur in human cortex as well?

This invited talk is hosted by SFB1315 project A03

Certificate of attendance

Please contact team assistant
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