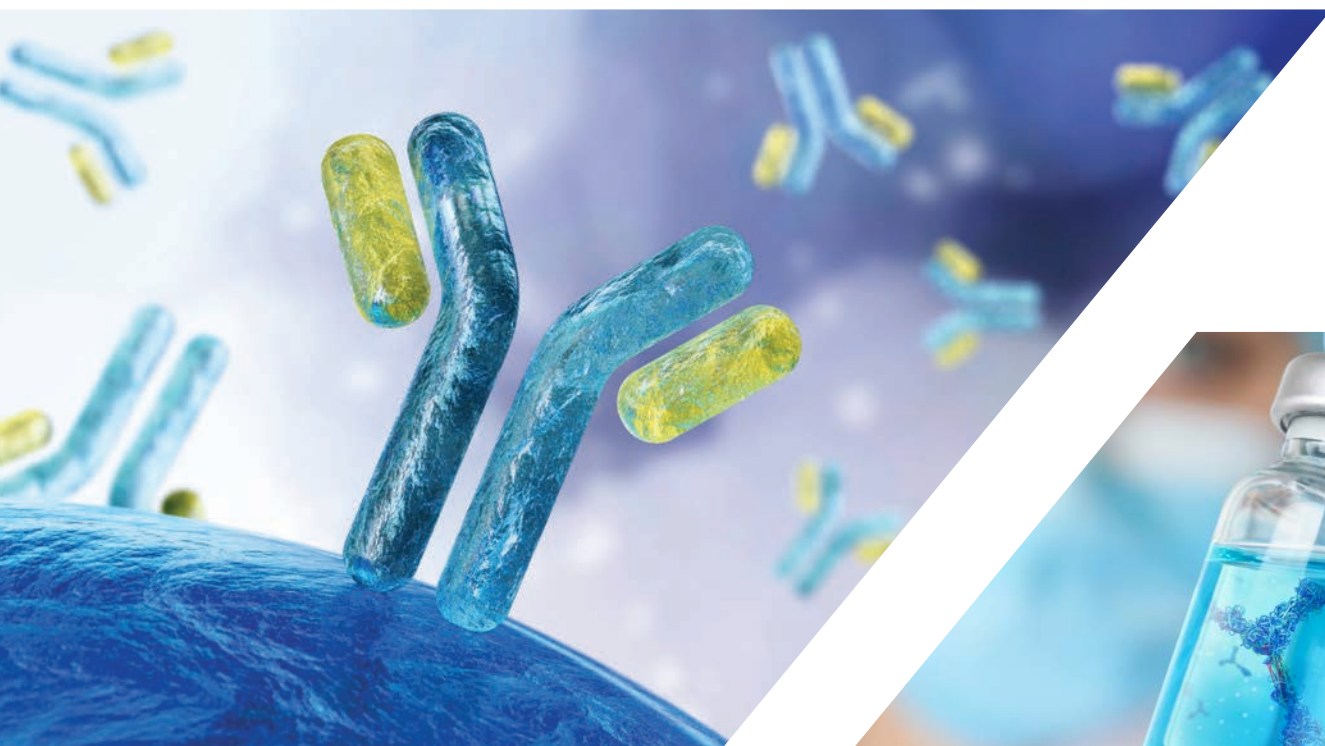


## Integrated End-To-End Discovery Services

From Concept to IND

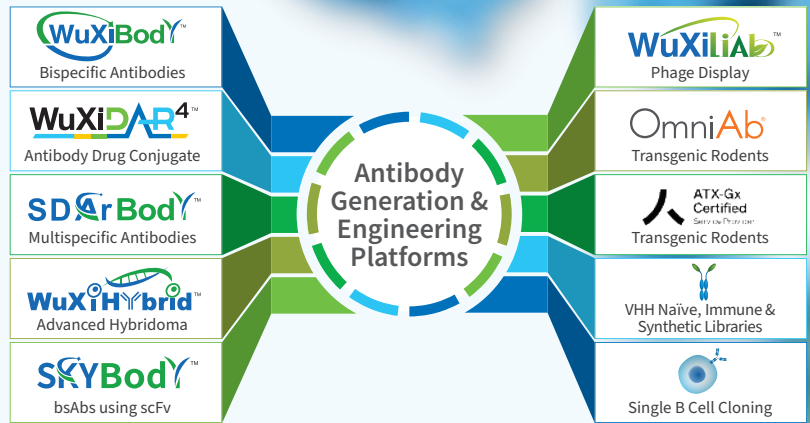


Scan the QR code  
to learn more:



# Integrated End-To-End Discovery Services

WuXi Biologics offers industry-leading expertise, state-of-the-art facilities, and multiple antibody generation technology platforms for the discovery of novel monoclonal, bispecific and multispecific antibodies, immunocytokines and other biologics. We tailor solutions to best suit your technical and budget requirements to ensure you achieve your key drug development milestones. Our antibody discovery team comprises about 400 highly-trained scientists for the generation, selection, optimization, and characterization of antibodies or other biologic molecules utilizing advanced *in vitro* and *in vivo* approaches. We provide one-stop services from concept to IND filing or modular approaches and flexible business models.



