



## Disease Models

Our team has over Fifty years of experience with efficacy studies in all of the major therapeutic areas including: Autoimmune Disorders, Cardiovascular, CNS, Infectious Disease, Inflammation, Metabolic Disease and Oncology. We use the most validated and reliable models for testing your compounds and our years of experience can help guide your decision regarding the best model for your application. MuriGenics also will help you develop new animal models tailored to your specific drug testing programs. Scroll over the therapeutic area categories for a list of models that we routinely use at MuriGenics.

### Autoimmune Disorders

Experimental Autoimmune Encephelomyelitis (EAE):

- MOG (myelin-oligodendrocyte-glycoprotein) induced
- PLP (proteolipid protein) induced
- Passive transfer of sensitized lymphoid cells

Rheumatoid Arthritis models:

- Collagen Induced Arthritis (CIA)
- Type-2 Collagen Monoclonal Antibody (mAB) Cocktail

### Cardiovascular

Atherosclerosis: Transgenic and Atherogenic Diet

- ApoE -/-
- LDLR -/-
- sPLA2- transgenic

Carotid Artery Ligation (mouse)

Hypertension

- Spontaneously Hypertensive Rat (SHR) model
- Angiotensin-2 Infusion
- High-salt diet

Restenosis following carotid balloon angioplasty (rat)

Chemically-induced carotid thrombus formation (rat)

Thrombosis

- Tail bleeding time
- Blood coagulation time

### Central Nervous System & Behavior

Parkinson's Disease by MPTP injection (1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine)

Behavioral

- Elevated plus-maze
- Open field activity
- Tail suspension
- Startle response
- Hang time

### Gastrointestinal Physiology

Intestinal transit time of alimentary bolus

Biliary secretion by cannulated bile duct

Gastric emptying of liquids and solids

### Infectious Disease

Neutropenic thigh model (cyclophosphamide and IM bacteria injection)

Superficial skin wound infection model

### Inflammation

Allergen-induced Pulmonary Inflammation

- lipopolysaccharide (LPS)
- ovalbumin (OVA)

Airpouch

- lipopolysaccharide (LPS)
- Carrageenan

Dermal

- Dermal Scar Model
- Skin Inflammation

Hepatitis

- Non-lethal LPS/D-GalN induced hepatitis (acute model)

## Inflammation (Cont'd)

### Contact Hypersensitivity & Delayed-Type Hypersensitivity

- dermal 2,4-dinitro-1-fluorobenzene (DNFB)
- intradermal methylated-BSA

### Inflammatory Bowel Disease (IBD)

- dextran sodium sulfate in drinking water (DSS)
- colonic instillation of trinitrobenzene sulfonic acid (TNBD)

### Local Inflammation

- Carrageenan injection hind paw
- Passive cutaneous anaphylaxis (PCA)

### Peritonitis

- thioglycollate, mineral oil, or pristane-induced

### Renal Acute Inflammation

- unilateral ureter obstruction (UUO)
- High-protein diet (rats)

### Sepsis

- intraperitoneal lipopolysaccharide (LPS)
- intraperitoneal Staphylococcal Enterotoxin-B (SEB)

## Metabolic Disease

### Obesity and Diabetes

- Dietary
  - C57BL/6J or /6N mouse diet-induced obesity (DIO)
  - Fructose diet Sprague Dawley Rat
- Genetically Modified
  - db/db
  - Non-obese diabetic (NOD)
  - Zucker fatty rat
  - ob/ob
  - Zucker fatty diabetic rat (ZDF)

### Renal Failure

- Goto-Kakizaki (GK) rats treated with a high-salt diet & angiotensin II

### Steatosis

- Atherogenic Diet (Piagen)
- ob/ob; db/db
- Dietary methionine/choline deficient
- C57BL/6J high-fat diet
- NON/ShiLtJ high-fat diet

## Oncology

### Xenograft models

- Tumor Cell lines in routine Use:
  - Prostate: PC3, DU145, LNCaP, 22Rv1
  - Breast: BT474, MCF7, SKBR3, BT 483
  - Colorectal: HT29, Colo320DM, Colo205, HCT15, DLD1, SNU C2B, NCI H716, HCT-116
  - Lung: NCI H460, A549, NCI-H2
  - Melanoma: WM115, A375
  - Ovarian: SK-OV3, OvCAR3
  - Pancreatic: BxPC3
  - Glioblastoma: A172
  - Hematopoietic tumors:
    - MV-4-11, MOLT4, K562, U937, RPMI, CCRF-CEM, HL-60, RAJI, Daudi

### Syngenic models in mice

### Custom tumor model development

## Transplantation

### Skin transplantation - Host immune response to foreign tissue (Murine allograft)