凯斯艾生物
KCI BioTech

珂玛麒生物
KMQ BioTech

COMPREHENSIVE PRECLINICAL CRO

- In vivo Pharmacology and Pharmacodynamics
- Oncology pharmacology and pharmacodynamic
- Pharmacokinetics&Early toxicology
- Pathogenic microorganism services platform
- Pathologies
- Integrated Service Platform

KCI BioTech (Suzhou) Inc.

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KCI Biotech and its wholly-owned subsidiary, KMQ Biotech are CROs specializing in providing preclinical pharmacodynamics and durability evaluation services for pharmaceutical research and development. The company owns two AAALAC-accredited state-of-the-art laboratory animal facilities in Suzhou and Nantong, with a total area of more than 40,000m², which can meet the needs of various types of preclinical research. The company has a full range of laboratory animal platforms including mice, hamsters, guinea pigs, rabbits, cats, dogs, pigs, ferrets and non-human primates, an in vivo pharmacodynamic evaluation platform with 400+ models, an pathogenic microorganism services platform, and service platforms for pathology, toxicology, pharmacokinetics, cellular and molecular biology, and medical imaging, etc. The company has already cooperated with more than 1,000 famous domestic and international pharmaceutical companies, and completed more than 100 domestic and international projects. With a professional R&D team, rich experience in in vivo pharmacology and pharmacodynamics evaluation, and a professional spirit of integrity and excellence, KCI&KMQ will provide a full range of preclinical drug discovery and development services for global pharmaceutical companies and research institutions, and establish a professional and efficient drug discovery and evaluation system!

AAALAC
Laboratory Animal Facility Accredited

18000 m²
Facility footprint

400 Types
Animal Models of Disease

These services include:

01 In vivo Pharmacology and Pharmacodynamics

02 Pathogenic microorganism services platform

03 Pharmacokinetics&Early toxicology

04 Cellular and Molecular Biology Research Platform;

05 Pathologies

06 Integrated Service Platform

40000 m² Footprint

400+ Disease Models

1000+ Number of clients

150+ Professionals

·Services·

Drug R&D

Vaccine R&D

TCM R&D

Medical devices

01

In vivo Pharmacology and Pharmacodynamics

- Cardiovascular Disease
- Metabolic Diseases
- Inflammation/Immune System
- Pain Diseases
- CNS Diseases
- Respiratory system
- Skin Diseases
- Urinary System Diseases
- Digestive System Diseases
- Motion System Diseaases Model

02

Pathogenic microorganism services platform

- Virus
- Bacteria
- Fungi

研发服务平台

03

Oncology pharmacology and pharmacodynamic

- Subcutaneous Tumor Model
- In Situ Tumor Model
- Metastatic Tumor Model

04

Pathologies

- Clinical pathology
- Histopathology
- IHC
- Molecular pathology

05

Pharmacokinetics & Early toxicology

- Bioanalytical research
- Tissue distribution studies, in vivo metabolism studies
- Pharmacokinetic study, PKPD study
- MTD
- DRF
- Toxicokinetic study

06

Integrated Service Platform

- Medical imaging
- Molecular pharmacology
- Micro/organoid
- Laboratory Sharing Platform
- Medical devices

