

## Background

CNS|CRO's proprietary animal models are progressive and slowly developing, providing accurate representation of human disease progression. The ability to evaluate candidates at various stages of disease development make these models ideal for identification of treatment effects throughout the pathogenic process. CNS|CRO also offers a range of standard animal models, as well as innovative add-on specialty platforms.

## Proprietary Offerings:

- **ALS PDC** (Amyotrophic Lateral Sclerosis-Parkinsonism Dementia Complex)
  - provides a slowly developing and progressive series of well-defined sequential deficits in mice; initially motor signs emerge, followed by parkinsonism and dementia
  - early time point measures allow investigation of motor neuron degeneration (ALS)
- **Parkinson's Disease**
  - slowly developing model that recapitulates all key facets of parkinsonism and PD dementia, including the progressive appearance and regional spread of  $\alpha$ -synuclein aggregates
- **Epilepsy**
  - a developmental rat model of partial complex epileptogenesis. Provides a latent period prior to the onset of clinical signs, allowing for prophylactic / early stage therapeutic evaluations
- **Schizophrenia**
  - a developmental rat model that exhibits delayed-onset deficits in attentional processing, sensory gating, and cognition, as well as changes in cortical dopaminergic markers

## Standard Models:

### Stroke\*

- focal: endothelin (ET-1) microinjection rat model
- global: neonatal hypoxia-ischemia and carotid vessel occlusion models

### Neuropathic Pain

- using the spared nerve injury paradigm, this mouse model allows for assessment of therapeutic efficacy at multiple time points post-treatment

### Cholinergic Immunotoxin

- produces specific cholinergic deficits in rats, representative of basal forebrain cholinergic nuclei (BFCN) cell loss observed in Alzheimer's disease

*\*CNS|CRO's intensive post-surgery care protocol results in a >90% survival rate, thus allowing evaluation of a more clinically-relevant post-stroke population*

## CNS|CRO Specialty Platforms

### *In vivo* electrophysiology platform

- provides a highly sensitive assessment of peripheral and central nerve conduction, damage, and regeneration. This is an especially valuable measurement for pain studies.

### Autism spectrum disorder (ASD) behavioural test battery

- a highly relevant and comprehensive assessment of ASD symptoms, with a particular focus on multiple aspects of social-communicative ability