



Empowering Your Research

Pre-Clinical Services



Early drug discovery
and
Development



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Pre-Clinical Research Services

- ***EFFICACY STUDIES***
- ***PK / ADME***
- ***TOXICOLOGY***
- ***ADDITIONAL SERVICES***
- ***In-Vitro SERVICES***

EFFICACY STUDIES

Experimental animal models produced spontaneously by selective inbreeding or by genetic modification, are essential tools for understanding the pathogenesis, complications, and testing of various therapeutic agents. These models are safe and reliable option to test the therapeutic potential of novel drugs.

The scientific team of Invitek is highly-qualified and experienced in Pre-Clinical studies of Diabetes, Obesity, Inflammation, Cancer, Multiple Sclerosis and other diseases. Invitek offers a number of animal models for screening and testing efficacy of new drugs and formulations.

Diabetes & Obesity

- Db/db Mouse
- Ob/ob Mouse
- DIO Mouse & Rat
- Non Obese Diabetic (NOD) Mouse
- Zucker Diabetic Fatty (fa/fa) Rat
- Goto Kakizaki (GK) Rat
- STZ Induced Diabetes in Mouse & Rat
- Diabetic Nephropathy

Cancer

Xenograft Tumor Models

- Breast Cancer: MCF-7; MDA-MB231; ZR-75-1
- Prostrate Cancer: DU-145, PC-3 and LANcaP
- Colorectal Cancer: COLO 205, HT-29, HCT-116,
- Liver Cancer: HepG-2, Huh7
- Renal cancer: A-498
- Pancreatic Cancer: Mia PaCa2, AsPc-1, PANC-1, HPAF-II, BxPc-3
- Glioblastoma: U-87 MG, U118
- Gastric Cancer: AGS, NCI-N87 (N87)
- Lung Cancer:H-460, H-358, A-549
- Leukemia (Peripheral Blood): HL-60, K-562
- Melanoma skin cancer: A-375, SK-Mel-28
- Teratocarcinoma: NT2

Multiple Sclerosis

- Acute EAE– using MBP in Lewis Rat
- Chronic EAE-using MOG in C57 Mice
- Relapsing EAE- using PLP in SJL/J Mice
- Cuprizone model of demyelination

Parkinson Disease

- MPTP Induced Mouse Model
- Rotenone Induced Rat Model
- 6-OHDA Rat Model

Inflammation

Models of RA

- Collagen Induced Arthritis (CIA) in Mice
- Collagen Induced Arthritis (CIA) in Rats
- Adjuvant Induced (AIA) in Rats
- SCW induced Arthritis in Rats
- Carageenan Induced Arthritis in Rats

Models of IBD

- DSS Induced Colitis in Mice/Rats
 - Acute
 - Chronic
- TNBS Induced Colitis in Mice/Rats
- Oxazolone Induced Colitis in Mice
- Acetic Acid Induced Colitis in Rats

Sepsis Model

- PS, injection of exogenous toxin
- CLP, Cecal Ligation and Puncture
- Injection of Exogenous Bacteria (*E.coli* and *S. aureus*)

Liver Disease

- Hepatic Fibrosis-using CCl4
- Hepatic Fibrosis-using TAA
- Non Alcoholic Fatty Liver disease (NAFLD) using- diet with high fat/carbohydrate
Leptin deficient mice-ob/ob
Leptin resistant mice-db/db
- Alcoholic Liver Disease (ALD) using-intragastric feeding in rats

Lung Disease

- LPS induced lung inflammation model
- Neutrophil Lung Infiltration Model

IMPORTANT: Our services are responsive to clients needs, customized protocols, fast results, expert consultation and flexibility. Invitek intends to expand with new therapeutic areas, models, and assays, contact us to discuss your specific research needs.

PK / ADME

Pharmacokinetic (PK) data is a key requirement in the evaluation of new drugs and formulations. A quantitative measure of drug exposure is essential for the sound interpretation of pre-clinical efficacy studies. PK data is also requisite before toxicology studies can be performed.

PK samples are collected at various time points as per protocol and analyzed for drug concentrations. The time points depend on the nature of compound and route of administration.

