



Biological Drug R&D Ask Sanyou Bio

BUILD THE WORLD'S TOP INNOVATIVE BIOLOGICAL DRUG INTEGRATED R&D SERVICE PLATFORM



ABOUT SANYOU BIO

Sanyou Bio is devoted to solve the unresolved core issues in research and industrialization of innovative biologic therapies by achieving the mission of "To make it easy to discover innovative biological drugs anywhere". The company has established a global and leading integrated R&D and preclinical development technology platform for innovative biopharmaceuticals. Sanyou Bio's "Super Trillion Innovative Biologics Platform" is positioned at the forefront of the industry globally. The company has entered the market through its "4C" (CRO, CDO, CPO, CRS) business, and the business footprint has expanded to continents including China, America, and Europe.

AI Guided R&D

Business: All-inclusive Package / PCC / PCC- IND

Molecular library: Ten Trillion Level

Technology: Three Integrated Innovation Platforms

Location: 215,280 ft²

Financing: C Round

2023-2025

Integrated Service

Business: Stage / Featured / PCC Service

Molecular Library: Trillion-level Ab Library

Technology: Integrated PCC, 25+ Platforms

Site: 37,674 ft²

Financing: A Round

2021-2022

Super Trillion Libraries

Business: Phase / PCC / PCC- IND Service

Molecular library: Seven Trillion Molecular Libraries

Technology: Preclinical Integration, 50+ Platforms

Site: 64,584 ft²

Financing: B / B+ Round

2019-2020

2017-2018

Service Integration

Business: Phase / PCC Service

Molecular library: Billion-level Ab Library

Technology: Ab Screening, 16+ Platforms

Site: 10,764 ft²

Financing: Pre-A Round

Exploration Period

Business: Phase Service

Molecular Library: Immuno-antibody Library

Technology: Ab Screening, 5+ Platforms

Site: 1,076 ft²

Financing: Seed & Angel Round

2015-2016



300+
employees



70%
with master or Ph.D.



215,280+ ft²
laboratory



50+
technology platforms



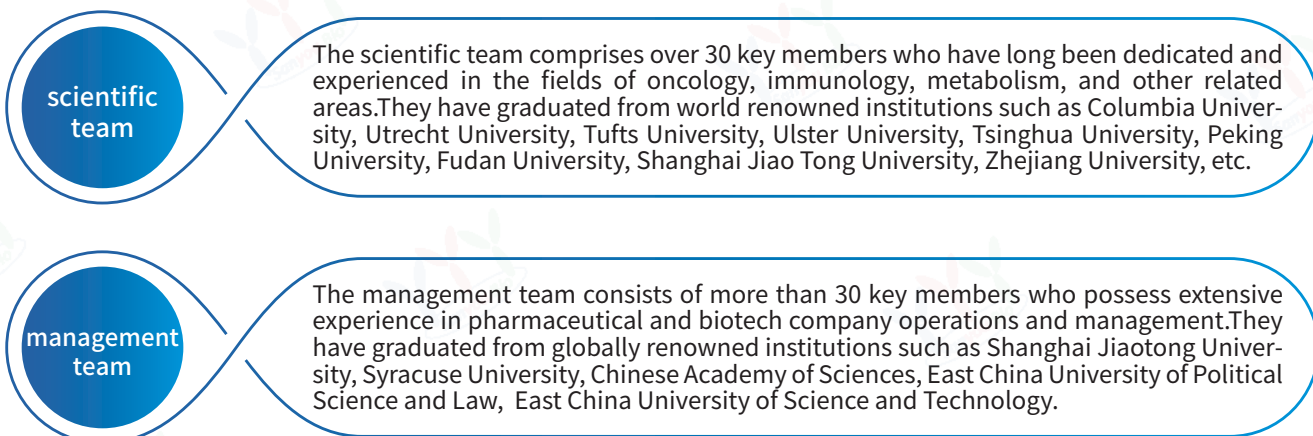
Global distribution across
China, US and Europe



