

# Medicilon Non-tumor Pharmacodynamic Services Platform

Keeping pace with industrial development and market demand, Medicilon's experienced Pharmacology and Pharmacodynamics Department has established a complete animal model evaluation system based on verification, precision and efficacy testing. Medicilon provides test subjects that include non-human primates, dogs, rats, mice, rabbits, guinea pigs, and miniature pigs.

With more than 20 years of experience, Medicilon boasts **270+** evaluation models for non-tumor diseases, including inflammatory & immune, CNS, digestive, metabolic, cardiovascular and others.

We have a professional team with profound professional theoretical knowledge and many years of experimental experiences and have most of the advanced experimental facilities to comprehensively evaluate the efficacy of various categories of new drugs, evaluate the pharmacological and pharmacodynamic effects of various types of new drugs from drug-gability to Class I innovative drugs from the molecular level, cellular level, *ex-vivo*, *in vivo*. The pharmacology department has a professional team with profound professional theoretical knowledge and many years of experimental experience. Preclinical systematic efficacy evaluation can be conducted on multiple categories of drugs (including oral preparations, injections, topical preparations, nasal drops, sprays, etc.), including small molecule chemicals, ADC drugs, cell preparations, monoclonal antibodies, traditional Chinese medicine, etc. We can provide comprehensive and authentic trial data and research reports for new drug applications. It has been highly recognized by many customers in the industry.

## Non-tumor Animal Models (271)

- 72 Inflammatory & immune diseases models
- 65 CNS diseases models
- 18 Digestive diseases models
- 46 Metabolic diseases models
- 25 Cardiovascular diseases models
- 45 Others diseases models

Data as of 2024.09

## Inflammatory & Immune Diseases Models

Diseases	Model	Animals
Arthritis	Acute joint inflammation (Carrageenan induction)	Rat
	Acute joint inflammation induced CFA	Mouse/Rat
	Rheumatoid arthritis induced by II Collagen (CIA model)	Mouse/Rat
	Rheumatoid arthritis induced by Complete Freund's Adjuvant (AIA model)	Rat
	Gouty arthritis model (Sodium urate induction)	Rat
Osteoarthritis	Sodium iodoacetate (MIA) induced osteoarthritis	Rat
	Partial Medial Meniscectomy (pMMx) induced osteoarthritis	Rat
	Partial Medial Meniscectomy with Anterior Cruciate Ligament severed (pMMx + ACLT) osteoarthritis	Rat
Osteoporosis	Osteoporosis model of castrated female rat	Rat
	Osteoporosis model (Retinoic acid A induction)	Rat
	Osteoporosis model (Glucocorticoid induction)	Rat
Psoriasis	Vaginal epithelium mitosis (Estrogen induction)	Mouse
	Tail scale model	Mouse
	Auricle epidermal dysplasia (IL-23 induction)	Mouse
	Back skin psoriasis (Imiquimod induction)	Mouse/Rat
Atopic dermatitis and eczema	Atopic dermatitis model (MC903 induction)	Mouse
	Atopic dermatitis model (Oxazolone induction)	Mouse
	Chronic atopic dermatitis model (DNFB induction)	Mouse
	Chronic atopic dermatitis model (DNCB + OX induction)	Mouse
	Subacute eczema-like model (DNFB induction)	Mouse
	Eczema-like model (Phorbol ester induction)	Mouse
Inflammatory bowel diseases (IBD)	Ulcerative colitis model (TNBS induction)	Rat
	Ulcerative colitis model (DNBS induction)	Rat
	Ulcerative colitis model (DSS induction)	Mouse
Multiple sclerosis , Amyotrophic lateral sclerosis (MS, ALS)	EAE allergic encephalomyelitis (EAE) model	Mouse
	Cuprizone-induced demyelination of brain tissue	Mouse
Pulmonary inflammation and fibrosis	Pulmonary inflammation model (LPS induction)	Mouse/Rat
	Systemic inflammation model (LPS induction)	Mouse/Rat
	Pulmonary fibrosis model (Bleomycin induction)	Mouse/Rat
	Pulmonary fibrosis model (Paraquat induction)	Rat
	Silicosis model (Silicon dioxide induction)	Rat
Asthma	Bronchial asthma model (OVA + Aluminum hydroxide induction)	Rat
Nephritis	Heymann nephritis model	Rat
	IgA nephritis model	Mouse
	Serum sickness nephritis model	Rat
Alopecia and Alopecia areata	Alopecia (Rosin and Paraffin + Testosterone propionate induction)	Mouse
	Alopecia (Testosterone propionate induction)	Mouse/Rat
	Alopecia (Dihydrotestosterone induction)	Mouse
	Alopecia areata (Imiquimod induction)	Mouse
	Alopecia areata (Cyclophosphamide induction)	Mouse
Allergic rhinitis	Allergic rhinitis model (OVA + Aluminum hydroxide induction)	Mouse
	Allergic rhinitis model (OVA + DPT vaccine induction without cell)	Rat
Pruritus model	Pruritus model (Chloroquine induction)	Mouse
	Acute pruritus model (Histamine induction)	Mouse
	Pruritus model (Histamine + 4-AP induction)	Mouse
	Pruritus model (Dextran induction)	Mouse

