CNS|CRO
Preclinical Neurological Disease Services

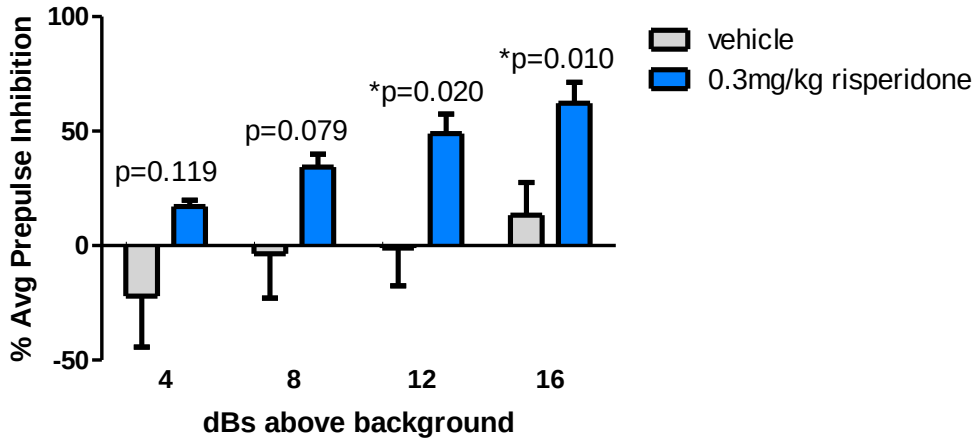
DBA/2 Model of Schizophrenia
Screening for Antipsychotic Activity

Model Overview

Prepulse inhibition (PPI) is a measure of sensorimotor processing that occurs when a weak pre-stimulus suppresses the startle response elicited from a closely following sudden, intense stimulus. Deficits in PPI have been observed in several neuropsychiatric disorders including schizophrenia, obsessive compulsive disorder, bipolar disorder, Tourette syndrome, and Huntington's disease. Measurable across species, PPI has become a valuable translational model for the identification of new therapeutics. DBA/2 mice display naturally lowered PPI which can be normalized through treatment with antipsychotic compounds currently in use with the human clinical population, making the DBA/2 mouse model a valuable screening tool for evaluation of antipsychotic activity.

Improvements in PPI Following Treatment with Risperidone

- DBA/2 mice display lowered PPI at all prepulse dB level
- The deficient PPI behaviour is reliably improved by treatment with the atypical antipsychotic risperidone
- 0.3mg/kg of Risperidone improves PPI but does not induce catalepsy and does not affect baseline startle behaviour



Rapid and Accurate Screening

- No pre-training required
- Within-subjects designs available
- Multiple animals may be tested concurrently
- Additional behavioural testing paradigms are available