

## Contract Research Organization

**PsychoGenics** offers tests in rats and mice including neonates to identify potential drug candidates to treat psychiatric, neurological and cognitive disorders. When necessary we make test recommendations and help design experiments to ensure test viability (including a positive control when possible).

### Mouse (and Rat) Models

#### Alzheimer's Disease

- APP/PS1
- Tg2576 APP Swe
- Line 41 APP Swe/Lon
- rTg4510 Tauopathy

#### Autism Spectrum/ Neurodevelopment

- Rett Syndrome - MECP2 (Bird)
- Fragile X - fMRI KO
- Shank3 (Feng), CNTNAP2 (Peles),
- Down Syndrome - Ts65Dn

#### Depression and PTSD

- Social defeat
- Chronic immobilization stress

#### Huntington's Disease

- R6/2
- Q175

#### Movement Disorders

- ALS -SOD1 (G93)
- Muscular Dystrophy - *mdx*
- SMA - SMNdelta 7

#### Parkinson's Disease

- Lesions: 6OHDA & MPTP
- $\alpha$ -syn Fibril
- $\alpha$ -syn models
- DJ1 & Pink1 (Rat)

#### Schizophrenia / Bipolar

- MAM (Rat)
- Chronic/Acute PCP
- Poly I:C
- Neurexin-1 $\alpha$ .

#### Spinal Cord and Brain Injury

### Behavioral Tests

- Anxiety
- Cognition
- Epilepsy
- Drug abuse liability
- Motor function
- Pain
- Depression & sexual function
- Social behavior
- Schizophrenia & mania
- General/neonatal health

### Electrophysiology

Slice Electrophysiology (interface & submerged)

- Whole-cell and cell-attached patch-clamp recording
- Field recording
- Synaptic physiology/plasticity/LTP

*In Vivo* Electrophysiology (spontaneous and evoked)

- Extracellular single unit recording
- Field potential recording

### Translational EEG

- Sleep
- Seizure
- Spectral power analysis
- Evoked potential

### Quantitative Immunohistochemistry

- Uniform, systematic, random sampling
- Laser scanning microscopy
- High-throughput imaging (Axio.scan Z1)
- Full slice imaging
- Standard and non-standard staining
- Fluorescent and chromogenic IHC

### *In Vivo* Microdialysis

- Conventional and retrodialysis
- "Push-pull" for large molecules
- Quantitative ultra-slow

### Bioanalysis

- HPLC, LC/MS/MS and ELISA
- Neurotransmitters & neuroactive molecules
- Large molecules & lipids
- Tryptophan metabolites

### Molecular Biology & Pharmacology

- Quantitative RT-PCR
- Quantitative Western
- Quantitation of phosphoproteins & second messengers
- Rodent primary neurons/cell culture
- ELISA/ Luminex®
- Receptor occupancy
- Receptor autoradiography

### Other Services

- Comprehensive behavioral phenotyping of genetically modified rodents
- Circadian function
- Motor assessment
- Complex surgeries
- Multiple drug delivery techniques

