



Medicilon—CFDA GLP, FDA GLP, AAALAC

➤ *Biology Services/生物学服务*

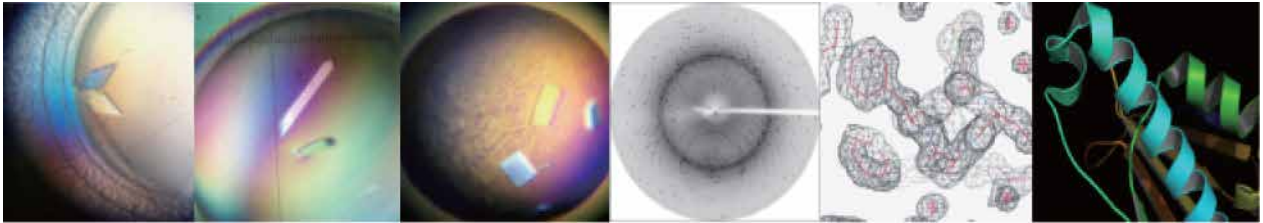
Medicilon provides fully integrated pharmaceutical services to the global pharmaceutical community. The services across biology, chemistry and preclinical research are specially designed to help clients develop their research and discovery programs from the initial idea stage to the IND filing phase. Biology department in Medicilon has extensive research experiences in the fields of molecular biology, cell biology, structural biology and in vitro biology. From initial construction of cDNA library to drug design, and from protein purification to structural determination and assays, we provide a complete set of biological services.

Medicilon is headquartered in Zhangjiang High-Tech Park, Shanghai, China, with wholly-owned research facilities in Chuansha Economic Park, Shanghai, China. We occupy over 200,000 SF lab space. Over 50% employees have MS and PhD degrees, and over 10% of our employees have significant foreign education and/or working experiences. We own a 12,000 SF biology facility with various kinds of state-of-the-art equipments and multiple biological technology platforms for biological research. Our experienced and professional biological teams offer advanced technology and high-quality services to conduct customized studies, which greatly promote the speed of drug research.

上海美迪西生物医药有限公司是一家提供集化学、生物学、药效学评价、药代动力学评价和毒理学评价为一体的一站式生物医药研发服务公司。我们的生物部在分子生物学、细胞生物学、体外生物学和结构生物学领域有丰富广泛的经验。从最初的cDNA文库构建到药物设计，通过蛋白质纯化，结构测定和分析测定，提供一套完整的生物学服务。

公司总部座落在上海张江高科技园区，并在上海川沙经济园区设有研发大楼。公司现有员工超过50%拥有博士学位或者硕士学位；超过10%的员工拥有国外教育背景和/或工作经验。美迪西拥有20,000平方米实验室。其中生物实验室占地1,200平方米，拥有各种高级生物学仪器和多种技术平台用于生物学研究，以及经验丰富、专业的技术团队，这些保证了客户项目的有力实施，并且极大的推进了药物研发的速度。





Our structural biology department offers services supporting structure-based drug discovery from determination of novel targets to final structures. Our platform is one of the earliest established structural biology platform in China and has been certified by the Shanghai government.

我们的结构生物实验室配备有分子克隆室及基于蛋白质晶体学的药物发现与筛选平台, 支持基于结构基础的药物开发, 从新靶点的确认到最终的结构确认。美迪西结构生物学平台是中国最早建立的结构生物平台之一, 已被上海市政府认定为重要新药研发平台。

➤ Molecular Biology

- Plasmid DNA preparation
- Subcloning
- Custom ORF cloning
- Mutagenesis services
- Molecular diagnosis

➤ Protein Production Systems and Purification

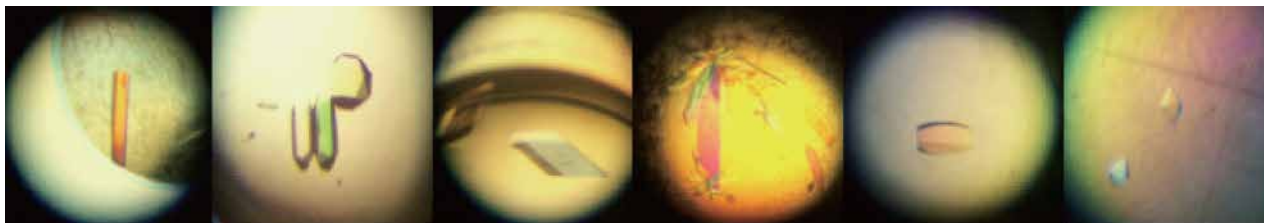
- **The E. Coli System**
 - Protein expression optimization and solubility test
 - Refolding
 - Small scale expression and purification
 - Scale up expression and purification
- **The Baculovirus System**
 - Generation of high titer baculovirus stock (BV stock)
 - Expression & optimization in Sf9, Sf21 and Hi5 cell lines
 - Pilot protein expression and purification
- **The Mammalian System**
 - CHO, Vero, BHK, 293 cells etc
 - Adherence and suspension culture
 - Transient expression screen
 - Stable cell line generation