Full range of animal experimentation service capabilities

Rats

Mice

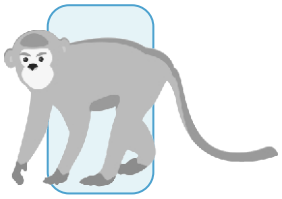
Guinea pigs

Hamsters

Cats

Ferrets

Rabbits



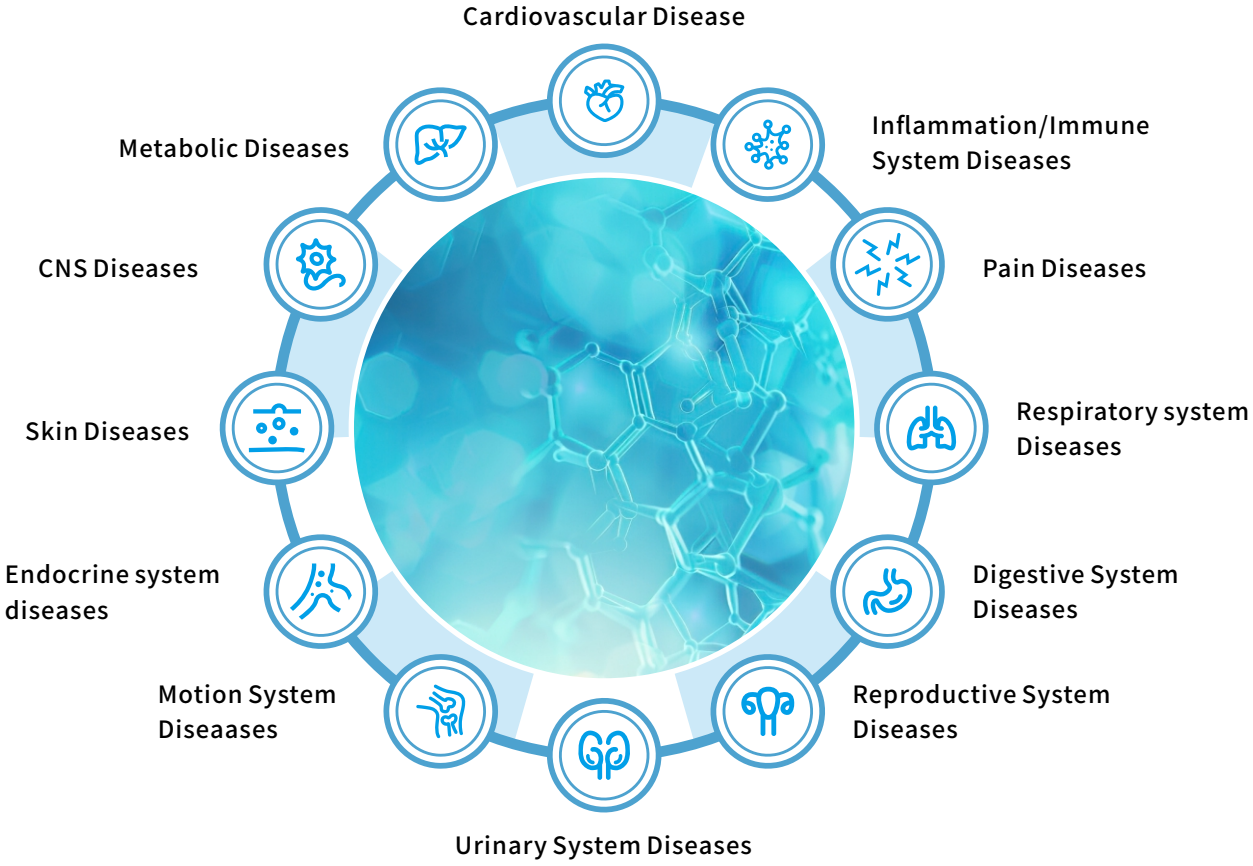
Non-human Primates

Dogs

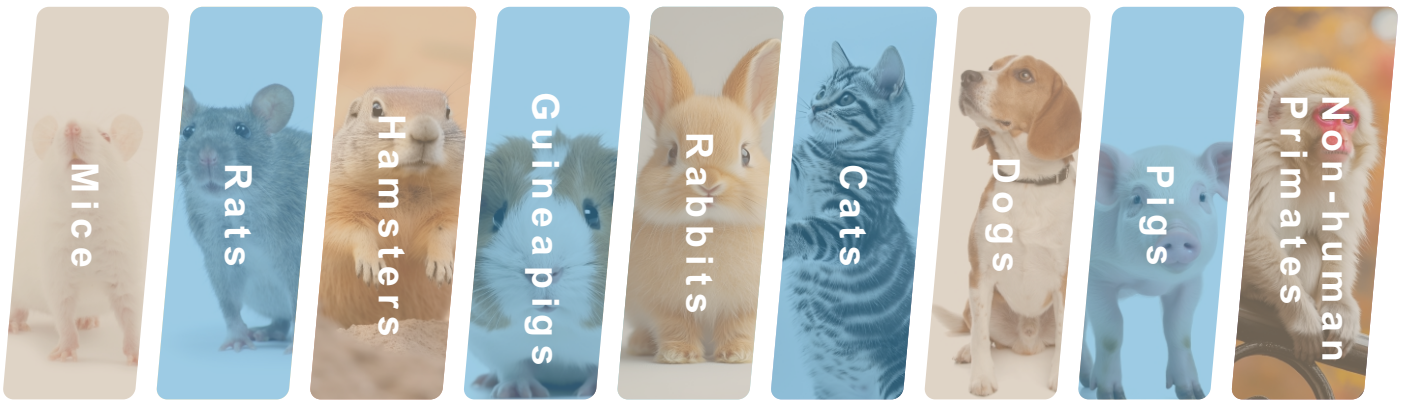
Pigs

In vivo Pharmacology and Pharmacodynamics

KCI&KMQ has been deeply engaged in non-tumor in vivo pharmacology and pharmacodynamics research for more than ten years. With professional and solid technical staff, advanced experimental equipment and facilities, and a comprehensive database of multidisciplinary disease models, Kaseya-Komaki has built a complete set of in vivo pharmacology and pharmacodynamics evaluation system, which is capable of accurately analyzing the mechanism of action of the drug in vivo, pharmacology and pharmacodynamics and other key data from molecular, cellular and overall animal levels. Currently, we have served hundreds of well-known pharmaceutical companies and will continue to provide comprehensive, efficient and accurate services to our customers, helping pharmaceutical R&D to advance steadily.



