Universität Basel

Research Project

Multisensory integration and associative learning in thalamic circuits

Third-party funded project

Project title Multisensory integration and associative learning in thalamic circuits
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Department
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Although we are starting to decipher how higher brain areas are involved in learning and memory, the role of sensory integration during associative learning in the brain's major input hub, the thalamus, is only poorly understood. Novel deep brain imaging techniques will now allow us for the first time to investigate multimodal sensory integration and thalamic function on both, the cellular as well as population and computational level. This enables us to revisit and revise fundamental concepts of thalamic sensory function and broaden our understanding of the role of thalamus in learning and memory as well as associated diseases like generalised anxiety disorders and schizophrenia.

Keywords Associative learning; Multimodal sensory integration; Miniature microscope; Thalamus; Deep brain calcium imaging; Neuroscience
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