



美迪西生物医药



**Integrated Preclinical Drug  
Discovery Services**

SHANGHAI MEDICILON INC.



## Company Profile

Shanghai Medicilon Inc. is one of the top contract research organizations (CRO) in China. Since its establishment in 2004, Medicilon has been striving to offer fully integrated pharmaceutical services for the global scientific community. Our services span across chemistry, biology, formulation and preclinical studies. Therefore, we have the capability to help our clients to develop their researches and discovery programs from the stage of initial ideas to the Investigational New Drug (IND) filing phase.

Our headquarters is located in Zhangjiang High-Tech Park in Shanghai, China, with an additional facility in Chuansha Economic Park, Shanghai, China. We occupy over 300,000 sq. ft. in lab space and have over 800 employees cross biology, chemistry and preclinical research. Over 30% of our employees have M.S. and Ph. D. degrees.

Medicilon is one of the first CRO in China to provide integrated services, including compound synthesis, biological activity screening, structural biology, pharmacodynamics, pharmacokinetics, toxicology, and IND filing. Our high quality services are well-recognized internationally.

Medicilon is fully accredited by the International Laboratory Animal Assessment and Accreditation (AAALAC) and in compliance with the US Food and Drug Administration's (US FDA) Good Laboratory Practice (GLP). The standard of laboratories is certified by the China Food and Drug Administration (CFDA) for GLP compliance. Therefore, experimental reports generated at Medicilon can be used for China and USA dual filing to facilitate the evaluation of the safety and marketing of life-changing compounds for our clients.

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## Innovation Platform

- The GLP for Safety Evaluation Platform
- The Protein and Antibody Pharmacokinetic Platform
- The Animal Disease Models Platform
- The Isotopic Platform
- The Protein Crystallography Platform
- The New Drug Formulations and The Generic Drug Platform

## Why Choose Medicilon?

- A CRO to Provide Full Set of Preclinical Research Which Comply with Both China and US GLP Standards
- A CRO to Provide Structural Biology and Chemical Biology Services
- A CRO to Provide "Foreign Pharmaceutical Company - CRO - Domestic Pharmaceutical Company" Three Parties Collaboration
- One of the Largest Preclinical Drug Safety Evaluation CRO in Shanghai

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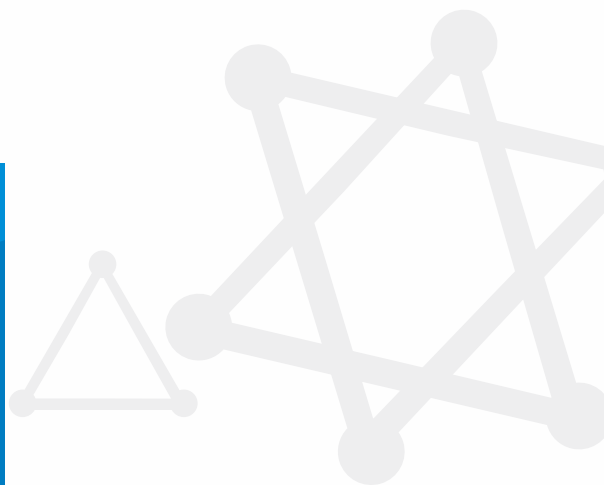


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## CAPABILITIES



### Integrated and Comprehensive Drug Research and Development Service Platform



### Chemistry Services

**Medicinal Chemistry:** Drug Design, Structure-Activity Relationship Campaign, Lead Optimization and Druggability Test

**Synthetic Chemistry:** Intermediates, Reference Compounds, Metabolites, Impurities, and Other Small Molecule Chemicals

**Process Development:** Development and Optimization of Synthetic Process, Quality Analysis

### Biology Services

Recombinant Protein Expression and Purification, Crystallization and Structure Determination, Discovery Biology, SeMET Growth Media Kits and Packages, Computational Biology and Molecular Modeling, Isotope Experiments and Biomarker Testing

### Formulation:

**Solid Formulation:** Tablets, Capsules, Granules, Injectable Powder

**Semi-Solid Formulation:** Ointments, Creams, Gels

**Liquid Formulation:** Injections, Oral Liquid Preparations, Sprays, Tinctures

**Innovative Dosage Forms:** Slow Release Formulations, Nano Preparations, Pellets, Fat Emulsions

### Pharmaceutical Analysis

API Analysis, Formulation Analysis, Analytical Method Development and Validation, Impurity Studies, Regular Chemical Analysis

