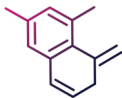




**CHEMPARTNER**

DEDICATED TO LIFESCIENCE

**FROM DISCOVERY  
TO MANUFACTURING**



## DISCOVERY CHEMISTRY

One of the largest and most experienced chemistry discovery organizations having designed and synthesized millions of molecules for hundreds of global organizations

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## BIOLOGY AND PHARMACOLOGY

Serving key bio-therapeutic areas, including oncology, cell biology, immunology, inflammation, and neuroscience, and providing assays and disease models to drive discovery

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## DMPK AND EXPLORATORY TOX

A science-based culture executing DMPK and tox studies and integrating quality data into drug discovery programs and supporting regulatory filings worldwide

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## BIOLOGICS DISCOVERY

A comprehensive offering for monoclonal antibodies and recombinant proteins from conceptual design to IND filing: discover, engineer, express, purify, and analyze

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## BIOLOGICS CMC/CDMO

Experts at seamlessly transitioning biologics from discovery to CMC development and onto manufacturing to meet mAb production demands for clinical and commercial launch

# DISCOVERY DEVELOPMENT MANUFACTURING

We are ChemPartner, a life science service provider with nearly 20 years of experience serving innovative pharmaceutical research with a global reach.

We have evolved from a chemistry service provider to a company offering full-service drug discovery and development for both small and large molecules, supported by biology, pharmacology, DMPK, and exploratory toxicology.

With over 2000 exceptional scientists and hundreds of western-trained pharmaceutical executive leaders at the helm, we are aligned and dedicated to technically and strategically accomplishing the research initiatives of pharma and biotech companies worldwide.

Our mission is to provide clients with the highest quality R&D services in a timely and cost-effective manner.



## CRO | CDMO

As a Contract Research Organization (CRO), ChemPartner has helped hundreds of clients take their small molecule and biologics projects from all stages of drug discovery to pre-clinical candidate selection and beyond. We provide assistance not only in laboratory settings but also intellectual input at various levels, such as project strategies, experimental study design, data interpretation, and source reports for regulatory filings.

As a Contract Development and Manufacturing Organization (CDMO), we provide biologics CMC development and GMP manufacturing to support overall IND and NDA applications and beyond for our clients.

As more and more pharma and biotech companies look for quality service providers, ChemPartner is uniquely positioned to not only be a CRO/CDMO, but to be the most reliable pharmaceutical alliance partner providing intellectual contributions and exceptional technical expertise.





# DISCOVERY CHEMISTRY

With a dynamic force of synthetic and medicinal chemists, ChemPartner is one of the largest and most experienced Chemistry service organizations in China. Our Synthetic Chemists come from a wide range of backgrounds and experience and have designed and synthesized molecules for hundreds of pharmaceutical and biotechnology companies. These synthetic chemists are supported in their work by a team of analytical chemists (including chiral separation), compound management, and project management professionals.

ChemPartner excels in all areas of chemistry for support of drug discovery. We have dedicated teams for MedChem design, custom synthesis and scale-up, library synthesis, peptide, carbohydrate, and nucleoside chemistry. Our chemists have access to state-of-the-art modeling, property prediction, and structure-based design tools, including MOE and the Schrodinger suites of software.

## Synthetic Chemistry

- Building Blocks
- Final Compounds for Biological Testing
- Scale-up Chemistry
- Library Chemistry
- Analytical Chemistry

## Medicinal Chemistry

- Traditional SAR-Based Drug Design
- Computer Aided Drug Design

## Specialized Chemistry

- Peptide Synthesis
- Carbohydrate Chemistry
- Fragment Based Screening and Drug Design
- Payload and Linker Synthesis to Support ADC Platform



# BIOLOGICS DISCOVERY

As one of the leading Biologics Discovery CROs in the world, ChemPartner provides a comprehensive service portfolio from conceptual biologics design to the pre-clinical (IND filing) stage. Our team of scientists has the full spectrum of specialty areas and extensive experience in biologics.

In close collaboration with our colleagues in pharmacology and DMPK, we apply cutting edge technologies and are dedicated to helping our clients discover and develop tomorrows therapeutics.