Diseases	Model	Animals
Pruritus model	Acute pruritus model (Compound 48/80 induction)	Mouse
	Pruritus model (MC903 induction)	Mouse
	Dry skin pruritus model	Mouse
Humoral and cellular immune function	Immunodeficiency model (Dexamethasone induction)	Mouse
	Immune dysfunction model (Heteroprotein induction)	Mouse
	Cellular immune function test <i>in vivo</i>	Mouse
	Humoral immune function test <i>in vivo</i>	Mouse
	Avaluating effects on mononuclear macrophage function <i>in vivo</i>	Mouse
Inflammation and Swelling	Auricle swelling model	Mouse
	Toe swelling model	Rat
	Capillary permeability test	Mouse/Rat
	Granuloma proliferation model	Rat
	Carbon clearance test	Mouse
	Fever model (Yeast induction)	Mouse
	Passive cutaneous anaphylaxis (PCA)	Mouse/Rat
Immune-mediated inflammatory eye diseases	Allergic conjunctivitis (AC) model	Rat
	Dry eye model	Rat

## CNS Models

Diseases	Model	Animals
Depression	Forced swimming test	Mouse/Rat
	Tail suspension test	Mouse
	5-HTP-induced head twitches response	Mouse
	Reserpine-induced ptosis	Mouse
	Yohimbine-induced lethality test	Mouse
	High dose apomorphine antagonism	Mouse
	Chronic unpredictable mild stress (CUMS)	Rat
	Novelty suppressed feeding test	Mouse/Rat
	MAO-A activity test	Mouse/Rat
	MAO-B activity test	Mouse/Rat
Convulsant	Clonic seizure model (Pentylentetrazol induction)	Mouse
	Clonic seizure model (Strychnine hydrochloride induction)	Mouse
	Clonic seizure model (Bicuculline induction)	Mouse
	Yohimbine-induced lethality test	Mouse
	Clonic seizure model (Picrotoxin induction)	Mouse
Parkinson's diseases	Subacute model (MPTP induction)	Mouse
	Chronic model (MPTP + Probenecid induction)	Mouse
	Tremors/salivation (Oxotremorine induction)	Mouse
Dementia	Memory acquisition impairment	Mouse
	Memory consolidating impairment	Mouse
	Memory retrieval impairment	Mouse
	Light-dark box test	Mouse
	Morris water maze test	Rat
	Activity of acetylcholinesterase test	Mouse/Rat
	Subacute aging model (D-galactose induction)	Mouse
	Novel object recognition (NOR) test	Rat
	APP/PS1/Tau transgenic mice (Morris water maze, CognitionWall)	Transgenic Mouse

