CNS|CRO offers rodent models for a variety of neurological disorders

- **ALS PDC** (Amyotrophic Lateral Sclerosis-Parkinsonism Dementia Complex)
  - Progressive model – motor neuron deficits in initial stages, followed by parkinsonism and cognitive decline
- **Epilepsy**
  - Acute and sub-chronic seizure models
- **Schizophrenia**
  - Models and evaluations for positive, negative, and/or cognitive symptoms
- **Stroke**
  - Focal: endothelin-1 (ET-1) microinjection rat model
  - Global: neonatal hypoxia-ischemia and carotid vessel occlusion models
- **Neuropathic Pain**
  - Chronic constriction injury model
  - Spared nerve injury model
  - In-vivo electrophysiology evaluations available
- **Autism Spectrum Disorder**
  - Pharmacological induction model; testing paradigm provides a comprehensive behavioral assessment, including multiple aspects of social-communicative ability
- **High Fat Diet**
  - Metabolic dysregulation model
  - Offspring exhibit some behavioral alterations similar to autism spectrum
- **Fibromyalgia**
  - Acid-saline rat model; evaluations for allodynia, muscle hyperalgesia, and visceral hypersensitivity available

**Behavioral testing**
- General activity/exploration
- Anxiety/depression
- Executive function
- Gross/fine motor control
- Neurosensory/neuromotor
- Conditioned place preference/olfactory
- Social behaviors
- Learning & memory assessments

**Pharmacokinetics & Safety Testing**
- Acute (≤24h), subacute (24h-48 days), subchronic (29-90 days), and chronic (4+ month) PK programs available
- Large variety of administration routes and sample collection techniques
- Safety evaluations performed using a modified IRWIN test

All tests are adaptable to suit individual needs
**Histology**

**Neonatal HI Model**

Control

Model

Double Labelling: NeuN (neurons; green) & GFAP (glial cells; red)

**Timm staining + Cresyl**

**Somatostatin (DAB)**

**H&E**

**GSTπ (oligodendrocytes; red) + GFAP (green)**

**Green = Myelin Basic Protein**

**Red = GFAP**

**Blue = DAPI**

**Ultrasonic Vocalizations (USVs)**

- assessments of affective state, useful for a variety of disorders (e.g. anxiety, PD, stroke, autism spectrum)

May be used with most behavioural tests

\[\text{In vivo Electrophysiology}\]

- assessments for peripheral and central nerve conduction, damage, and regeneration.

Especially valuable for pain studies