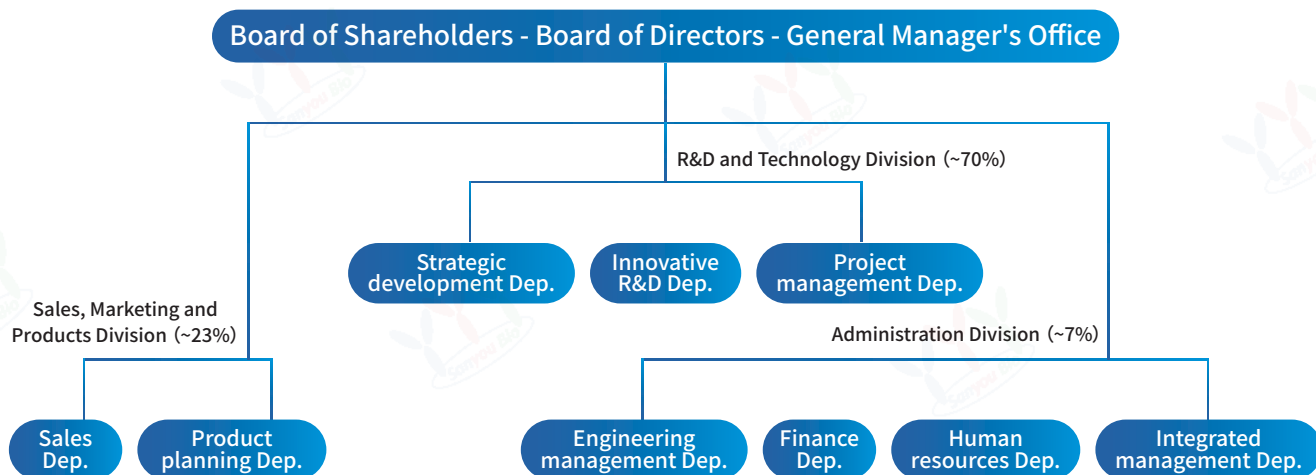
1,000+
pharmaceutical customers

TEAM OVERVIEW

01/ Sanyou has a scientific and management core team consisting of more than 60 members



02/ Sanyou currently has approximately 300 full-time employees and has established a standardized governance structure along with a professional team that excels in research and R&D capabilities



Robust scientific capabilities

More than 30
senior Ph.D. scientists

Well-educated workforce

70%+
postgraduates

Substantial growth potential

Avg. age of
management team: 33

Focus on R&D

75%+ R&D and
product-focused staff

Professionalization

50%+ core members
>10 years of experience

Internationalization

More than 30 professional
talents from Europe and US

Effective management

More than 30 core
management personnel

C COMPANY HIGHLIGHTS

► Three innovative technology platforms “super-trillion, integration, and intelligence”

Sanyou has built three innovative technology platforms that are industry-leading in terms of “super-trillion, integration, and intelligence”. These platforms cover various stages of preclinical research and development of innovative biopharmaceuticals, including molecular discovery, functional screening, process development, quality control and more. These platforms providing comprehensive end-to-end services for drug research and development.

Super trillion innovative biologics discovery platform



Leading in the field of innovative large molecule libraries

Encompass nine major trillion level libraries, including "fully human Ab, single-domain Ab, mouse monoclonal Ab, rabbit monoclonal Ab, bispecific Ab, multi-specific Ab, targeted peptides, targeted small proteins," and more

Innovative biologics preclinical integrated R&D platform



Globally leading integrated service capabilities in innovative biopharmaceuticals

cover ten major modules, including material preparation, antibody generation, in vitro screening, antibody engineering, in vivo validations, drug properties analysis, cell line development, process development, and more

Intelligent innovative biologics R&D platform



Leading in providing intelligent R&D services for innovative biopharmaceuticals

Deeply integrating digitalization, computational biology, and automation. Establishing an innovative biopharmaceutical intelligent research and development platform which accelerates the processes of drug discovery, drug optimization and drug development

C COMPANY HIGHLIGHTS

01/ Super trillion innovative biologics discovery platform

With 8 years of continuous innovation, Sanyou Bio has built the world's leading super trillion level innovative biologic library with full independent property rights, which can be widely used in the fields of innovative biologic discovery, diagnostic assay and research antibodies discovery.