## Antibody Discovery

- Reagent Generation
- Assay Development
- Hybridoma and Phage Display
- Fully human mAb
- Antibody Engineering (humanization, affinity maturation)
- Bi-specifics and fusion protein
- Epitope mapping

## Antibody Drug Conjugate (ADC) Platform

- Linker-payload synthesis
- Lysine or Cysteine conjugation
- Site specific conjugation
- Cleavable / Non-cleavable Linker-payload design

## Analytics

- mAb Release Tests and Extended Characterization
- Antibody-Drug Conjugate Analysis
- Therapeutic Protein Characterization
- Bio-molecular Interaction Analysis

## Protein and Antibody Production

- Molecular Biology
- Recombinant Protein Production
- Recombinant Antibody Production
- Recombinant Cell Line Generation

# BIOLOGY AND PHARMACOLOGY

ChemPartner's biology team of over 250 dedicated members is led by senior scientists with extensive, global drug discovery and development expertise. We pride ourselves on having 300+ validated discovery assays for different targets, as well as a panel of 800+ cancer cell lines. All of which are routinely used and customized. In addition, thousands of in vivo studies have been performed in our AAALAC accredited and OLAW assured animal facility.

## Experience and Expertise

Our industry leading biology and pharmacology service, with comprehensive portfolio of assays & models, helps clients maximize efficiency in completing translational R&D from target to IND in a wide range of therapeutic areas:

- Target validation
- In vitro assays & HTS
- Cell-based assays
- In vivo pharmacology
- Oncology & immuno-oncology
- Neuroscience
- Inflammatory & autoimmune diseases
- Metabolic & cardiovascular diseases

## Technology

We work within tight timelines and are well-equipped with state-of-the-art high performance technologies:

- FACS (BD Aria II, BD Calibur, Attune NxT, CytoFlex)
- High throughput compound screening (Envision HTS, FLIPR, INCell2000, Echo550)
- Electrophysiology (QPatch 48)
- CDX/PDX tumor models
- Histology & pathology

## Immuno-Oncology Platform

- In vitro and ex vivo assays (MLR, tumor/T cell co-culture, Th1/Th2/Th17/Treg, Macrophages, MDSC)
- Syngeneic and humanized mouse models







## DMPK AND EXPLORATORY TOXICOLOGY

The DMPK and Exploratory Toxicology department was established in 2007. We have served global clients to assist with pharmacokinetics, in vitro ADME, bioanalysis, and exploratory toxicology. Our expertise has been vital during lead finding and optimization stages, ultimately helping clients identify preclinical candidates for IND filings.

We are the extension of our clients' DMPK department and provide high quality data in an efficient manner. In both small/large molecule areas, we work with ChemPartner's chemistry, biologics, and biology and pharmacology departments to form an integrated team and deliver IND candidates.

## In Vitro ADME

- Discovery ADME
  - Microsomal and Hepatocyte Metabolic Stability
  - Transporter Assessment
  - Plasma Protein Binding
  - Drug and Drug Interaction Assessment
  - Cytochrome P450 Time Dependent Inhibition
  - Cytochrome P450 Reaction Phenotyping
- Metabolite Identification
- Customized Assay Development
- Physicochemical Property Assessment
  - Log D, Aqueous Solubility, Kinetics
  - Chemical and Physical stability
  - Particle Size Determination
  - Pharmacokinetics

## Exploratory Toxicology

- *In vitro* Toxicology
- Tolerability/Non-GLP *in vivo* Toxicology including MTD and DRF
- Clinical Pathology support for 24hr a day, 7 days a week
- Histopathology including slide preparation, immunohistochemistry and tissue cross reactivity

- Access to broad range of species, including rodent, mini pigs, dogs, and monkeys
- Extensive experience in animal model development, *in vivo* technique such as surgical operation, and animal care
- Formulation support for *in vivo* studies including formulation screen, development and formulation recommendation for various species and strains
- PK/PD data analysis, modeling, and simulation
- Regulatory filing support
  - Robust *in vitro/in vivo* ADMET, toxicology packages in support of regulatory submissions
  - Experienced in both US FDA and CFDA assay design requirements and filings

## Bioanalytical (GLP and Non-GLP)

- Non-GLP small molecule and large molecule bioanalysis
  - Quick turnaround generic analytical methods
  - Anti-drug antibody (ADA) method development for large molecule
- GLP small molecule and large molecule bioanalysis
  - Method transfer or assay development
- Biomarker and metabolomics

# BIOLOGICS CMC

Established in 2015, ChemPartner Biologics is a wholly-owned subsidiary of ChemPartner. We transition your projects seamlessly from discovery to biologics CMC development and manufacturing in support of overall IND and NDA applications and beyond.

