Schizophrenia is a mental disorder characterized by positive symptoms that include paranoia, hallucinations and delusions. While treatments exist for these positive symptoms, there remains a clinically unmet need for medications that are active and effective against the negative symptoms of the disease: specifically, cognitive impairments and asociality.

Charles River now offers a fully validated preclinical in vivo model for the study of compounds and therapies aimed at combating the cognitive and negative symptoms of schizophrenia. This schizophrenia model’s study paradigm is based on the administration of PCP. The primary cognitive tasks are Morris Water Maze (MWM) and Novel Object Recognition (NOR), as well as the Prepulse Inhibition of startle (PPI) for the PCP-induced disruption. The model also displays measurable deficits in social behavior. The schizophrenic-like symptoms induced by PCP are reversed by marketed anti-psychotic compound(s).

Example Paradigm for Positive Symptoms (PPI)

- Habituation Period
- Test Article or Vehicle
- PCP (Phencyclidine)
- PPI (PrePulse Inhibition) Test

Example Paradigm for Negative Symptoms (MWM)

- Habituation Period
- Pretreatment PCP/Vehicle
- Treatment PCP/Vehicle MWM Acquisition 3 trials per day
- Treatment PCP/Vehicle MWM Probe trial

This model offers investigators the opportunity to examine a full battery of histopathological endpoints and biomarkers within the study, along with advanced in vivo imaging such as PET-CT/SPECT-CT and MRI/MRS.

For more information on this study model, as well as any other neurologic and/or psychiatric study models offered by Charles River, please contact us at askcharlesriver@crl.com.