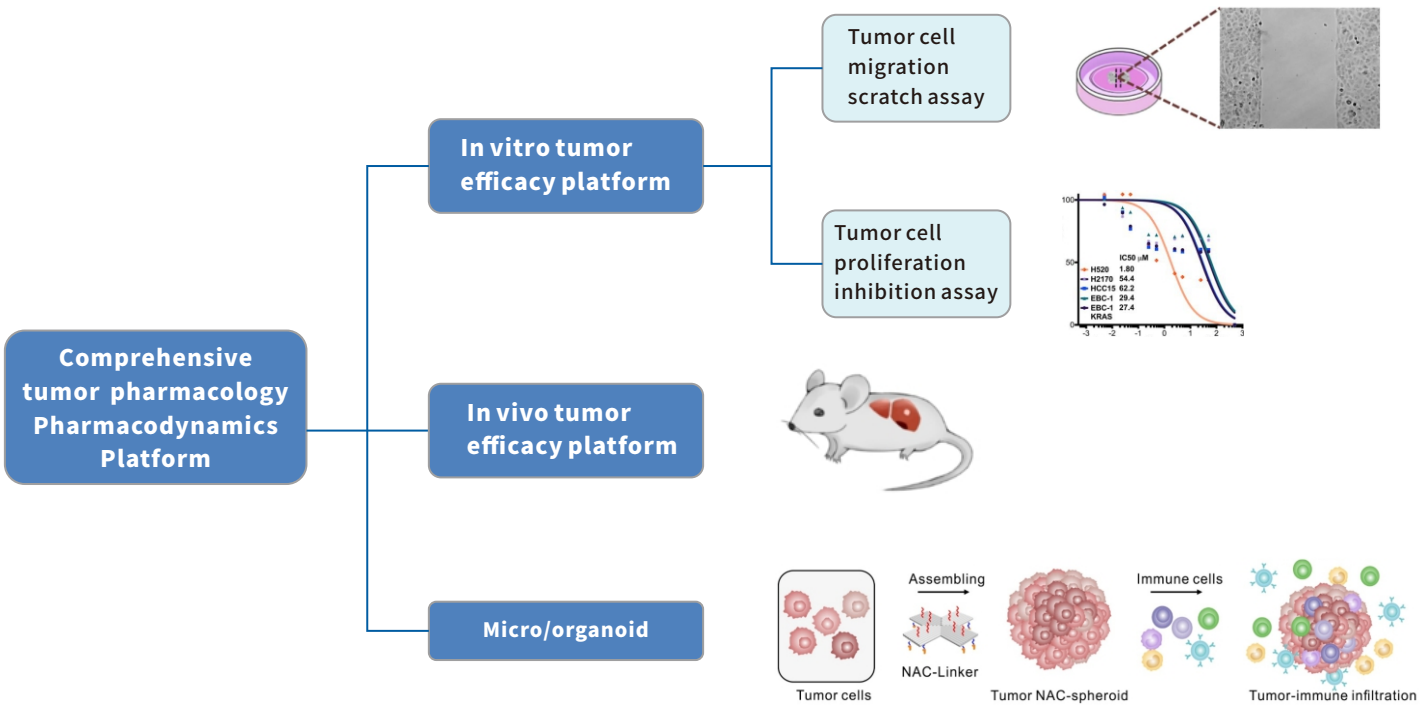
Species of animals

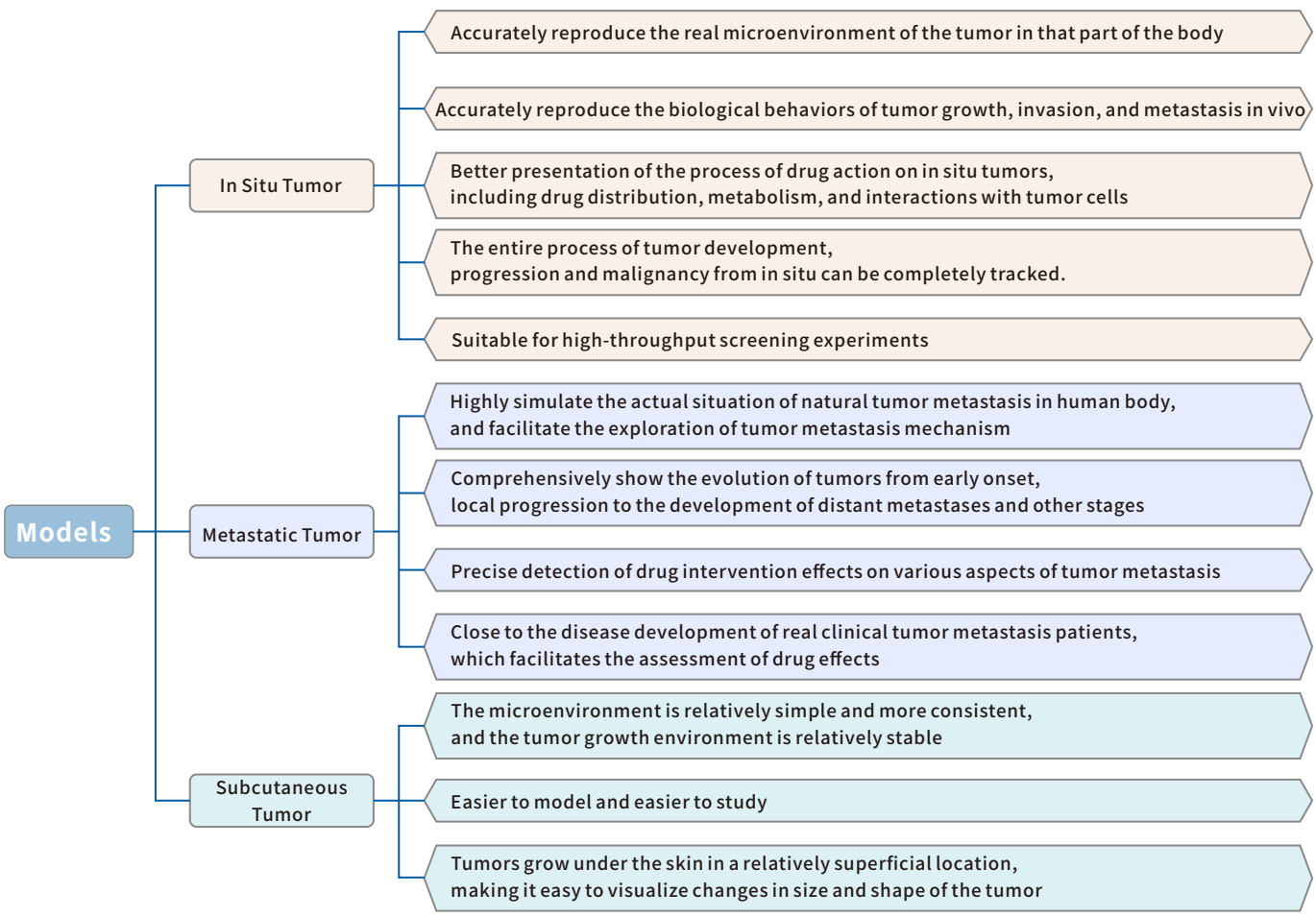


Cardiovascular Diseases	Stroke
	Acute myocardial infarction
	Heart failure
	Atherosclerosis
	Coronary heart disease
	Hypertension
	Pulmonary arterial hypertension
	Deep-vein thrombosis
	Arterial thrombosis
	Peripheral vascular disease
	Atrial fibrillation
	Ventricular tachycardia
	Diffuse intravascular coagulation
	Pericarditis
	Myocarditis
Metabolic Diseases	Obesity
	Diabetes
	Complications of diabetes
	Hyperlipidemia
	NASH
	Acute liver injury
	Liver fibrosis/cirrhosis
	Gout
	Sarcopenia
Respiratory system Diseases	Acute lung injury
	Cough
	Chronic obstructive pulmonary disease
	Idiopathic pulmonary fibrosis
	Acute/Chronic asthma
	Silicosis
	Nodular pulmonary disease
	Bronchiectasis
Endocrine system Diseases	Hyperthyroidism
	Hypothyroidism
	Thyroiditis
	SHPT
	Bulging eyes

Inflammatory and Immunological Diseases	Rheumatoid arthritis
	Inflammatory bowel disease
	Atopic dermatitis
	Psoriasis
	Systemic lupus erythematosus
	Septicemia
	Systemic sclerosis
	Skin scar
	Skin burns
	Healing of skin defects
	Pressure ulcer
Renal/Urological Diseases	Acute kidney injury
	Subacute/chronic renal failure
	Hypertensive nephropathy
