

Information about the pharmacokinetic fate of compounds in a test system provides invaluable insight for drug development. Pharmacodynamic assessment provides information regarding behavioural and physiological changes that may occur in response to compound challenge. The pharmacokinetic/dynamics team at CNS|CRO is well trained in various methods of test article administration and collection of fluid and tissue samples from both rats and mice. Safety testing is performed using an Irwin test battery.

Standard Programs

We offer acute (≤ 24 h), subacute (24h-48 days), subchronic (29-90 days), and chronic (4+ month) testing programs.

Compound Administration

We offer the following routes of administration:

- Oral: gavage, feed, liquid
- Intracerebroventricular
- Intra-nasal
- Intravenous
- Intramuscular
- Intra-rectal
- Subcutaneous
- Intraperitoneal
- Dermal / intradermal

Sample Collection

Single time point or serial sampling is available for blood (plasma or serum), saliva, urine, and feces. At euthanasia, various tissues may be harvested (e.g. cerebral spinal fluid, liver, heart, kidney, lung, gut, etc).

Samples are collected and stored as per project requirements. We are pleased to offer a number of post collection evaluation/processing techniques (e.g. wet weight, volume, drying, fixation, staining)

Safety Testing

Irwin testing allows for evaluation of test article effects on physiological functions and central nervous system activity. Results may be used to select doses for subsequent efficacy testing and predict therapeutic activity, as well as for assessment of possible adverse effects associated with test article use.

Categories of response include the following:

- Excitation
- Sedation
- Stereotypy
- Pain
- Motor Function
- Autonomic