

CNS Models

We offer preclinical research services using validated rodent models for central nervous system (CNS) disorders to support neuroscience drug development. Our expertise includes models for cognition, depression, anxiety, and Parkinson's disease. With capabilities in behavioural testing, pharmacological evaluation, and neurochemical and biomarker analysis, we provide high-quality, reproducible data to accelerate your CNS research.

Cognition

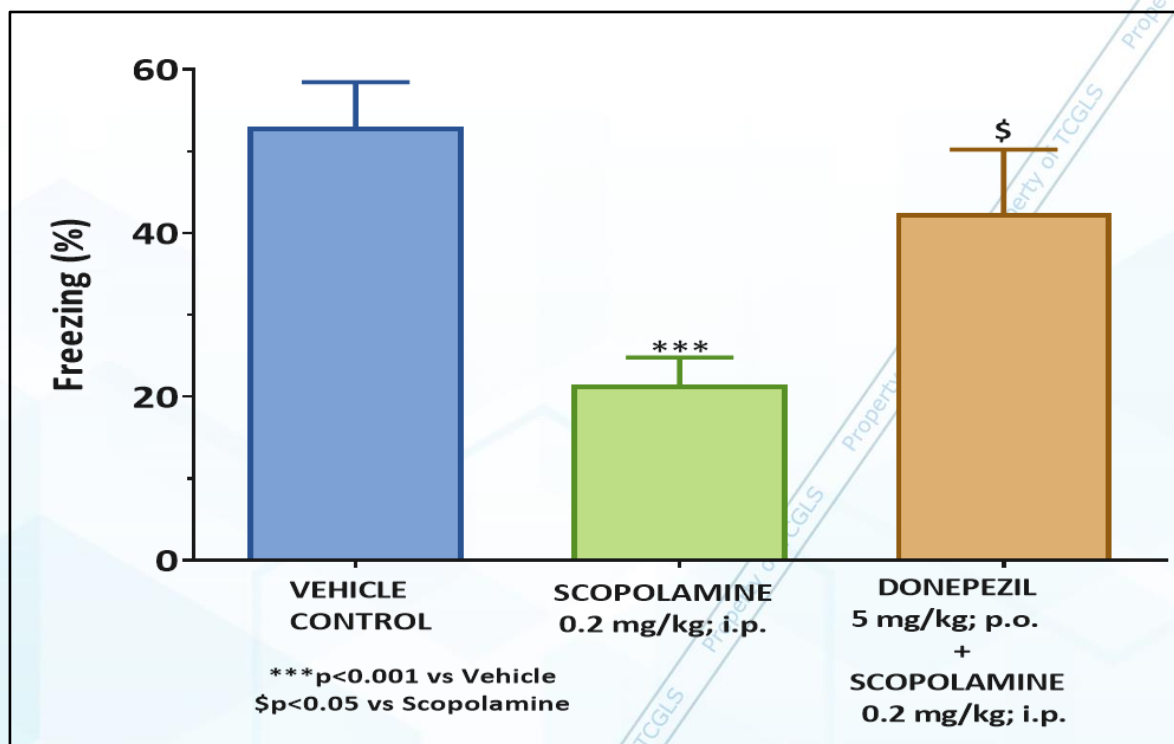
Contextual Fear Conditioning (CFC)

The Contextual Fear Conditioning (CFC) test is a crucial tool in behavioural neuroscience for evaluating associative learning and memory, particularly those involving the hippocampus and amygdala. Its importance lies in its ability to model how organisms learn to associate environmental cues with aversive events, providing insights into the neural mechanisms underlying fear and memory. This test is widely used to study cognitive functions and emotional processing, making it valuable in research on neurodegenerative diseases (e.g., Alzheimer's), psychiatric disorders (e.g., PTSD, anxiety), and the effects of genetic or pharmacological interventions.

Validation results

- **Cognition development:** Conditioning of rats to a context for a definite time period (PSI) followed by unconditional stimulus of electric shock at foot
- **Cognition testing:** Observation of animals in the same environment on the following day for endpoint readout
- **Endpoint readout:** Rats show freezing behaviour, and the freezing time is recorded

Effect of Donepezil in Amnesia Model in SD Rats



- ❖ Scopolamine inhibited freezing behaviour which was reversed by Donepezil
- ❖ This platform can be used in screening compounds for reversal of amnesia

• Novel Object Recognition Test

Anxiety & Depression

- Forced Swim Test (FST)
- Marble Burying Test (MBT)
- Novelty Suppressed Feeding (NSF)
- Tail Suspension Test (TST)

Neurogenerative Disorder

- MPTP-PD (Under development)
- Traumatic Brain Injury (To be onboarded soon)

Adverse Effect Profiling

- Locomotor Activity
- Rotarod Test
- Two-Bottle Taste Preference Test

Field Potential Recording

- LTP and LTD in Hippocampal Slices