	Metabolic nephropathy
	Immune-mediated nephropathy
	Acute/Chronic cystitis
CNS Diseases	Pain disorder
	Parkinson's disease
	Alzheimer's disease
	Autism
	Huntington's disease
	Cerebral palsy
Gastrointestinal Diseases	Gastric ulcer
	Atrophic gastritis
	Primary biliary cholangitis
	Primary sclerosing cholangitis
	Acute pancreatitis
	Chronic pancreatitis
	Diarrhea
	Vomit
MusculoskeletaL Diseases	Osteoarthritis
	Osteoporosis
	Rheumatoid arthritis
	Joint fibrosis
Reproductive system Diseases	Endometriosis
	Hysteromyoma

Oncology pharmacology and pharmacodynamic





Subcutaneous tumor model	
Genus	Type
Human	Human colon cancer cells
	Human pancreatic cancer cells
	Human breast cancer cells
	Human macrophage lung cancer cell
	Human lung cancer cells (lymph node metastasis)
	Human non-small cell lung cancer cells
	Human small cell lung cancer cells
	Human lung adenocarcinoma cells
	Human liver cancer cells
	Human highly metastatic liver cancer cell Line
	Human gastric cancer cells
	Human brain astrocytoblastoma cells
	Human glioblastoma cells
	Human bladder cancer cells, or human bladderMigratory cell carcinoma
Rodent	Mouse colon cancer cells
	Mouse lung cancer cells
	Mouse breast cancer cells
	Mouse liver cancer cells