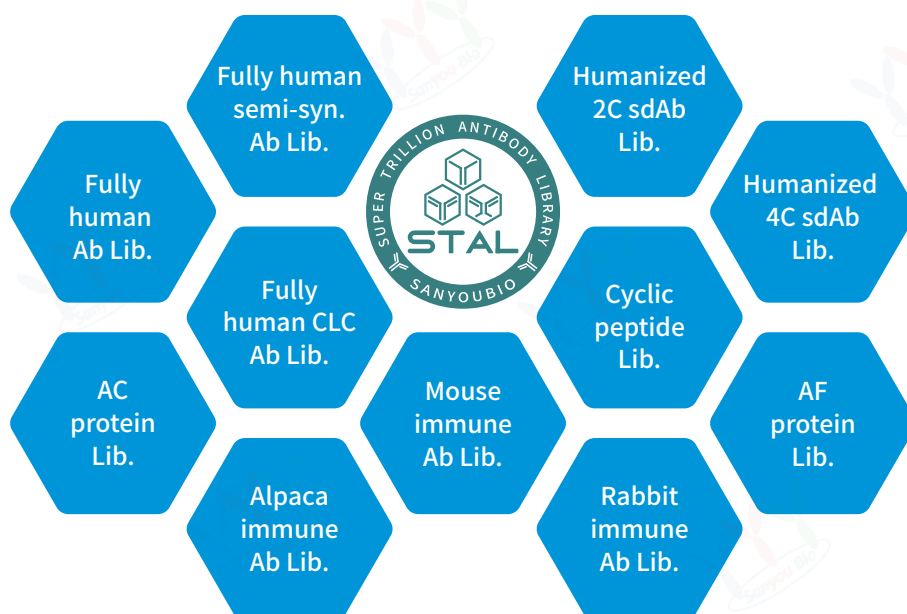
It can cover the needs of innovative biologic discovery such as "fully human antibody, single domain antibody, murine monoclonal antibody, bispecific antibody, polyclonal antibodies, targeted peptide, targeted small protein".

It can obtain biologic drug candidates with high innovativeness, high affinity, excellent specificity and developmental feasibility.

