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Newsletter

PsychoGenics

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Company Update

PsychoGenics is a neuroscience company committed to providing gold-standard, validated behavioral tests for use in drug discovery and development. PsychoGenics has established relationships with over 60 global pharmaceutical and biotechnology companies, universities and non-profits, and over 80% of the company's current business is repeat business, attesting to high-quality service and consistent client satisfaction.

Senior management (listed in the margin) collectively has over 100 years of successful drug discovery and pharmaceutical industry experience. This is complemented by a scientific management team drawn from academia, and the biotechnology and pharmaceutical industries. The scientific team includes: Taleen Hanania, Ph.D., Contracts Study Director, Liliana Menalled, Ph.D., Huntington Disease Research Study Director, Bassem El-Khodor, Ph.D., Spinal Muscular Atrophy Study Director and the recent additions of Barbara Caldarone, Ph.D., High Throughput Drug Discovery, and Elliot Ludvig, Ph.D., Cognitive Sciences.

PsychoGenics offers a wide range of established and customized resources, including over 40 validated *in vivo* behavioral tests in mice and rats (*see New Services below*). All tests are rigorously validated in multiple strains of mice to elicit highly characteristic responses of drug efficacy with reference compound administration. Client studies also include reference compound comparisons, to confirm that test outcomes predict drug efficacy.

PsychoGenics assures study quality control by precisely identifying both animals and compounds via a unique tracking system, and by processing and verifying experimental data through PsychoGenics' well-established proprietary databases.

A newly designed website details the extensive list of PsychoGenics' services, validation data and presentations, all of which are regularly updated.

www.psychogenics.com

New Facility

Construction has begun on a new, state-of-the-art, 30,000 sq. ft. facility to be completed in December 2005. The entire area will be custom-designed to accommodate our expanding operations. The majority of the new area is dedicated to *in vivo* testing space, to help better serve client needs.

PsychoGenics' executive offices have already relocated to the new address.

765 Old Saw Mill River Road
Tarrytown, New York 10591

Behavior Tests for Neurological & Other Disorders

Grip Strength

Home Cage Observation

Irwin Test

Metabolic Chambers

PTZ Seizure

Rotarod

Visual Cliff

Behavior Tests for Anxiety

Differential Reinforcement of Low Rate of Responding

Elevated Plus Maze

Fear Potentiated Startle

Light/Dark Choice

Novelty Suppressed Feeding (Acute)

Open Field

Stress-Induced Hyperthermia

Ultrasonic Vocalization

Conditioned Defensive Burying

Mouse Models

Huntington's Mouse Licensed

PsychoGenics has licensed the R6/2 transgenic mouse model of Huntington Disease. This mouse develops progressive neurodegeneration and motor deficits characteristic of Huntington disease. Huntington's is a fatal neurological condition for which no treatment currently exists. This is yet another of many behavioral animal models licensed to PsychoGenics. The license is limited, with no reach-through royalty fees or milestone client payments, which translate into significant drug-development cost and time savings. PsychoGenics breeds a large colony of R62 transgenic line in-house and has established a comprehensive battery of tests for compound screening including measures of motor and cognitive decline in mice as young as 4 weeks of age.

Agreement Signed to Help Treat Childhood Disease

PsychoGenics and the Spinal Muscular Atrophy (SMA) Foundation have entered into a research agreement to profile putative therapeutics in various mouse models of SMA. SMA is a heritable disease characterized by progressive muscle weakness and probable death early in life. According to the SMA Foundation website "SMA is the number one genetic killer of infants and toddlers...The Foundation is dedicated to preventing the death and suffering of thousands of children whose lives depend upon increasing research funding to fulfill the scientific opportunity to cure the disease." This collaboration will lead to the establishment of self-sustaining breeding colonies of SMA mice to characterize the progression of behavioral deficits in this model. As with Huntington's Disease, the goal is to establish a rapid throughput battery of discriminatory tests in transgenic mice to evaluate candidate drugs to treat SMA. No drug treatment for SMA is currently available.

