

## **Translational models of epilepsies in rodents**

SynapCell is a preclinical Contract Research Organization which provides translational solutions to evaluate the therapeutic potential of CNS drug candidates in epilepsy.

To assess the antiepileptic effect of new AEDs, SynapCell develops chronic animal models of partial and generalized epilepsy.

Mesial temporal lobe epilepsy (MTLE) is one of the most common form of partial epilepsy and represents a major challenge in the clinical management of seizures. The MTLE Mouse model is a chemically induced model of mesial temporal lobe epilepsy. A unique intrahippocampal injection of kainate induces an initial status epilepticus followed by a latent period during which the epileptogenesis takes place, associated with an ipsilateral hippocampal sclerosis.

The MTLE mouse is resistant to classical AEDs within safety margins while new AEDs have shown good efficacy. Altogether, MTLE mouse reproduces behavioural, EEG and histopathological features of human MTLE and represents a unique tool to qualify new AEDs.

The GAERS (Genetic Absence Epilepsy Rats from Strasbourg) is a genetic model of generalized absence epilepsy that displays the EEG (spontaneous recurrent generalized bilateral SWDs), behavioural and pharmacological features of human absence seizures. Thanks to its high predictivity and face validity, the GAERS has become a gold standard to study both the anti-absence and aggravating effects of an AED in development.

SynapCell offers with MTLE mouse and GAERS powerful tools for preclinical evaluation and predictive clinical validation of new AEDs, using clinical like protocols and customized solutions.