CHEMPARTNER
DEDICATED TO LIFESCIENCE

MEDICINAL CHEMISTRY

Our talented scientists provide individualized medicinal chemistry design and synthesis support focused on project needs and goals. Our medicinal chemists are based in Shanghai and San Francisco. We work closely with our clients' discovery teams to provide optimal support for every stage of the drug discovery process.

CAPABILITIES

Our chemists collaborate with the other functional disciplines at ChemPartner and can provide a complete solution from initial discovery all the way through to process development.

SYNTHETIC CHEMISTRY SUPPORT

- Synthetic route planning, troubleshooting, and optimization

MEDICINAL CHEMISTRY DESIGN

- Hit identification
- Lead identification
- Lead optimization
- Pre-clinical and clinical candidate identification

LIBRARY SYNTHESIS

- Screening and targeted libraries

STRUCTURE-BASED DRUG DESIGN (SBDD) AND FRAGMENT-BASED DRUG DESIGN (FBDD)

LEAD GENERATION TECHNOLOGIES

- HTS
- DNA encoded libraries
- Scaffold hopping using computer-aided drug design (CADD)

FULLY INTEGRATED DRUG DISCOVERY SOLUTIONS

- US and China-based support including:
  - Medicinal chemistry
  - Synthetic chemistry
  - DMPK
  - *In vitro* and *in vivo* biological screening
  - Structural biology support

SMALL MOLECULE DRUG DEVELOPMENT

Customizable solutions at every phase from discovery to manufacturing

TARGET VALIDATION	HIT FINDING	HIT-TO-LEAD AND LEAD OPTIMIZATION	LEAD CHARACTERIZATION	CMC
CRISPR-Cas9 Mutagenesis and siRNA/shRNA Knockdown Translational Models	SBDD, FBS, DELT, and HTS *In Vitro* Assay Development	Medicinal Chemistry Analytical Chemistry Computational Chemistry DMPK	*In Vivo* Efficacy PK in Rat/Dog/Cyno Physical Properties Toxicology Studies Metabolite ID	Non-GMP Scale-up Synthesis Process Development Analytical Development Manufacturing

SCIENTIFIC EXPERIENCE

Our chemists collaborate with the other functional disciplines at ChemPartner and can provide a complete solution from initial discovery all the way through to process development. Our medicinal chemistry teams are experienced advancing programs across a wide range of therapeutic areas and target types with experience using specialty chemistries.

THERAPEUTIC AREAS

- Inflammation
- Pain
- CNS
- Oncology
- Infectious disease
- Cardiovascular

TARGET TYPES

- GPCR
- Ion channels
- Kinases
- Enzymes
- Transporters
- Nuclear hormone receptors
- Protein-protein interactions

SPECIALTY CHEMISTRIES

- Pro-drug design
- Novel peptide design
- Asymmetric synthesis
- Carbohydrate chemistry

EXPERIENCED SCIENTISTS

Our medicinal chemistry team has experience successfully executing on projects in all stages of discovery research, including hit identification, lead identification, and lead optimization through to pre-clinical candidate selection.

In addition their background (at least 10+ years in big pharma or biotech), the experience of our team covers the full spectrum of therapeutic areas and biological target types. Our medicinal chemists utilize computational chemistry methods, are well-versed in the latest tools and have access to industry standard software platforms.

All of our medicinal chemistry leaders have a proven track record of designing and delivering pre-clinical candidate compounds. They are now applying this extensive knowledge and experience to our client's drug discovery programs.

In addition, ChemPartner scientists have been instrumental in advancing many of our clients programs into pre-clinical and clinical development.

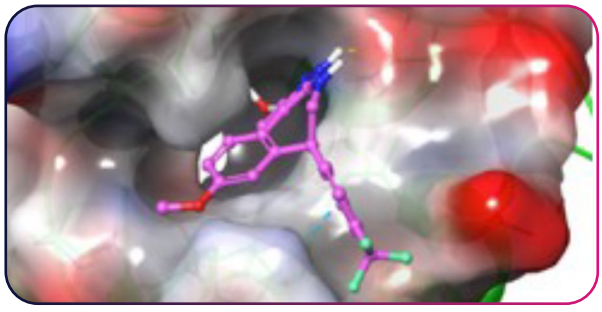
STRUCTURE-BASED AND FRAGMENT-BASED DRUG DESIGN

To support our medicinal chemists, we have a group of computational chemistry experts in both Shanghai and South San Francisco with 40+ years of combined industry experience, 56 peer review articles, and 15 patent applications.

We have access to a wide variety of computational chemistry software and tools including MOE, Schrodinger, and the Cresset software suites.

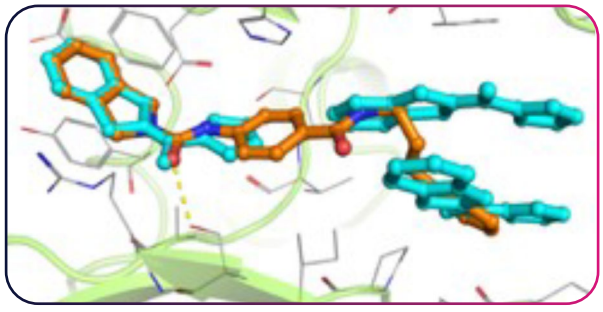
STRUCTURE-BASED DRUG DESIGN

Novel Compound Docked to Bromodomain Target



FRAGMENT-BASED DRUG DESIGN

Ligand-bound Crystal Structure of Novel Fragment Screening Hit for NAMPT (overlaid with a known active)



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