



# Life Sciences Talk

## Mossy cell circuitry and function

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Host: Peter Jonas

The hippocampus plays a key role in learning and memory. The input region of this important network, the dentate gyrus, is comprised of granule cells (GCs), but also GABAergic interneurons and mossy cells (MCs). However, the role of MCs in hippocampal coding remains unclear. To address this question, we have combined electrophysiology, two-photon calcium imaging, and behavioral analysis. We found that hippocampal MC pathways differentially regulate GC activity along the longitudinal axis. MCs mediate a low excitation–inhibition balance in intralamellar (local) GCs, but a high excitation–inhibition balance in translamellar (distant) GCs. MCs are preferentially active during the exploration of anxiogenic environments. Furthermore, elevating MC activity decreases avoidance behaviors. In conclusion, our results suggest that MCs show highly specific synaptic connectivity and play an important role in behavior.

Topic: Cheng-Chang Lien TALK

Time: Dec 27, 2022 10:00 Amsterdam, Berlin, Rome, Stockholm, Vienna

Join Zoom Meeting

<https://istaustria.zoom.us/j/66801344749?pwd=aFk2cVdERHpwbDdTU08zZ2ZNTVNJQT09>

Meeting ID: 668 0134 4749

Passcode: 811143

**Tuesday, December 27, 2022 10:00am - 11:00am**

IST Austria Campus Mondri Seminar Room 2, Central Building