In situ tumor model			
Genus	Type	Cell name	Model type
Human	Gastric cancer	NCI-N87-luci	Gastric cancer in situ and spontaneous metastasis
	Breast cancer	MDA-MB-231-LUC; MCF-7	Breast cancer in situ and spontaneous metastasis
	Liver cancer	MHCC97H-LUCI; SNU-739; SK-hep1	In situ and spontaneous metastasis of hepatocellular carcinoma
	Brain glioma	U87 MG-LUC; U251-LUC	Glioma in situ
	Pancreatic	PANC-1; MIAPaCa-2; CFPAC-1	Pancreatic cancer in situ
Rodent	Breast cancer	4T1-LUC	Breast cancer in situ and spontaneous metastasis
	Liver cancer	Hepa 1-6	Hepatocellular carcinoma in situ and spontaneous metastasis

Metastatic tumor model			
Genus	Type	Cell name	Model type
Human	Lung cancer	NCI-H446; HCC827; NCI-H292	Brain metastasis
			Liver metastasis
	Colorectal cancer	SW620	Brain metastasis
			Liver metastasis
	Prostate cancer	22RV1	Bone metastasis
	Breast cancer	MDA-MB-231-LUC	
			Bone metastasis
Rodent	Lung cancer	LLC	Liver metastasis
			Liver metastasis
	Colorectal cancer	CT26.WT; MC38	Brain metastasis
			Liver metastasis
	Breast cancer	4T1-LUC	Lung metastasis
			Bone metastasis

Pathogenic microorganism services platform

Human vaccines and anti-infective drugs, veterinary vaccines and anti-infective drugs

01 In vitro anti-infective efficacy tests: antiviral effect-EC50/CC50 assay; MIC drug sensitivity test; FIC determination; biological properties.

02 In vivo immunogenicity tests for vaccines: neutralization test, hemagglutination inhibition test, cellular immunity, etc...

03 Protective tests for animal attack: vaccines, antiviral drugs.

04 Infectious animal testing.

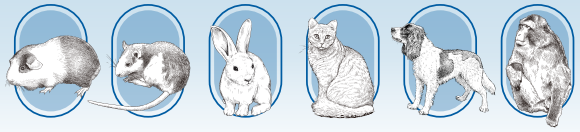
Types	Name	Sub type	Model	Animal species							
				Mice	Rats	Cotton mice	guinea pig	Pigs	Cats	Ferrets	Rabbits
Virus	RSV	A2/9320/18537	Virus attack model	✓		✓					
	HBV		AAV-HBV1.3 infection model	✓							
	Influenza virus	H1N1/H3N2 B Victoria B Yamaga	Virus attack model	✓						✓	
	HSV-2	MS	Reproductive Tract Infection Model	✓			✓				
	VZV	Oka	Neuropathic pain\skin herpes		✓		✓				
	FIPV	FCoV II	FIPV Model						✓		
	Rabbit papilloma skin lesion model	NA	Rabbit CRPV virus skin papilloma								✓
	PRRSV	High fever type	PRRSV Model					✓			
Bacteria	staphylococcus aureus	Seattle 1945	Skin wound infection model					✓			
			Sepsis model	✓							
		Seattle 1946	Sepsis model	✓							
	Enterobacter cloacae	Clinical strain	Thigh muscle infection model	✓							
	Acinetobacter baumannii	Clinical strain	Vaginitis model		✓						
			Thigh muscle infection model	✓							
	Klebsiella pneumoniae	C122	Vaginitis model	✓							
	Pseudomonas aeruginosa	ATCC9027	Vaginitis model	✓							
			Sepsis model	✓							
			Thigh muscle infection model	✓							
Fungi	Candida albicans	3147	Pneumonia model		✓						
			Sepsis model	✓							
			Vaginitis model	✓							