## Target (Concept)

### Target Evaluation

Bioinformatics and structural biology tools are used to help identify an appropriate target, domain or epitope for antibody generation activities. We offer target evaluation and identification expertise across a wide array of disease areas.



### Reagent Materials Generation

We generate high-quality control antibodies, target proteins, and tool cell lines for immunization, candidate screening and selection, bioassays, and other research purposes. Additional capabilities include:

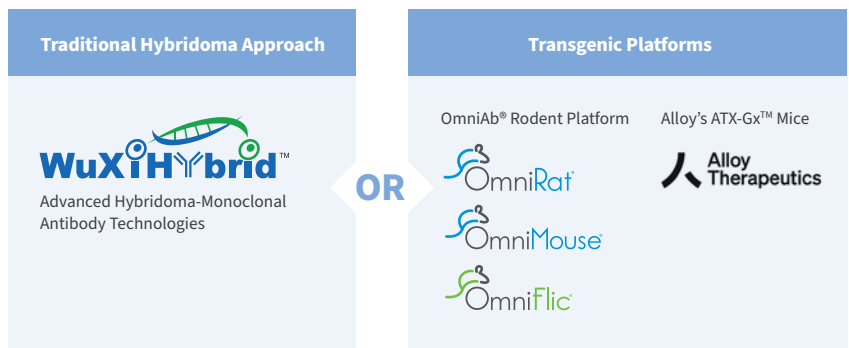
- Protein Engineering
- Protein Bioconjugation
- Target Cell Line Characterization
- Cell Surface Protein Quantification
- In-Cell Biotinylation
- Protein Analytics and Stability
- Assessment
- Reagent Labeling

## Antibody Discovery

### Monoclonal Antibody Discovery





WuXi Biologics has extensive experience in the generation and lead preclinical candidate (PCC) discovery of mAbs from human, mouse, rat, alpaca, and rabbit covering traditional and heavy-chain-only mAbs. We have established multiple core technology platforms including:

- Hybridoma
- Phage display
- Single B cell screening



## Bispecific & Multispecific Antibody Generation

We offer five, integrated discovery platforms for screening and lead identification of bispecific and multispecific antibody approaches. Novel platforms include our WuXiBody™, SDARBody™, SKYBody™, and Ligand's OmniFlic®. We also offer a standard bispecific engineering platform utilizing technologies available in the public domain. Based on your R&D goals, we can offer many different bsAb and msAb platforms and formats that best suit your biology and drug development requirements.

 <b>Leading Proprietary Bispecific Platform</b>	 <b>VHH-based Multispecific Ab Platform</b>	 <b>Transgenic Rats with Common Light Chain</b>
 <b>Proprietary Platform for bsAbs Generated Using scFv</b>	<b>WuXi Biologics General Platform</b>	

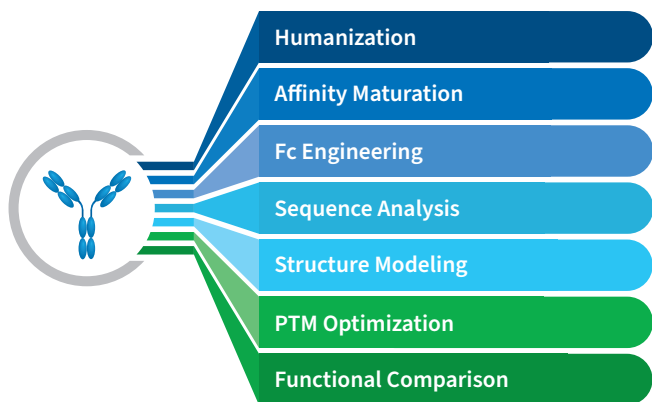
## Other Molecular Modalities

Extensive design, generation and discovery of new molecular modalities is available, including but not limited to: Antibody Drug Conjugates (ADCs), recombinant proteins, fusion proteins, cytokines, immunocytokines, peptides, nanobodies, antibody fragments, TCR-based antibodies, virus proteins, and other biologics.

## Lead Optimization & Characterization

### Lead Optimization

WuXi Biologics offers extensive lead assessment and optimization services for antibody therapeutics. Services include humanization, affinity maturation, Fc engineering and post translational modification (PTM) optimization.



