

SYNTHETIC CHEMISTRY

Chemistry Team

ChemPartner has been a world leader in China-based outsourcing for synthetic chemistry for over 15 years. We are one of the largest and most experienced chemistry service organizations in China. Our talented chemists come from a wide range of backgrounds and experience and have designed and synthesized molecules for hundreds of pharmaceutical and biotechnology companies. Additionally, our management team is comprised of a mix of internationally and locally-trained talent leading to a diverse company culture.

Service Models

At ChemPartner, we offer two main service models for synthetic chemistry, the particulars of each model are shown below. These models can be customized to suit individual project needs.

Full Time Equivalent Model (FTE)

- Dedicated full time employees
- Dedicated teams
- Flexibility to increase or decrease team size
- Flexibility to reprioritize targets/project direction
- Synthetic Chemistry support, Medicinal Chemistry, and Blended Teams with San Francisco-based leaders
- The FTE model is ideal for projects where a significant degree of troubleshooting or route scouting will be required

Fee For Service Model (FFS)

- Fixed price quoted for amount of specific synthesis of compounds, or a focused library
- Fixed price quoted for a specific service, e.g. analytical characterization/separation, library screening (fragment-based, DNAencoded)
- Literature precedent is very important for accurate synthesis quotation
- Non-GMP Kilo scale-up is available
- The FFS model is ideal for projects with known or well-established chemistry

Scope of Service

At ChemPartner we offer a wide range of Synthetic Chemistry services and due to our size have experience in almost all areas of synthetic chemistry.

Synthetic Chemistry

- Large scale synthesis of intermediates or final compounds
- Synthetic troubleshooting and route optimization

Medicinal Chemistry

- Design of targets for SAR development
- Synthesis of targets for SAR study

Antibody Drug Conjugates (ADC)

- Linker and toxin synthesis
- Conjugation provided by Biologics group

Peptide Chemistry

- Automated peptide synthesis and purification, macrocyclic, stapled, and complex peptides
- Synthesis of unnatural amino acid building blocks

Library Chemistry

- Synthesis of targeted libraries

Analytical Chemistry

Our synthetic chemistry teams are supported by dedicated teams of analytical chemists. These teams primarily support the analytical and purification requirements of the FTE and FFS teams. An extensive array of standard structural characterization techniques are available including: Mass spectroscopy, NMR, FT-IR, UV, elemental analysis, and counter-ion analysis. The following specialized services are also available and can be requested separately as needed.

Analysis and Purification, Automation

- HPLC with various detection techniques (UV/DAD/ MS/ELSD/ CAD)
- SFC chiral analysis, method development and purification
- Large-scale purification
- Mass-directed autopurification

Structural Characterizations

- Mass spectroscopy: LC/MS, GC/MS, LC/MS/MS
- NMR: ^1H -, ^{13}C -, ^{19}F -, ^{31}P -, COSY, NOESY, DEPT, HSQC, HMQC, etc.

Physical Characterizations

- Physicochemical properties: pKa, logP/logD, melting point
- XRPD, TGA, DSC, DVS, particle size

Chemical Characterizations and General Testing

- Purity, residual solvents, KF titration, heavy metals, ROI, LOD
- HPLC, GC, LC/MS, GC/MS, titration, ion chromatography, atomic absorption
- HPLC/CLND, HPLC/FLD