Tests			
	Bacterial / Fungal / Viral isolation and culture		
	In vitro antiviral CC50 and EC50 tests		
	In vitro antimicrobial sensitization	MIC	Micro broth dilution method
			Paper Amplification
		FIC assay - Checkerboard method to determine combined antimicrobial capacity	
		Biological Characterization	Growth Curve
			Motility
			Biofilm
			Adhesion invasion
	疫苗免疫原性评价	Evaluation of humoral immunity	Binding antibody Ig G and different subtype detection
			Neutralization test\hemagglutination inhibition test
		Cellular immunity evaluation	ELISOPT-IFN-γ\IL-2\IL-4\IL-6 assay
			Flow Test-CD4+\CD8+\IFN-γ+\TNF-α+\IL-2+\IL-4+\IL-6+ and other tests
	Attack protection assay		
	Evaluation of therapeutic anti-infective drugs		

动物种属

Pharmacokinetics&Early toxicology

ANIMAL STRAIN



Rats Mice Rabbits Cats Dogs Non-human primate

ROUTE OF ADMINISTRATION

Gavage, intraperitoneal injections, intravenous injections (tail vein, femoral vein, facial vein, posterior eye socket vein), intramuscular injections, myocardial injections, airway nebulization administration, skin application, nasal drip administration, and stereotactic brain injections.

SAMPLE COLLECTION

Tail vein, dorsal foot vein and femoral vein blood collection, orbital blood collection, cheek blood collection, cerebrospinal fluid collection, lacrimal fluid collection, lymphatic fluid collection, bile collection, urine collection, fecal collection and all other tissue collection.

BIOLOGICAL MATRIX

Whole blood, plasma, serum, urine, feces, tissues of all parts, ocular tissues (sclera, iris, cornea, aqueous humor, ciliary body, choroid, retina, etc.), cerebrospinal fluid, brain, nerves and ganglia of all parts, lymph nodes, and bone marrow.

In Vivo Pharmacokinetic

Type of surgaery

Intubation of jugular veins, carotid arteries, portal veins, bile ducts, duodenum, and lymphatics

Type of experiment

- 01. Rapid drug screening, simultaneous administration of multiple drugs detection
- 02. PK test of drugs in different dosage forms/salt forms/crystal forms
- 03. Single-dose, single-administration PK test
- 04. Gradient dose (low, medium, high) single/multiple administration PK test
- 05. Gradient dose (low, medium, high) single/multiple administration tissue distribution test
- 06. Gradient dose (low, medium, high) single/multiple administration excretion test
- 07. Conventional efficacy trials: combining PK data results for specific models
- 08. Customized Experimental Solutions

（可提供IND申报整体策略）

Bioanalytical

Type of surgaery

Small molecules, large molecules (peptides, ADCA, proteins, XDC, PROTAC), liposomes, nucleic acids etc.

Sample type

Whole blood, plasma, serum, urine, feces, tissues from various sites, ocular tissues, cerebrospinal fluid, brain, nerves and ganglia from various sites, lymph nodes, bone marrow, clinical samples, etc.

Type of test

LC/MS/MS method development/validation and sample analysis, immunological assay method development/validation and sample analysis, etc.

Early toxicology

DRF
Toxicokinetics(7、14、28 Days)

Single/multiple dose toxicity studies

Acute/long-term toxicity studies

Local toxicity studies
(sensitization, irritation studies)

MTD

Histopathology/Clinical Pathology
(serum chemistry, hematology and coagulation)

Equipment

SHIMANZU UHPLC LC-30AD

LC-MS AB Sciex 5500

Flow cytometer

Blood Coagulation Analyzer

Biochemical analyzer

Blood analyzer

Testing platforms: ELISA、FACS Analysis、LC/MS/MS

Others

Formulation analysis, biomarker testing, etc.