➤ 分子生物学

- 质粒制备
- 亚克隆
- ORF克隆
- 基因突变
- 分子诊断

➤ 蛋白质表达系统以及纯化

- 大肠杆菌表达系统
 - 蛋白质表达优化及可溶性表达筛选
 - 蛋白质折叠复性
 - 小规模蛋白质表达及纯化
 - 大规模蛋白质表达及纯化
- 昆虫细胞表达系统
 - 高/低度病毒制备
 - Sf9, Sf21 and Hi5细胞系表达优化
 - 小规模蛋白质表达及纯化
- 哺乳动物表达系统
 - CHO, Vero, BHK, HEK293 等多种表达系统
 - 贴壁及悬浮培养
 - 瞬转表达筛选
 - 稳定细胞系建立



➤ Crystallization & Structural Determination

- Crystallization condition screening
- Co-crystallization and soaking
- 3-D structural determination

➤ 蛋白质晶体结构测定

- 结晶条件筛选
- 蛋白质共结晶及小分子浸泡
- 三维结构解析

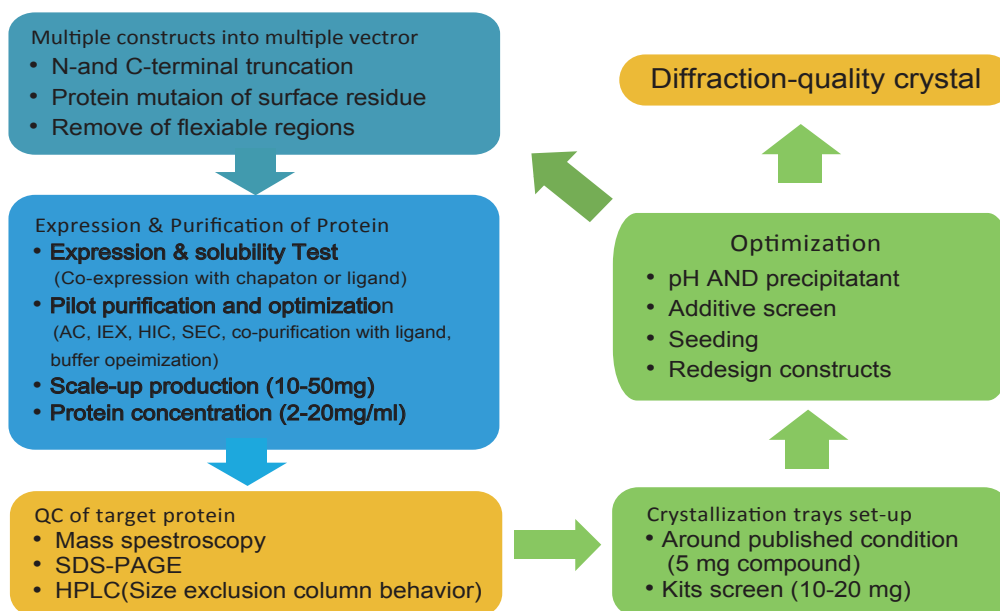
➤ Computational Biology & Molecular Modeling

- Structural-Based Drug Design (SBDD)
 - Target family analysis: using prior knowledge (specificity)
 - Homology modeling
- Quantitative structure-activity relationship (QSAR)
- Virtual drug screening
 - Pharmacophore match for docking-based virtual screen
 - Hypothesis-driven docking
 - Enhancing results of virtual screens using data mining
- De novo drug design

➤ 计算生物学和分子模型构建

- 基于结构的药物设计
 - 目标族群分析：利用优先知识（特异性）
 - 同源建模
- 定量构效关系
- 计算机虚拟筛选
 - 药物匹配对接的虚拟筛选
 - 假设驱动的对接
 - 提高使用数据挖掘的虚拟筛选的结果
- 全新药物设计

Medicilon Approach—Crystal Growth



Highest success rate! Fastest turnaround time! Lowest cost per crystal!



Our discovery biology department owns various kinds of state-of-the-art equipments, such as Envision, Nimbus, Precision XS etc, and multiple technology platforms for enzyme-based assays, cell-based assays, and radioactive assays, in support of your discovery program optimization. In addition, we also offer mechanism of action studies, biomarker analysis along with SAR studies, and stable cell lines generation, RNAi and MicroRNA Technologies. Our isotope platform has been certified by the Shanghai government.

