

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
- α -syn Fibril
- α -syn models
- DJ1 & Pink1 (Rat)

Schizophrenia / Bipolar

- MAM (Rat)
- Chronic/Acute PCP
- Poly I:C
- Neurexin-1 α

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