Pathologies

Histopathology

Experiment	Content	Description
Pathology Sections	Decalcification of bone tissue	Slow stripping, fast stripping
	Paraffin Embedding	Fixed Sample
	0CT Embedding	Fresh/fixed sample
	Paraffin sectioning	Fixed Sample
	Frozen section	Fresh/fixed sample
Pathology Staining	HE staining	
	Pathology Staining	Masson Trichrome、Oil red 0、Sirius Red、PAS、IHC、Multiplex Immunofluorescent、Masson-Fontana、Golgi stain
	TUNEL apoptosis assay	Bright Field
Pathological imaging	Full Slice Scanning (Bright Field)-20X/40X	
	Immunofluorescence Full Section Scan-20X	Single and Multi Label
	Morphologic Description	

Clinical pathology

Experiment	Content	Description
临床病理	Biochemical Analysis	Lipids, lipoprotein metabolism, cardiovascular classes, liver function classes, renal function classes, myocardial function and myocardial enzyme profiles, glucose metabolism classes, gastric function, pancreatic function classes, rheumatologic markers infection markers, metabolic classes, specific proteins (D-Dimer, FDP, IgE, Ferritin, TRF), ionic classes (CO2, Ca, Mg, P, Fe)
	Hematology Analysis	CBC, DIFF, RET (reticulocyte measurable)
	Coagulation Analysis	Prothrombin time, activated partial thromboplastin time, fibrinogen, prothrombin time
	Urinalysis	Color, appearance, pH, glucose, bilirubin, ketone bodies, specific gravity, protein, occult blood, urobilinogen, nitrite and leukocytes, vitamin C

IHC

IHC validated targets (>200)

ki67	HER2	NK1	LGMN
ED1/CD68	FAK	APP	F4/80
CD16/32	p-FAK	MAP2	Collagen I
CD3	NF2	Neun	MPO
CD86	HER3	GFAP	b-arrestin1
CD206	p-HER3	Stat3	Insulin
CD25	AxI	p-Stat3	p-AKT
CD31	ROS1	Brud	HER4
CD34	p-ERK	b-Catenin	MBP
CD45	ERK	E-Cadherin	ALDH2
CD8	c-Myc	b-Cadherin	p-Met
ER	n-Myc	IGF-R	YAP1
HGF	HER4	Mcl-1	p-AKT
TUNEL	SPARC	4-NEH	p-S6
a-actin	Caspase3	P53	P21
TGF-a	IL10	Collagen IV	CTGF
PI3K	p-PI3K	PD-1	PD-L1

Cellular Molecular Biology Platform

Services	Sample types	Testing technology	Applications
PCR&qPCR Assay	Tissue cell culture	Routine PCR RT-PCR Absolute Quantitative PCR Relative Quantitative PCR	RNA/DNA gel electrophoresis, gene expression analysis AAV virus, influenza virus, etc. viral titer assay (qPCR method) Method development and validation
Elisa Assay	Tissue Serum, plasma、Alveolar lavage fluid BALF, cerebrospinal fluid CSF cell culture	Abs FI TRF Chemiluminescence	Molecular biology: enzyme kinetic analysis, nucleic acid/protein quantification, detection of reporter genes Pharmacokinetic direction: cell proliferation, cytotoxicity and apoptosis studies. Aspects of cell signaling pathways: kinase, NFkB, CAMP, Ca2+ assays Microbiology: Bacterial endotoxin (LPS) detection
Western Blot Assay	Tissue Cells Serum, plasma	WB	Protein Expression Analysis Phosphorylated protein expression analysis Customized Testing
Flow Cytometry	Blood samples Tissue cell culture Fluids Other special samples	Flow Cytometry	Treg, Th cell secreted cytokine assay Apoptosis, cell cycle and proliferation TBNK cell fractionation, other cell typing, e.g., macrophages, DC cells Flow multifactor assays (CBA analysis) Phosphorylated protein (phos-Flow) analysis
Cell Construction	Cell line	NA	Cell line construction and screening, cell transfection, etc.

General PCR instrument

Real-time fluorescence quantitative PCR instrument

Enzyme marker

High-order Imager

Flow Cytometry

Medical imaging	
	Large\Small animals MRI
	Large\Small animals CT
	Large\Small animals B-ultrasound
	Small Animal Live Imaging System

CT

MRI

B-ultrasound

Micro/organoid

Medical devices

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