● Ten trillion-level-libraries layouts

● Ten trillions total capacity

● Hundreds of projects validated

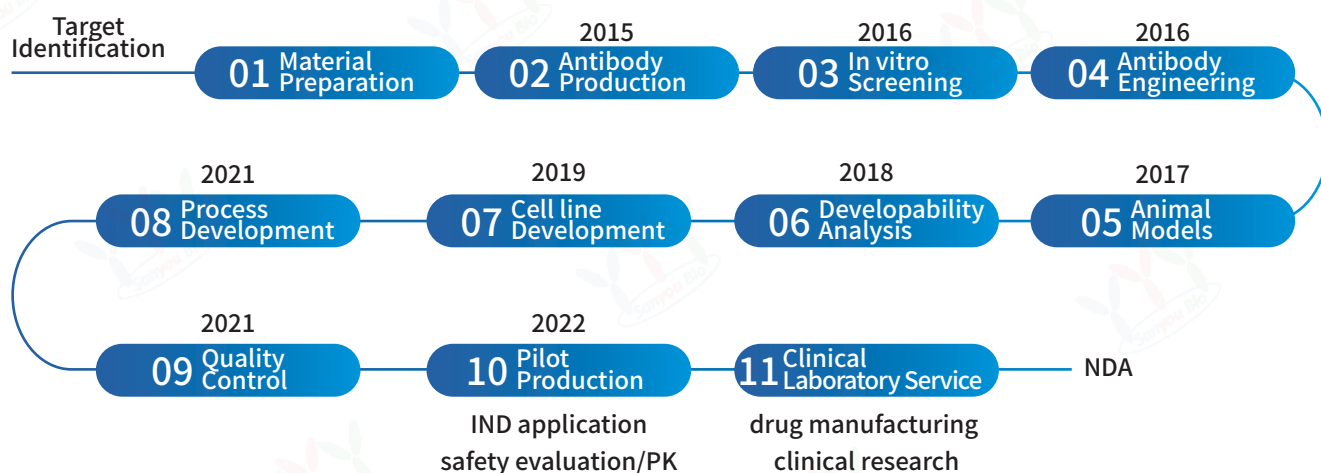


Parameter	Company C (1.0)	Company C (2.0)	Company D	Company M	Company W	Sanyou Bio
Library	scFv	scFv	Fab	Fab	scFv	Fab / VHH / CLC
Size	1.40×10^{10}	1.30×10^{10}	1.00×10^{10}	1.30×10^{11}	1.40×10^{11}	$>9.38 \times 10^{12}$
Diversity	N / A	N / A	N / A	> 97%	90%	100%
VH/VL Proportion	N / A	N / A	N / A	naïve	N / A	Pairing optimization
Fab Display Rate	N / A	N / A	N / A	70%	80%	88%
Lead Abs	Dozens	Hundreds	Dozens	Dozens	Dozens	Hundreds to Thousands
IgG1 Purity	N / A	N / A	N / A	N / A	N / A	94%
IgG1 Tm Rate	N / A	N / A	N / A	69.7-85.0°C	N / A	64.4-88.2°C

COMPANY HIGHLIGHTS

02/ Innovative biologics preclinical integrated R&D platform

Building an integrated service platform that covers the entire process from [target to PCC], [PCC to IND] and [IND to clinical sample production]. Covers ten major modules, including material preparation, antibody generation, in vitro screening, antibody engineering, animal models, drug-likeness analysis, cell line development, process development, quality control, and pilot production. The integrated research and development system can support the entire process from target identification to preclinical candidates, from preclinical candidates to IND application, and from IND application to clinical drug manufacture. 50+ sub platforms and speciality platforms.



Outstanding R&D capabilities

- 10 modules, 50+ sub-platforms and speciality modules
- One stop services from target identification to IND and expanding to NDA
- Innovative Super Trillions Ab library and fully automated high-throughput screening platform
- Comprehensive system for target identification, pharmacological evaluation, and drug property assessment

Well-established development capacity

- Leading CDMO production capacity
- CDMO capacity of 148,000 liters
- Encompass the entire process from drug substance to formulation and regulatory filing
- Complies with the drug manufacturing requirements of China, the United States, and Europe