### Preclinical Services

**Pharmacokinetics:** In Vivo Assays, In Vitro Assays, BE Research, A Full Set of Studies for IND (CFDA & US FDA)

**Drug Safety Evaluation:** Single Dose Toxicity Test, Repeated Dose Toxicity Test, Safe Pharmacology Study, Immunogenicity Test, Toxicokinetics, Reproductive Toxicology Study, Genotoxicity Study

**Pharmacology:** Oncology, Digestive Diseases, Endocrine and Metabolic Diseases, Inflammation and Immune Diseases, Nervous System Disease Models

**Bioanalysis:** Small Molecule Drugs, Biologics (Proteins & Antibody)



## BIOLOGY

- The Department of Biology at Medicilon has more than 13,000 sq. ft. in lab space. We offer a wide range of service in cell-based assay, enzyme-based assay and structural biology. Our structural biology core offers services to support structure-based drug discovery from novel target assessment to final structure determination. We are one of the earliest platforms in China to establish the structural biology services. Our discovery biology core owns various state-of-the-art research equipments, including Envision, Nimbus, Precision XS, Biocore, etc., and multiple technology platforms for enzyme based, cell based, and radioactive assays to facilitate drug discovery. In addition, we also offer mechanism studies, biomarker analysis along with SAR studies, and stable cell line generation to further accelerate the research progress for our sponsors.





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## ■ Expression and Purification of Recombinant Proteins

- Prokaryotic Expression System (E. coli Expression System)
- Yeast Protein Expression System
- Insect Cell Protein Expression System (Baculovirus Expression)
- Mammalian Cell Protein Expression System (Fc, Human Serum Albumin, 3xFlag, GST, 6His)

## ■ Protein Crystal Services

- Protein Crystal Conditions High Throughput Screening
- Protein Synchrotron Radiation Diffraction Data Collection
- Protein-Compound Co-Crystallization
- Fragment Screening

## ■ Computational biology and molecular modeling

- Computational Biology and Molecular Modeling
- FBDD Services
- Analysis of Protein Crystal Data

## ■ In Vitro Biology

### Enzyme Based Assay

- Lance Assay
- AlphaScreen Assay
- Z'-LYTE Assay
- Adapta Assay
- Kinase-Glo Assay
- ADP-Glo Assay
- Ligand Binding Assay
- ELISA Assay
- HTRF Assay

### Cell Based Assay

- Cytotoxicity Assay
- Apoptosis Assay
- Cell Migration Assay
- Cell Invasion Assay
- HTRF Cell-Based Assay
- Immunostaining Assay
- Immunofluorescence Assay (96/384 wells)

- Reporter Gene Assay (GFP/Luc)
- Radioactive Ligand Binding Assay
- Cellular Uptake Assay
- Gene Knockdown Assay
- RNAi Assay
- MicroRNA Overexpression Assay
- MicroRNA Knockdown Assay
- Adenovirus / Retrovirus / Lentivirus

## ■ Radioactive Assay

### Multiple Technology Platforms

- Radioactive Receptor Binding Assay
- Radioligand Binding Assay
- Radioactive Uptake Assay
- Cell Proliferation Assay (3H-TdR)
- Radioimmunoassay (RIA)
- Immunoradiometric Assay (IRMA)

### Diversified Targets and Applications

- Kinases
- Transporter
- Cell Proliferation
- Compound Screening
- Biomarker

## ■ SeMET Growth Media Kit and Package

- SeMET Growth Media Kit
- Amino Acid Defective Medium (For Insect Cell Culture)

## ■ Recombinant Kinase Preparation

- Various Expression Systems: Insect cells, HEK293 cells, E. coli
- Holoenzyme or Kinase Region
- Screening at Analysis Level and Structure Biology Level
- Recombinant Kinase Products: BTK, SYK, JAK1, JAK2, JAK3, PLK1, PLK2, PLK3, PLK4, PI3Kgamma, EGFR, RIPK1, RIPK3, LRRK2





## **SHANGHAI MEDICILON INC.**

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