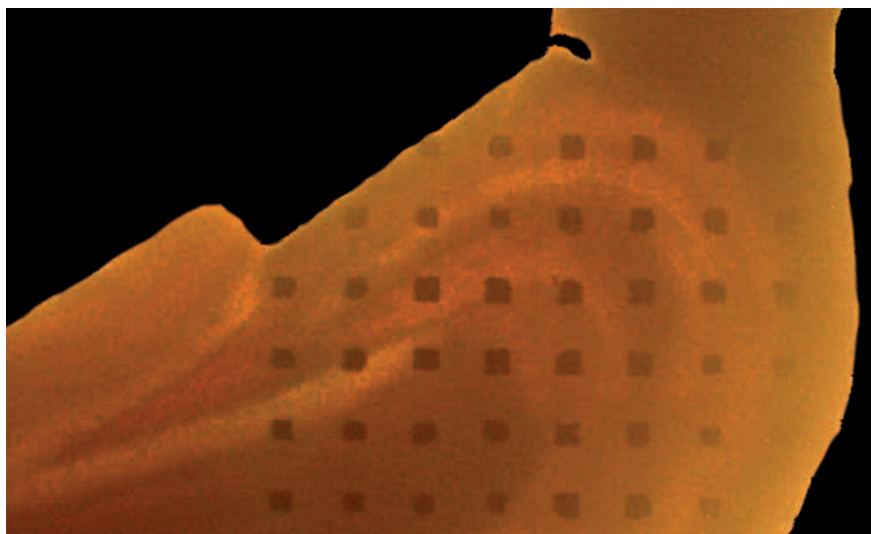


In Vitro **LONG-TERM** potentiation

**GIVING MOLECULES
THE VALUE THEY DESERVE**



LONG-TERM POTENTIATION (LTP) is a long-lasting enhancement in signal transmission that depends on NMDA receptors activation. It represents one of several phenomena underlying synaptic plasticity, the ability of chemical synapses to change their strength.

As memories are thought to be encoded by modification of synaptic strength, LTP is widely considered as one of the major cellular mechanisms that underlies learning and memory.

Accordingly, disturbances of LTP are established in psychiatric (e.g. schizophrenia) and neurodegenerative disorders (e.g. Alzheimer's disease), both including memory impairments.

LTP assessment is the most valuable technique to evaluate cognitive impairments in mutant models and/or beneficial or deleterious effects of your compounds on cognition.

Our solutions

SYNAPCELL provides customized solutions which cover the entire range of customers needs, from early steps to the final answer.

In vivo

We assess the anti-epileptic, anti-epileptogenic or pro-epileptic effects of your drug candidates through :

- PREDICTIVE** animal models of epilepsy
- PROTOCOLS MIMICKING** clinical trials (e.g., cross-over, add-on, chronic treatment)
- QUANTITATIVE RESULTS** using EEG.

In vitro

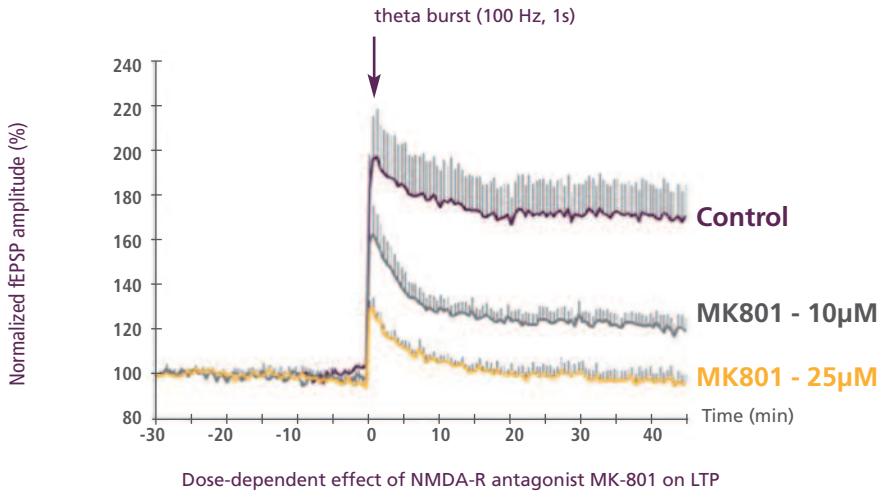
We define the activity profile of your drug candidates on neuronal network through :

- INTEGRATED MODELS** on acute / organotypic brain slices
- VARIOUS EXPERIMENTAL** conditions (e.g., physiological, excitotoxic, epileptic)
- MULTISITE RECORDING** using MEA.