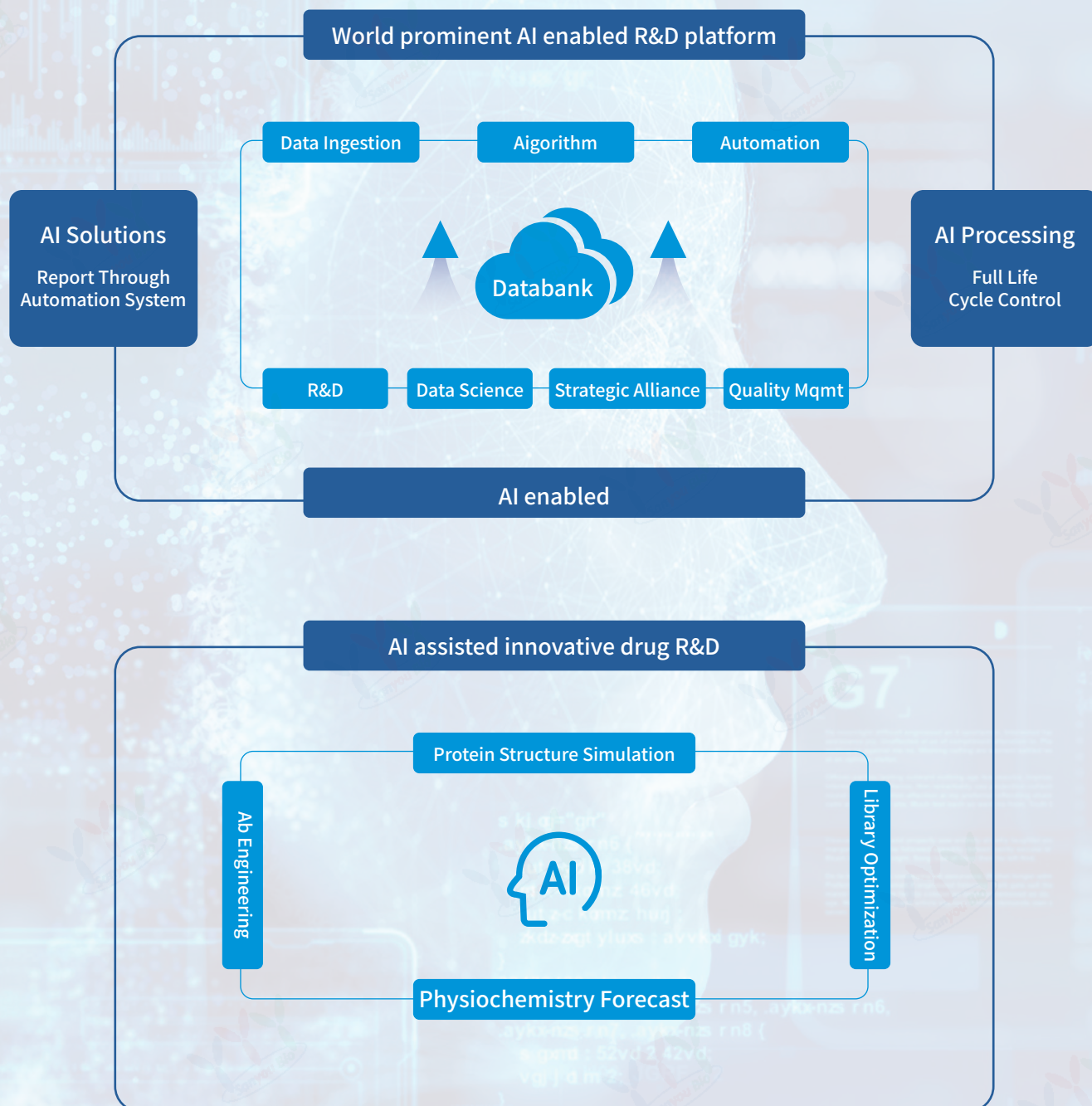
Rich reagent production experiences

- 6 CPO (licensed-out) projects with IND filing or IND approval
- 10 targets in pre-clinical development stage
- 26 on-going collaborative R&D projects
- 60 successful PCC
- 200+ delivered projects

COMPANY HIGHLIGHTS

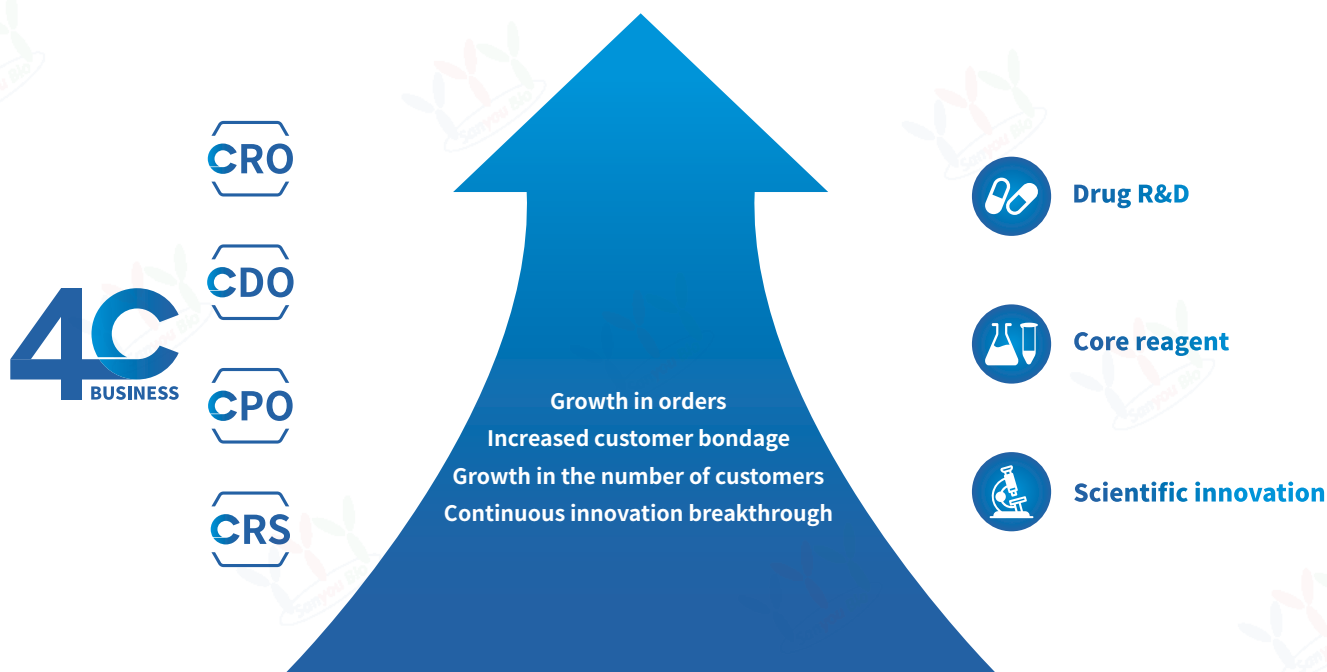
03/ Intelligent innovative biologics R&D platform

