



## Overview of Preclinical Assays

### Scope of application

- CNS disorders (stroke, Alzheimer)
- Neuroprotection
- Neuroregeneration
- Memory Deficits
- Mouse Phenotyping
- Pharmacokinetic Services

### *Global Ischemia*

Transient 2-vessel occlusion in rats

4-vessel occlusion in rats

### *Focal Ischemia*

Endothelin-induced MCAO in narcotised or freely moving rats

Thread model of MCAO

Sensorimotor testing: Staircase test , Ladder rung

### *In vitro Neuroprotection (Organotypic slice cultures)*

Oxygen-glucose deprivation (OGD)

Excitotoxicity

### *Neurogenesis in vivo and in vitro*

Drug effects on proliferation of endogenous stem cells

Transplantation of stem cells into the brain

### *Electrophysiology for testing nootropica and side effects*

Field potential recording in rats and mice in vitro

LTP and LTD, paired pulse inhibition

### *Alzheimer and dementia*

LTP after A $\beta$  oligomers in mice slices

A $\beta$  Fibrill toxicity

### *Small animal SPECT and MRI*