Diseases	Model	Animals
Sedative hypnosis anti-anxiety	Synergistic effect with pentobarbital	Mouse
	Synergies with pentobarbital drugs	Mouse
	Wake up and fall asleep again	Mouse
	Open field test (video monitoring, software processing)	Mouse/Rat
	Elevated plus maze test (video monitoring, software processing)	Mouse/Rat
	Shuttle Box test (video monitoring, software processing)	Mouse
Schizophrenia	MK801 induced schizophrenia (negative symptom)	Mouse
	MK801 induced schizophrenia (positive symptom)	Mouse
	Ketamine induced schizophrenia with negative symptom	Mouse
	Haloperidol-induced catalepsy	Rat
	Lower lip retraction test	Rat
	Apomorphine-induced rotation test	Mouse
	Hyperactivity induced by Amphetamine	Rat
	Hyperactivity induced by Phencyclidine	Rat
Nociceptive pain	Hot- or cold-plate tests, Radiant heat tail-flick test, Randall-Selitto test	Mouse/Rat
	Von-Frey filaments test	Mouse/Rat
	Acetic acid writhing test	Mouse
	Formalin model (phase I & phase II)	Mouse
	Model of foot inflammatory pain model (CFA induction)	Mouse/Rat
	Model of foot inflammatory pain model (Carrageenan induction)	Mouse/Rat
	L5/L6 spinal nerve ligation (SNL)	Rat
	LPS-induced thermal hyperalgesia	Mouse/Rat
	Sciatic nerve injury (SNI) model	Mouse/Rat
	Pain model (Incision induction)	Rat
	Diabetic foot ulcer pain model	Mouse/Rat
	Chemotherapy pain model (Vincristine induction)	Rat
	Chemotherapy pain model (Paclitaxel induction)	Rat
	Osteoarthritis pain model (pMMx + ACLT induction)	Rat
Osteoarthritis pain model (MIA induction)	Rat	

## Digestive Diseases Models

Diseases	Model	Animals
Gastric acid secretion and Gastric ulcer	Gastric acid secretion model (Pyloric ligation induction)	Rat
	Gastric acid secretion model (Histamine induction)	Rat
	Gastric ulcer model (Ethanol induction)	Mouse
	Gastric ulcer model (Non-steroidal anti-inflammatory drug induction)	Rat
	Gastric ulcer model (water bundle stress induction)	Rat
	Chronic gastric ulcer model (Acetic acid induction)	Rat
	Gastric ulcer model (Pyloric ligation induction)	Rat
	Duodenal mucosal lesions model (Cysteine induction)	Rat
	Reflux esophagitis model	Rat
	Chronic atrophic gastritis model	Rat
Gastric and intestinal motility disorders	Gastric emptying (GE) model	Mouse/Rat
	Gastric and intestinal motility model	Mouse/Rat
	Functional dyspepsia model	Rat
	Diarrhea model	Mouse/Rat
	Constipation model	Mouse

## Metabolic Diseases Models

Diseases	Model	Animals
Obesity and Diabetes	Obesity model (HFD and HSD induction)	Mouse/Rat/Golden Hamster
	DIO model (HFD induction)	Mouse/Rat
	Model of losing fat and gaining muscle	Mouse/Rat
	Type 1 diabetes model (Streptozotocin induction)	Mouse/NOD Mouse/Rat
	Spontaneous type 2 diabetes mice (db/db, ob/ob)	db/db Mouse, ob/ob Mouse
	Spontaneous type 2 diabetes rat (ZDF)	ZDF Rat
	Diabetic skin ulcer model	Mouse/Rat
	Diabetic foot model	Mouse/Rat
Hyperuricemia	Hyperuricemia (Potassium oxonate induction)	Mouse/Rat
	Hyperuricemia (Adenine induction)	Rat
	Hyperuricemia (Adenine + Potassium oxonate induction)	Rat
	Hyperuricemia (Hypoxanthine induction)	Mouse
	Hyperuricemia (Hypoxanthine + Potassium oxonate induction)	Mouse/Rat
	Hyperuricemia (Yeast induction)	Mouse
	Hyperuricemia (Adenine + Ethambutol induction)	Rat
	Hyperuricemia (Uric acid induction)	Mouse
NAFLD (NAFL / NASH)	Alcoholic liver injury model	Mouse/Rat
	NAFLD model (HFD diet induction)	Mouse/Rat/Hamster
	NASH model (HFD diet induction)	Mouse/Rat/Hamster
	NASH model (MCD diet induction)	Mouse
	NASH model (CDAA diet induction)	Mouse
	NASH model (Composite factor induction)	Rat
Liver fibrosis	Liver fibrosis model (Biliary ligation induction)	Rat
	Liver fibrosis model (TAA induction)	Rat
	Liver fibrosis model (Composite factor induction)	Rat
	Liver fibrosis model (ConA induction)	Mouse
	Immune liver fibrosis (pig serum induction)	Rat
Liver and Bile duct diseases	Acute liver injury model (Acetaminophen induction)	Mouse
	Intrahepatic cholestasis model	Rat
	Primary biliary cholangitis	Mouse