Integrate digitalization, computational biology and automation to form an innovative artificial intelligent R&D platform for biologics therapies. High technology backbone, big data and fast delivery are integrated into Sanyou digital drug R&D platform. Computational biology platform: integration of bioinformatics, computational science and statistics. Automation and drug screening are put together into automation technology platform.



01/ "4C" business provides diversified services and solutions for global clients in drug research and development

Sanyou Bio can provide CRO services to thousands of global pharmaceutical companies and drug development facilities, CDO business to hundreds of leading global drug development companies and scientists, and CRS products and services to more than 1 million scientists engaged in life science research worldwide, contributing to the diagnosis and treatment of major human diseases, chronic diseases and broad spectrum diseases.



02/ The "4C" business opens up "end-to-end" supply chain of drug research and development life cycle

Based on the product strategy of "innovation, excellence, substitution and upgrade, and customer adaptation," the company has fully expanded its "4C" business.

Category	Products	Driving force
CRO	Leading with trillion-scale molecule discovery platform. Comprehensive integrated services for preclinical research and development.	Expanding product portfolio to cover a wider range of customers in the pharmaceutical research and development field. Establishing a global marketing team.
CDO/CPO	Drug development and manufacturing services meet the regulatory requirements for submissions in China, the United States, and Europe.	The company's accumulated experience drives precise incubation, resulting in an increasingly rich pipeline of projects. It has also formed a strategic partnership network.
CRS	Offers excellent quality and a comprehensive range of life science and drug discovery reagents.	Expanding product categories to achieve full coverage of customers in research, diagnostics, testing, and treatment.

SITES AND BUSINESS NETWORKS

China HQ with global footprint for innovative business breakthrough



Caohejing Pujiang Industrial Park

64584+ ft² phase I R&D center

R&D Center in use, with more than 1000 equipment and instruments supporting integrated discovery R&D process



Minhang Bixiang Industrial Park

107640+ phase II ft² R&D center

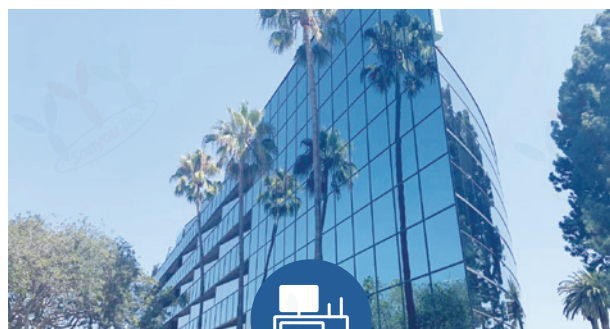
R&D Center expansion. The center is to be inaugurated in July 2023 to fully support integrated pre-clinical CRO service and innovative drug discovery process



Min Development Industrial Park

53820+ ft² pilot manufacturing plant

Planning in implementation, all in compliance with clinical pilot manufacturing requirements and quality standards



