IGSN - SYMPOSIUM

Wednesday, October 26th 2022 · 15.00 (3 pm)   **Beckmanns Hof**

Mechanisms underlying brain plasticity, information encoding and memory

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Mapping the neural circuitry of associative recognition memory

Memory of a particular stimulus may be aided by remembrance of other information associated with that stimulus, such as the location in which it was previously encountered. Such so called 'object-in-place' memory in rodents depends on a brain wide neural network in which we have paid particular interest in the interactions between the hippocampus (HPC), medial prefrontal cortex (mPFC) and lateral entorhinal cortex (LEC) and nucleus reuniens of the thalamus (NRe). Here I present data from in my lab in which we have utilise activity dependent cell labelling, pharmacological and optogenetic techniques to reveal the memory engrams, ensembles and the neural pathways that mediate object-in-place recognition memory. These experiments reveal the importance of distinct interleaving pathways for memory encoding and retrieval, as well providing some insight into the synaptic and cellular mechanisms of object-in-place memory.

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