### In Vitro Lead Characterization

Comprehensive biologics screening and characterization throughout the lead drug candidate selection process is provided and we offer assay development services as required for your specific lead characterization needs. Capabilities include:

<b>Binding</b>	<ul style="list-style-type: none"> <li>Affinity by SPR (Surface Plasmon Resonance)</li> <li>Bispecific antibody simultaneous binding</li> <li>Related SPR service</li> </ul>
<b>Epitope Binning and Mapping</b>	<ul style="list-style-type: none"> <li>Peptide mapping (linear epitope)</li> <li>Domain mapping (domain epitope)</li> <li>Alanine Scanning Mutagenesis (both linear and conformational epitopes)</li> </ul>
<b>Functional Assays</b>	<ul style="list-style-type: none"> <li>Biochemical Assays</li> <li>Cellular Assays</li> </ul>

### In Vivo Lead Characterization

Our senior scientists and experts, many trained in the U.S. and Europe provide the full-spectrum of *in vivo* characterization services including *in vivo* efficacy evaluation of therapeutic antibodies, ADCs, CAR-T products, and other large molecules for the treatment of tumors, autoimmune conditions, inflammatory disease, diabetes and other diseases. We also provide high-quality preclinical PK, safety, exploratory toxicology, biomarker and ex vivo studies to support pharmaceutical companies worldwide.

The efficacy characterization services at WuXi Biologics involve the use of hundreds of models across many disease states for lead screening and characterization purposes. The table below gives just a few examples of the multitude of models available at WuXi Biologics.

Tumor Models	Autoimmune Disease Models	Metabolic Disease Models	GVHD Models
<ul style="list-style-type: none"> <li>Syngeneic</li> <li>CDX</li> <li>Human PBMC</li> <li>Knock-in (KI)</li> <li>Human CD34 Stem Cell Models</li> </ul>	<ul style="list-style-type: none"> <li>Autoimmune Encephalomyelitis (EAE)</li> <li>Rheumatoid Arthritis (RA)</li> <li>Asthma Model</li> <li>Systemic Lupus Erythematosus (SLE)</li> <li>Intestinal Bowel Disease Model (IBD)</li> <li>Air pouch Model</li> <li>Atopic Dermatitis (AD) and Psoriasis model</li> </ul>	<ul style="list-style-type: none"> <li>Oral glucose tolerance test (OGTT) model</li> <li>Diet-induced obesity (DIO) model in C57BL/6</li> <li>HFMCD diet-induced NASH in C57BL/6</li> <li>mFc.hGDF15-induced Body weight loss in BALB/c</li> </ul>	<ul style="list-style-type: none"> <li>Graft-versus-host disease model in B-NDG</li> </ul>

## Target to IND and Beyond

We've expedited the path from target identification to IND for many of our 600+ global clients. By using our true single-source platforms and by integrating critical developability assessment into the discovery process, we can expedite your product into the clinic faster and more cost-effectively.

### End-to-End Integrated Discovery & Development Packages

- Discovery Target to Lead
- Preclinical Studies (DMPK, Tox, Biology)
- CMC Development
- GMP Manufacturing
- Global Regulatory Compliance

### Client's projects using our integrated discovery services:



*In addition, we are currently supporting 80+ fully integrated (target identification to final preclinical candidate lead) projects.*

### The True Single-Source Advantage

What makes WuXi Biologics unique is our integrated, one-stop Discovery-to-IND biologics development platform and our full suite of discovery services which are available separately, as needed. Work with our highly experienced team of nearly 400 scientists who have completed 1,000+ standalone projects against 200+ targets covering different molecular modalities and disease indications. We have what you need to support your project, plus comprehensive single-source services for an all-inclusive solution to reduce your target to IND timeline by a remarkable 6-12 months.

### Core Competencies

Based on your R&D goals, we tailor a program that will meet your discovery needs. All of our discovery technologies and platforms take advantage of our core competencies:

- World-class research expertise
- State-of-the-art facilities
- Well-established project management systems
- Efficient workflows
- Demonstrated success in generating antibodies against a multitude of targets and identification of preclinical candidates (PCCs) in all disease areas



By linking discovery with development, we can reduce your timeline from concept to IND by 6-12 months.

## About WuXi Biologics

WuXi Biologics is a leading contract research, development and manufacturing organization (CRDMO) that provides end-to-end capabilities to healthcare organizations worldwide. With operations in China, the United States, Ireland, Germany, and Singapore, we enable our partners to effectively and efficiently bring biologics and vaccines to patients worldwide through our comprehensive and high-quality drug development model.

**The world's leading global single-source platform from concept to commercialization.**

wuxibiologics.com | info@wuxibiologics.com

**WuXi Biologics**  
Global Solution Provider

