

**NEUROFIT is a Contract Research Organisation (CRO)** specialising in the evaluation of treatments for peripheral and central nervous system disorders.

**NEUROFIT offers a long list of *in vivo* and *in vitro*** validated methods and disease models for drug screening and provides customers with high quality research data and reports.

Methods and protocols can of course be adapted to client's request.



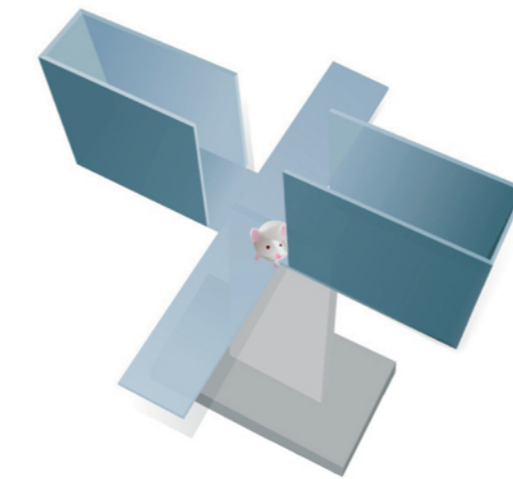
## PSYCHIATRY

**NEUROFIT** offers a variety of well- accepted behavioral tests to assess the potential anxiolytic, antidepressant or antipsychotic effects as well as cognitive enhancing and disrupting effects on learning and memory.

- **Anxiety tests:** Light-dark boxes, Marble burying and the Elevated plus maze
- **Depression:** Forced swimming, Marble burying and Tail suspension
- **Schizophrenia:** MK-801 or Phencyclidine-induced hyperactivity
- **Cognition:** Object recognition, Passive avoidance and T-maze

**NEUROFIT** is able to include in these tests experimental conditions that mimic protocols used in some clinical settings.

Find out more...



- CCK-4-induced panic anxiety
- Scopolamine-induced cognitive deficits
- Aging-related cognition dysfunction
- Amphetamine-induced hyperactivity
- Side effects: locomotor activity & sedation in open-field, motor coordination on rotarod, muscle strength in the grip or in the string test



PSYCHIATRY  
( *in vivo* )

## NEUROLOGY

**NEUROFIT** has developed models for several diseases such as Parkinson's Disease, Epilepsy, Multiple Sclerosis, Arthritis, Pain, Nerve injury and Peripheral neuropathies.

- **Parkinson's Disease:** 6-hydroxydopamine (6-OHDA) - induced lesions of nigrostriatal pathway, Catalepsy
- **Epilepsy:** PTZ-induced seizure
- **Multiple Sclerosis:** Relapsing Remitting and Active Experimental Autoimmune Encephalomyelitis (EAE) and Delayed-Type Hypersensitivity (DTH)
- **Arthritis:** Collagen / Pristane-induced arthritis
- **Peripheral neuropathies:** diabetic neuropathy, sciatic nerve crush, chemotherapeutic agent-induced neuropathy
- **Pain and neuropathic pain:** formalin-induced pain, painful diabetic neuropathy

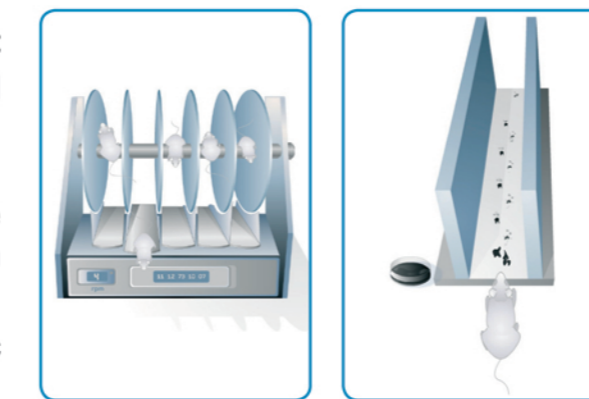
These models are used primarily to evaluate the neurotoxic, neuroprotective or neurorestorative effects of drug candidates.

Find out more...