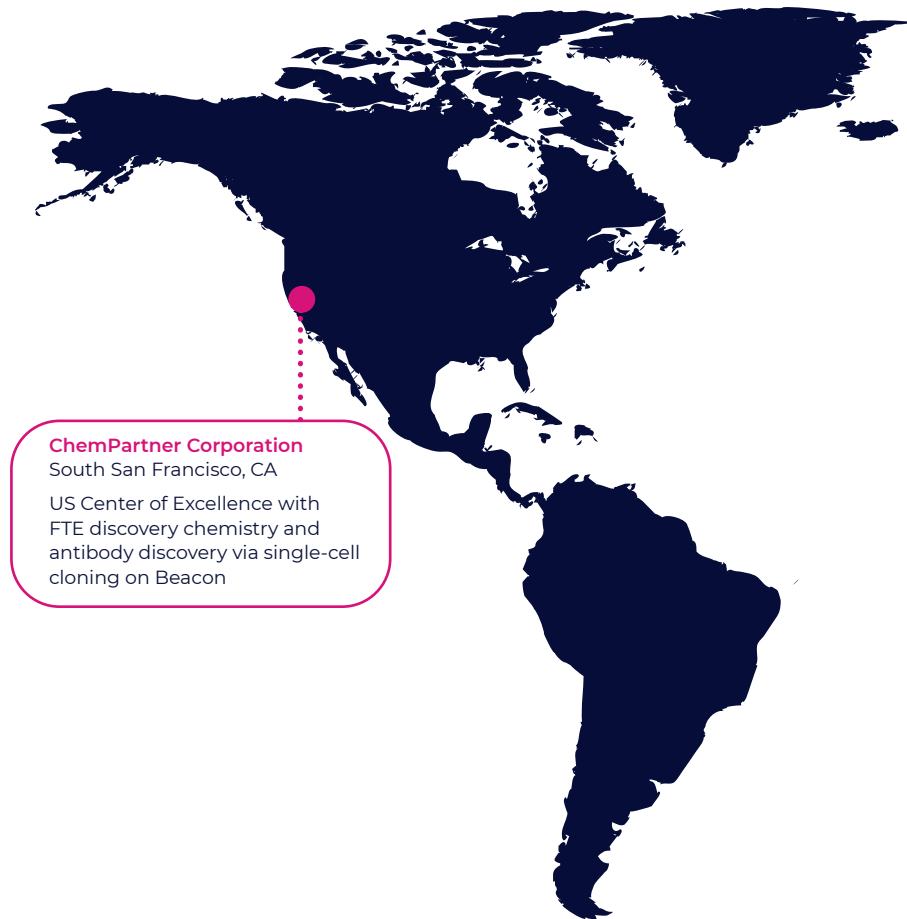
Our broad service scope ranges from stable cell line development, process development, and production to aseptic filling and lyophilization on both pilot and commercial scale manufacturing.

- Stable Cell Line Development
- Process Development
- Formulation Development
- Aseptic Filling and Freeze-drying
- Developability/Manufacturability Study
- Container Closure Extractables and Leachables
- Analytical Development and Testing
- GMP production



# A GLOBAL FOOTPRINT

Shanghai ChemPartner serves a diverse global client base and has laboratories, business offices, and representatives in the US, Europe, China, and Japan.



## **ChemPartner Corporation**

South San Francisco, CA

US Center of Excellence with  
FTE discovery chemistry and  
antibody discovery via single-cell  
cloning on Beacon



**ChemPartner Europe**

Copenhagen, Denmark

European operations center

**ChemPartner Biologics**

Qidong, China

Biologics development and CMC  
for clinical and commercial

**ChemPartner Chengdu**

Chengdu, China

Discovery chemistry center

**Shanghai ChemPartner**

Shanghai, China

Global Ops Center and new  
discovery chemistry specialty unit

**Tokyo Field Office**

Tokyo, Japan

Japan operations center



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