我们生物学研发部门拥有各种高级生物学仪器和多种技术平台用于酶水平、细胞水平以及同位素测定，这些可以极大地优化你们的研发项目。同时，我们还提供药物作用机制探索，生物标记物分析和药物构效学研究等生物学服务，并建立了稳定细胞株和RNAi技术。我们的同位素平台已被上海市政府认定为重要新药研发平台之一。

► Enzyme-Based Assay

- Multiple Technology Platforms
 - Lance Assay
 - Alphascreen Assay
 - Z'-LYTE Assay
 - Adapta Assay
 - Kinase-Glo Assay
 - ADP-Glo Assay
 - Ligand Binding Assay
 - ELISA Assay
 - HTRF Assay

- Diversified Targets and Applications
 - Kinases
 - GPCR
 - Proteases
 - Transcription Factors
 - Cytokines
 - Metabolic Enzymes
 - Biomarker
 - Protein Binding
 - Protein Interacting
 - Compound Screening

► 酶水平测定

- 多种技术平台
 - 分析试验
 - AlphaScreen分析试验
 - Z'-LYTE分析试验
 - 通用激酶分析
 - 激酶发光检测分析
 - 激酶检测分析
 - 配体结合试验
 - 酶联免疫ELISA分析
 - HTRF均相时间分辨荧光检测分析

- 多样性靶点和应用
 - 激酶
 - GPCR
 - 蛋白酶
 - 转录因子
 - 细胞激素
 - 代谢酶
 - 生物标记
 - 蛋白结合
 - 蛋白相互作用
 - 化合物筛选



➤ 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/Receptor Binding Assay
- Cellular Uptake Assay
- Gene Knockdown Assay
- MicroRNA Overexpression Assay
- MicroRNA Knockdown Assay
- Adenovirus/Retrovirus/Lentivirus

➤ 细胞水平测定

- 细胞毒性分析
- 细胞凋亡检测分析
- 细胞迁移分析
- 细胞侵袭分析
- HTRF 细胞水平检测分析
- 免疫染色分析
- 免疫荧光分析(96/384 孔板)
- 报告基因分析(绿色荧光蛋白/荧光素酶)
- 放射性配体受体结合试验
- 细胞摄取分析
- 基因敲除分析
- MicroRNA过表达分析
- MicroRNA敲除分析
- 有关腺病毒/逆转录病毒/慢病毒 载体的应用分析

Medicilon has established over 100 different cancer cell lines for cell-based assays.

美迪西建立了100多种细胞株用于细胞水平测定。

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| <ul style="list-style-type: none"> - Breast cancer cell lines - Colorectal cancer lines - Leukemia cell lines - Liver cancer cell lines - Kidney cancer cell lines - Lung cancer cell lines - Melanoma cell lines - Ovarian cell lines - Pancreas cell lines - Gastric cancer cell lines | <ul style="list-style-type: none"> - 乳腺癌细胞 - 大肠癌细胞 - 白血病细胞 - 肝癌细胞 - 肾癌细胞 - 肺癌细胞 - 黑色素瘤细胞 - 卵巢癌细胞 - 胰腺细胞 - 胃癌细胞 |
|--|--|



➤ Cell Biology & Biochemistry

- Custom assay development
- Compound screening and profiling
- SAR study and medicinal chemistry support
- Middle-throughput screening
- Mechanism-of-action study and biomarker analysis

➤ 细胞生物学和生物化学

- 定制分析研究
- 化合物筛选和化合物特性
- 构效关系研究以及药物化学支持
- 高通量筛选
- 作用机制研究和生物标记物分析

➤ Radioactive Assay

- Radioactive receptor binding assay
- Radioligand binding assay
- Radioactive uptake assay
- Cell proliferation assay (³H-TdR)
- Radioimmunoassay (RIA)
- Immunoradiometric assay (IRMA)

➤ 体外同位素测定

- 放射性受体结合测试
- 放射性配体结合测试
- 放射性摄取测试
- 细胞生长测试
- 放射性免疫分析
- 免疫放射分析

➤ Stable Cell Line Generation

- Overexpression
- Knock-out
- Cell Lines
 - Mammalian cell lines

➤ 稳定细胞株建立

- 过表达
- 敲除
- 细胞株
 - 哺乳动物细胞

➤ RNAi and MicroRNA Technologies

➤ RNAi 和 MicroRNA 技术

Advanced technology! High-quality data! High efficiency!

Please contact us for more information on how we can help move your drug along the development pathway.