New Services

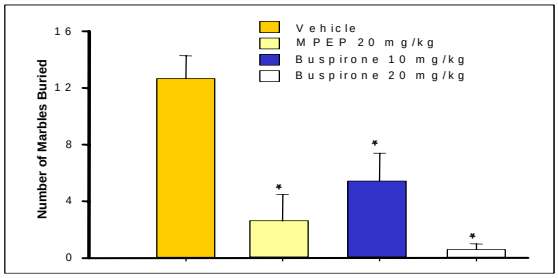
In response to client requests and market demands, a number of new behavior tests have been validated and added to PsychoGenics' portfolio. Here is a selection of newly added services and capabilities:

Anxiety

Marble Burying

Marble burying is a test that predicts anxiolytic activity and is specifically proposed as a model for obsessive compulsive disorder. Mice are placed individually in clean cages containing 5-cm of wood bedding. Marbles are placed in each cage in evenly spaced rows. Mice pretreated with anxiolytic agents such as 2-methyl-6-(phenylethynyl)-pyridine (MPEP) and buspirone bury fewer marbles than control mice.

Effects of MPEP and buspirone on Marble Burying

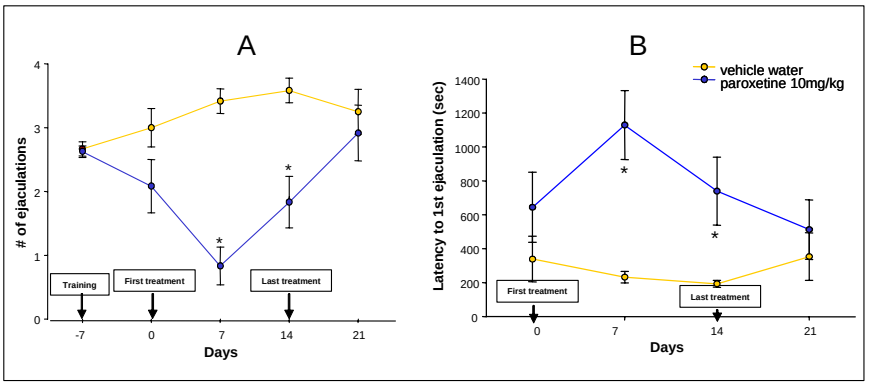


MPEP (20 mg/kg) and buspirone (10 & 20 mg/kg) significantly reduce the number of marbles buried, indicating a decrease in anxiety.

Sexual Dysfunction

Sexual dysfunction in response to genetic or pharmacological intervention can be modeled in rats. Many classes of drugs affect sexual performance and this is frequently used to assess sexual side effects or to determine whether a novel compound has superiority over others in a class. Here male rats are treated with the antidepressant Paroxetine which impairs performance.

Effects of Paroxetine on Rat Ejaculation Frequency and Latency



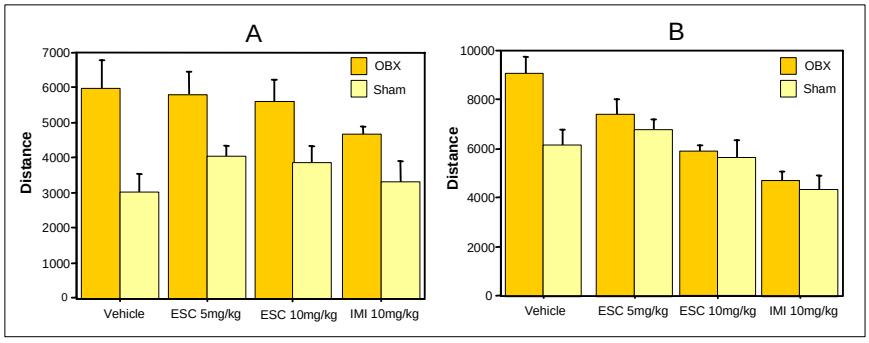
Chronic administration of paroxetine decreases the number of ejaculations in rats (A) and increases the latency to first ejaculation (B)

Depression

Olfactory Bulbectomy

Rats that undergo olfactory bulbectomy (OBX) are significantly more active in the open field test. Chronic antidepressants treatment reduces this hyperactivity.