## Cardiovascular Diseases Models

Diseases	Model	Animals
Dyslipidemia	Hyperlipidemia model (HFD/Cholesterol /Fructose diet induction)	Rat/ Hamster
	Hereditary atherosclerosis + HFD	APOE Mouse
Thrombosis, Anticoagulation, Hemophilia	Arteriovenous bypass thrombosis model	Mouse/Rat
	Caudal vein thrombosis (Carrageenan induction)	Mouse
	Rat model of deep vein thrombosis	Rat
	Carotid artery thrombosis model	Mouse/Rat
	Bleeding time (BT) test	Mouse
	Coagulation time (CT) test	Mouse
	Four tests for coagulation (PT, APTT, TT, FIB)	Mouse/Rat
	F8-KO hemophilia model	Mouse
Middle cerebral artery occlusion (MCAO)	Cerebral ischemia reperfusion: dose-dependent and time-effect relationship research	Mouse/Rat
	Time window for treatment of cerebral ischemia reperfusion injury	Mouse/Rat
	The neuroprotective effect of cerebral ischemia reperfusion	Mouse/Rat
	Permanent cerebral infarction model	Rat

Diseases	Model	Animals
Myocardial ischemia-reperfusion	Myocardial ischemia-reperfusion model	Rat
Anemia	Hypoferric anemia	Rat
	Renal anemia induced by 5/6 Nephrectomy	Rat
	Renal anemia induced by Adenine	Rat

## Other Diseases Models

Diseases	Model	Animals
Kidney injury and failure	Acute renal failure (Cisplatin induction)	Rat
	Acute kidney injury (RIAKI) model (Rhabdomyolysis induction)	Mouse
	Renal ischemia-reperfusion model	Rat
	Chronic renal failure induced by 5/6 Nephrectomy	Rat
	Chronic renal failure induced by Adenine	Rat
	Diabetic renal failure	ZDF Rat, db/db Mouse
Leukopenia	Leukopenia model (Cyclophosphamide induction)	Mouse/Rat
	Leukopenia model (Cytarabine induction)	Rat
	Leukopenia model (Adriamycin induction)	Rat
	Leukopenia model (Cisplatin induction)	Rat
Respiratory system	Expelling phlegm test (phenol red excretion method)	Mouse
	Tracheal goblet cell staining counts	Rat
Sexual dysfunction	Sexual behavior test experiment (Back climbing experiment)	Rat
	Erectile function test in normal rat	Rat
	Erectile function test in castrated rat	Rat
Prostatic diseases	Prostatic hyperplasia model (Normal)	Mouse/Rat
	Prostatic hyperplasia model (Castration)	Mouse/Rat
	Prostatic hyperplasia model (Androgen induction)	Mouse/Rat
	Nonbacterial prostatitis	Rat
Gynecological diseases	Uterine fibroid model	Rat
	Endometriosis model	Mouse/Rat
	Mammary hyperplasia model	Rat
Hyperthyreosis	Secondary hyperthyroidism model	Mouse/Rat
Skin healing	Full-thickness skin trauma model	Mouse/Rat
	Standardized Scalding Burn Model	Mouse/Rat
	Diabetic foot ulcer model	db/db Mouse
Sepsis	Sepsis model (LPS induction)	Mouse
	Sepsis model (CLP induction)	Mouse
Ocular diseases	Glaucoma model	Rat
	Choroidal neovascularization (CNV) model	Mouse/Monkey
	Retinal neovascularization (RNV) model	Rabbit
	Alkali burn of cornea model	Rat/Rabbit
	Dry AMD model	Mouse



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