



Electrophysiology in Brain Slices: Synaptic Transmission, Plasticity (LTP, LTD)

Scope of application

- Evaluation of drug effects on synaptic transmission related to Alzheimer's disease and age-related dementias as well as cognition enhancement
- Electrophysiological mouse phenotyping of knock-out, knock-in and transgenic mice
- Safety pharmacology (detection of side effects of putative therapeutics)

Characterisation of basic synaptic transmission and excitability

Extracellular recording of field potentials (field-EPSP, population spike) in hippocampal slices from adult rats or mice in a submerged-type chamber; evaluation of paired-pulse inhibition and paired-pulse facilitation as well as different types of short-term plasticity.

Long-term potentiation (LTP) and long-term depression (LTD)

Long-term recording of different types of LTP and LTD (e.g. weak, strong) up to 5 hours.