**NEUROFIT conducts different measures:**

- Quantitative or semi-quantitative behavioral measures
- Blood biochemistry
- Electrophysiology measures (sensory nerve conduction and compound muscular action potential)
- Histopathological and / or histomorphometric analyses



NEUROLOGY  
( *in vivo* )

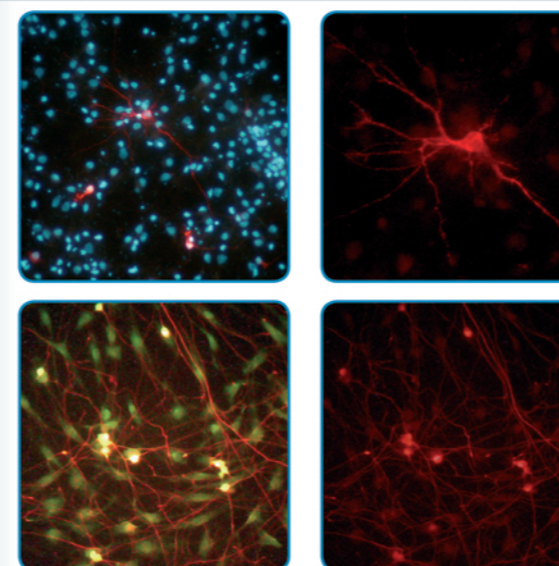
## IN VITRO ( rat primary neuronal culture )

**NEUROFIT** has developed a comprehensive range of rat primary neuronal culture models and assays to evaluate neurotoxicity, neuroprotective or neurotrophic effect of test compounds.

**NEUROFIT** can perform cultures of neurons from different brain regions of the rat such cortical, hippocampal or mesencephalic neurons; sensory neurons or spinal cord motor neurons. Culture can be enriched (>95%) for a given neuron types or co-cultured with Schwann cells or glial cells

- **Neurotrophic effect:** Basal neuronal survival and neurite outgrowth
- **Excitotoxicity and Amyotrophic lateral sclerosis disease:** NMDA or glutamate-induced neuronal death
- **Parkinson's disease:** MPP+-induced death of dopaminergic neurons
- **Chemotherapy induced-neuropathy models**
- **Multiple sclerosis:** proliferation of oligodendrocyte precursors

Find out more...



**NEUROFIT conducts different measures:**

- Neurite length
- Cell death or viability: Lactate-dehydrogenase (LDH), (3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) or Acid phosphatase (AP) measures
- Cell counts (dopaminergic neurons)
- Nerve function: human muscle - rat nerve co-culture

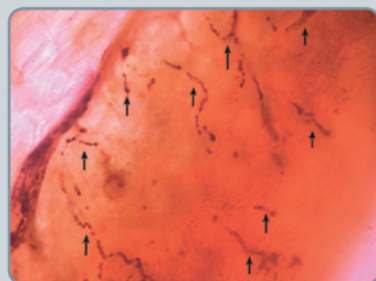
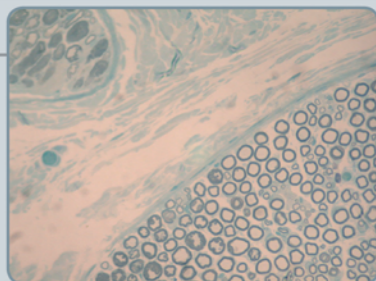
IN VITRO  
( rat primary neuronal culture )

## HISTOLOGY

**NEUROFIT** offers a computer assisted histological platform to investigate changes in morphological profile of peripheral nerves parameters: axonal area, relative myelin sheath thickness, fiber size distribution, fibers density.

As in clinical peripheral neuropathy, **NEUROFIT** uses the loss in the density of Intra-Epidermal Nerve Fibers as a sensitive hallmark of peripheral neuropathy.

**NEUROFIT** implements standard colorations as well as specific immunostaining on paraffin section and cryo-section.



## BRAIN MICROSTRUCTURE TISSUE SAMPLES

**NEUROFIT** routinely performs, as part of a study, dissection of brain microstructures from compound-treated animals (mouse or rat) to provide customers with useful samples for their:

- PK
- biochemistry
- immunochemistry analyses