About us

SYNAPCELL is a preclinical CRO which provides highly predictive solutions to evaluate the therapeutic potential of CNS drug candidates in Epilepsy.

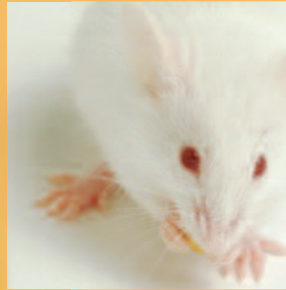
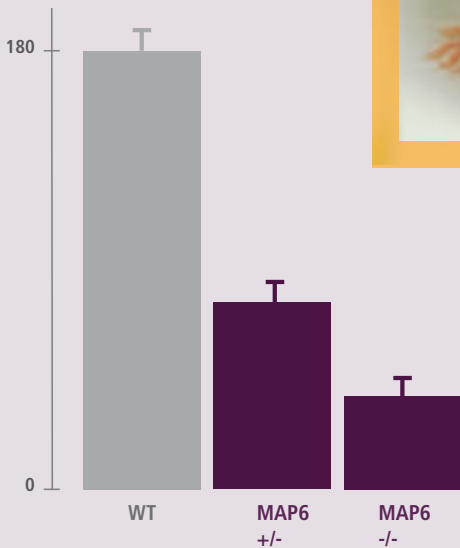
SYNAPCELL
www.synapcell.com
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PHARMACOLOGY

LTP study is useful to predict beneficial or deleterious effects of your compounds on cognition.

Normalized fEPSP amplitude (%) between 30 and 40 min after tetanus (100 Hz, 1 s)



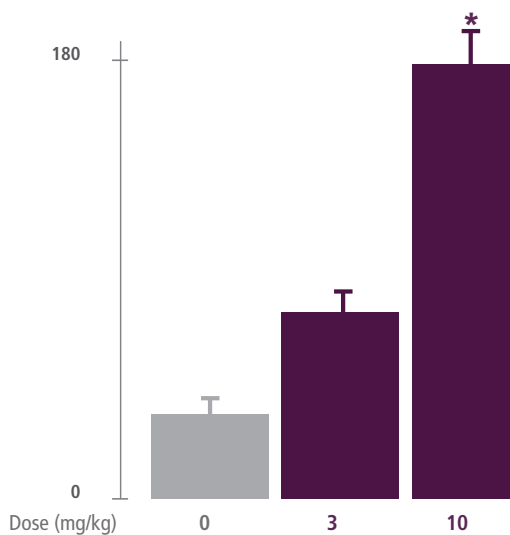
PHENOTYPING OF MUTANT MODELS

To better understand the mechanisms underlying psychiatric or neurodegenerative disorders, mutant mice have been developed during the last ten years. LTP assessment is the most valuable technique to evaluate cognitive deficiencies in such mutant models.

KO STOP MICE PHENOTYPING

Alterations in LTP in a transgenic mouse model, the KO STOP schizophrenic model

Normalized fEPSP amplitude (%) between 30 and 40 min after tetanus (100 Hz, 1 s)



CLOZAPINE IN THE KO STOP MICE

Dose-dependent effect of clozapine on LTP in the KO STOP model of schizophrenia

PHARMACOLOGY ON A SCHIZOPHRENIC MUTANT MODEL

The KO STOP model, a transgenic mouse with schizophrenic like symptoms presents a deficiency in LTP, associated with cognitive impairments. This model allows the cognition-related evaluation of your compounds developed for the treatment of schizophrenia.