San Diego

5382+ ft² global offices sites

Located in Boston, Los Angeles, Rotterdam, San Diego and London, all in order to attend global supply chain and business needs



CLIENT REPRESENTATIVES

Sanyou's business has been rapidly developing and has initially formed a global business network



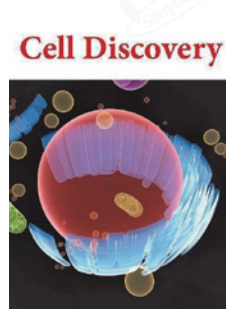
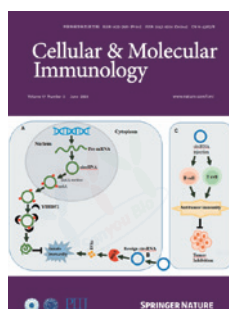
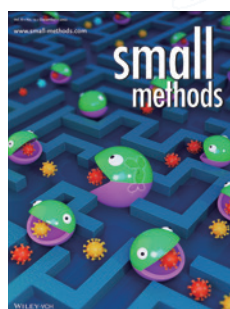
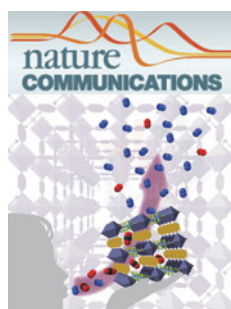
ACHIEVEMENT EXHIBITION

01/ Sanyou continuously invests in technology and project innovation, more than 80 invention patents have been applied, and multiple CPO projects with IND filing or IND approval



ACHIEVEMENT EXHIBITION

02/ Collaborate or assist partners in publishing over 50 papers, including top journals such as CNS



- [01] Hastie K M, Li H, Bedinger D, et al. Defining variant-resistant epitopes targeted by SARS-CoV-2 antibodies: A global consortium study[J]. Science, 2021, 374(6566): 472-478.**IF: 47.728**
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- [03] Yao H, Sun Y, Deng Y Q, et al. Rational development of a human antibody cocktail that deploys multiple functions to confer Pan-SARS-CoVs protection[J]. Cell research, 2021, 31(1): 25-36.**IF: 25.617**
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- [11] Liu J, Chen Q, Yang S, et al. hACE2 Fc-neutralization antibody cocktail provides synergistic protection against SARS-CoV-2 and its spike RBD variants[J]. Cell Discovery, 2021, 7(1): 54.**IF: 10.849**
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- [14] Ou F, Lai D, Kuang X, et al. Ultrasensitive monitoring of SARS-CoV-2-specific antibody responses based on a digital approach reveals one week of IgG seroconversion[J]. Biosensors and Bioelectronics, 2022, 217: 114710.**IF: 10.618**

STRATEGY DEVELOPMENT

Mission: To make it easy to discover innovative biological drugs anywhere
Vision: To improve the quality of people's lives with innovative biological drugs
Sanyou as innovative drug development service company with global influence



Global business strategic planning in full implementation. Optimizing Sanyou business system constantly

Organic and continuous growth of global branding, optimization of CXO and CRO and Optimizing Sanyou business system

Global branding strategy in implementation, improvement of CXO and CRS businesses. Sanyou 8 business models in building

Building global benchmark drug discovery research and development platform



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THREE CORE TECHNOLOGY PLATFORMS



ST-AL based molecule generation



Integrated drug discovery



AI drug screening

COMPREHENSIVE LAYOUT OF FOUR BUSINESS MODELS



PCC integrated service

Antibody generation

Antibody engineering

Pharmacodynamics



IND integrated service

Cell line / Process



Technology transfer

Collaborative R&D



Protein customization

Antibody products

Protein products

Diagnostic materials

MULTIDIMENSIONAL SYSTEMIC SOLUTIONS



Drug R&D



Core reagent



Scientific innovation



Sanyou Biopharmaceuticals Co., Ltd.

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📍 3F | Bldg. 6 | No. 188 Xijunhuan Rd. | Minhang District | Shanghai | China | 201114