Species Offered

- Mouse
- Rat

Route of Administration

- Oral (PO)
- Intraperitoneal (IP)
- Subcutaneous (SC)
- Intramuscular (IM)
- Intravenous (IV)
- Topical
- Intranasal
- Intraocular
- Intra-rectal

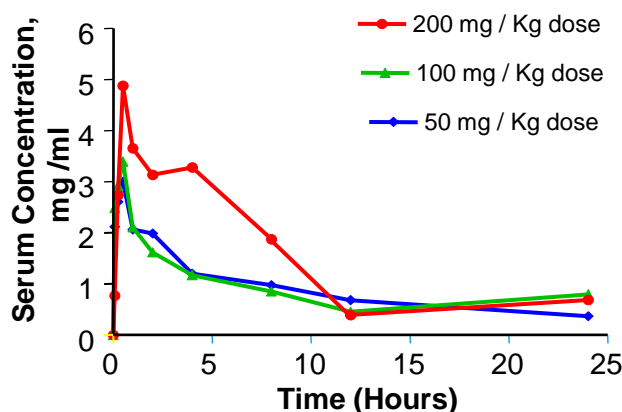
Method of Delivery

- Single dose
- Multiple dose
- Infusion
- Cassette dosing

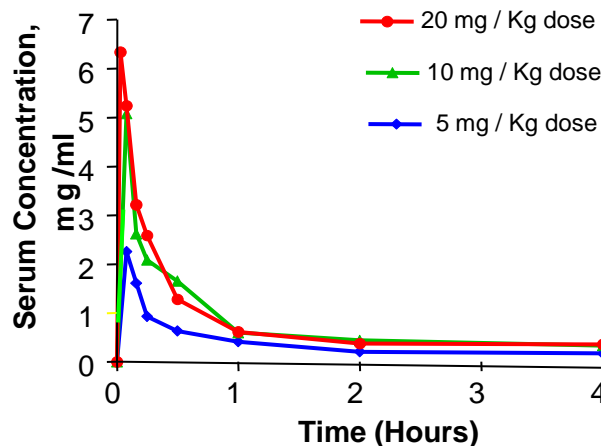
Sampling

- Blood-Plasma or Serum
- Urine
- Feces
- Tissue or organ

Rat PK Studies with different oral doses of Test Article



Rat PK Studies with different I.V. doses of Test Article



Pharmacokinetic study in Disease Model

Invitek offers Pharmacokinetics in disease models for better understanding of absorption and bioavailability.

Toxicokinetics

Plasma samples are generated in toxicology studies and the resultant test material concentration data is interpreted utilizing industry-standard software.

Toxicokinetics is used primarily for establishing relationships between exposures in toxicology experiments in animals and corresponding exposures in humans.

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TOXICOLOGY

Invitek offers non-GLP toxicology studies. Non-GLP toxicology studies are intended to provide preliminary assessment of a drug's safety. Non-GLP Toxicology studies have the following advantage:

- It can be performed on research grade materials
- It gives flexibility to design study protocol for regulatory submission
- It reduces costs and time required for GMP grade material.

GLP toxicology studies are required as part of the IND package before starting a human clinical trials.

In-Vivo Services

- Acute Oral Tox-LD50
- Maximum Tolerated Dose (MTD)/
Dose range finding study
- Single dose Acute Toxicity
- Repeat dose Toxicity
- Sub-Chronic Toxicity
- Chronic Toxicity
- Toxicokinetic

In-Vitro Service:

- Cytotoxicity
- MTT Assays

Route of Administration

- Oral (PO)
- Intraperitoneal (IP)
- Subcutaneous (SC)
- Intravenous (IV)
- Intramuscular (IM)
- Topical

Genotoxicity

- Chromosomal Aberration Study
- Mouse Micronucleus Study

ADDITIONAL SERVICES

- Hyperinsulinmic-Euglycemic Clamp
- Glucose Tolerance Test
 - OGTT (Oral Glucose Tolerance Test)
 - IPGTT (Intraperitoneal Glucose Tolerance Test)
 - IVGTT (Intravenous Glucose Tolerance Test)
- Behaviorable Studies
- ELISA Assays
- In-vitro dose range finding, Ciytotoxicity, MTT Assay, IC50

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