Effects of Escitalopram and Imipramine on Olfactory Bulbectomy-Induced Hyperactivity



Escitalopram and imipramine do not affect olfactory bulbectomy-induced hyperlocomotion, compared to sham operated rats, when administered once (A) but do reduce activity when administered for 14 days or longer (B)

Behavior Tests for Cognition

Active Avoidance

Barnes Maze

Coloboma Mouse (model of ADHD)

Fear Conditioning

Holeboard

Morris Water Maze

Novel Object Recognition

Peak Procedure (Time Perception)

Place Recognition/ Y-Maze

Radial Arm Maze/ Delayed Non-Matching to Position

Spontaneous Alternation (Y-Maze)

Behavior Tests for Depression

Differential Reinforcement of Low Rate of Responding

Forced Swim

Novelty Suppressed Feeding (Chronic)

Olfactory Bulbectomy

Open Field

Tail Suspension

Conditioned Defensive Burying

Behavior Tests for Sexual Dysfunction

Male & Female Sexual Behavior Including:

Ejaculation frequency

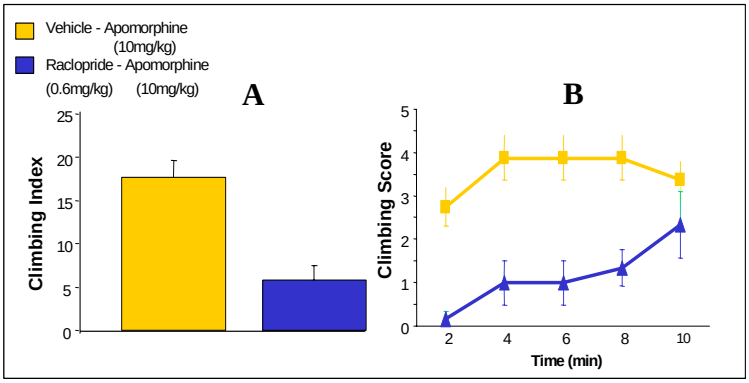
Ejaculation latency

Psychosis & Mania

Apomorphine-Induced Climbing

Test for antipsychotic drugs. The test has predictive validity for anti-psychotic drugs which normalize hyperactivity and stereotypic behavior, induced by apomorphine.

Effects of Raclopride on Apomorphine-Induced Climbing

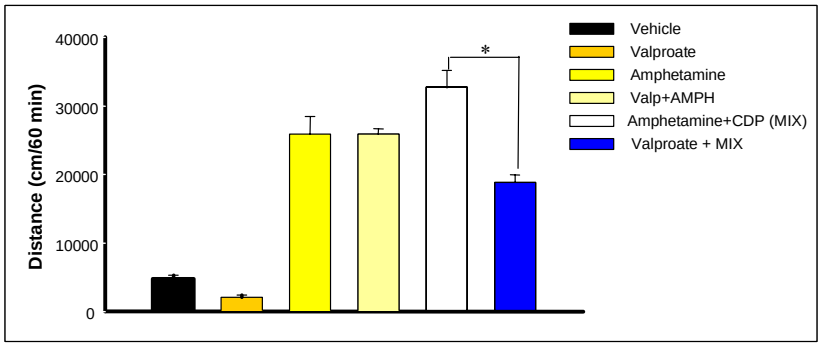


Raclopride (0.6 mg/kg) decreases the effect of apomorphine induced rearing and climbing (A) and this effect is lost over time (B).

Amphetamine- and Chlordiazepoxide (CDP)-Induced Hyperactivity

Test for mood stabilizing drugs. The combination of amphetamine and CDP induces hyperactivity that responds to mood stabilizing drugs such as lithium and valproate, an effect that cannot be produced with amphetamine or CDP alone.

Effect of Valproate on Amphetamine / CDP Induced Hyperactivity



Valproate decreases hyperactivity induced by a mixture of amphetamine and CDP, but does not reduce hyperactivity induced by amphetamine alone.

Contact Information

765 Old Saw Mill River Road, Tarrytown, NY 10591
Tel: 914 593 0640 • Fax: 914 593 0645
www.psychogenics.com
Email: info@psychogenics.com