

# Overview of China IVD Industry and its Future Development



**CACLP**®

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Entering the Market

# 1. China Overview



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# China

**Surface:** 9.6 billion square km

**Population:** 1.4 billion



\* As of January 2023

# China

**23 provinces**

**5 autonomous regions**

**4 direct-controlled municipalities :**

Beijing

Tianjin

Shanghai

Chongqing

**2 special administrative regions:**

Hong Kong

Macau

**First tier cities, population:**

Beijing – 21.729 million

Shanghai – 24.197 million

Guangzhou – 14.0435 million

Shenzhen – 11.9084 million

Chongqing – 31.0179 million

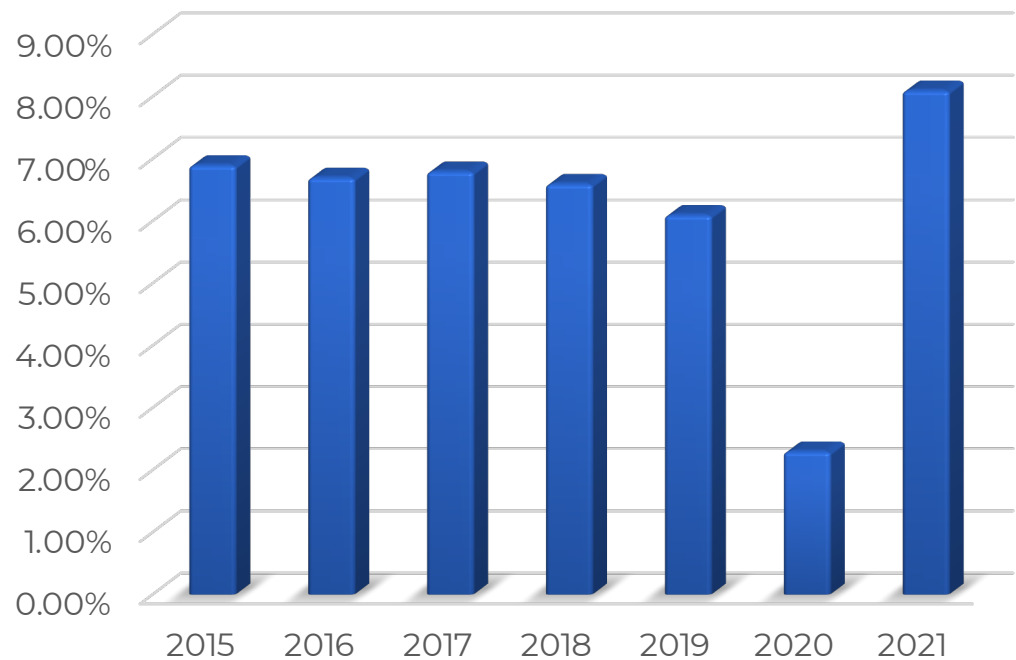


\* As of January 2023

# GDP

2021 GDP reaches 114.37 trillion CNY  
(≈ US\$15.82 trillion)

Despite the pressure of the epidemic situation, China still maintains a high economic growth rate, and the inflation rate is very low. In 2020, China was the only major national economy that achieved a positive GDP growth (2.3%).



# Healthcare resources

<b>Number of medical and healthcare institutes:</b>	<b>1,030,935</b>
Hospitals	36,570
Primary medical and health institutions	977,790
Professional public healthcare institutes	13,276
<b>Total number of beds:</b>	<b>9.448 million</b>
Hospitals:	7.413 million
Primary medical and health institutions:	1.712 million
Specialized public health institutions:	302,000
<b>Total staff:</b>	<b>13.983 million</b>

\* Source: National Health Commission 2021

# Medical services in 2021

- 8.47 billion hospital visits in medical and health institutions
- 6 visits per person, on average
- 247.3 million people admitted to hospitals in medical and health institutions nationwide
- Rate of utilization of hospital beds – 74.6%

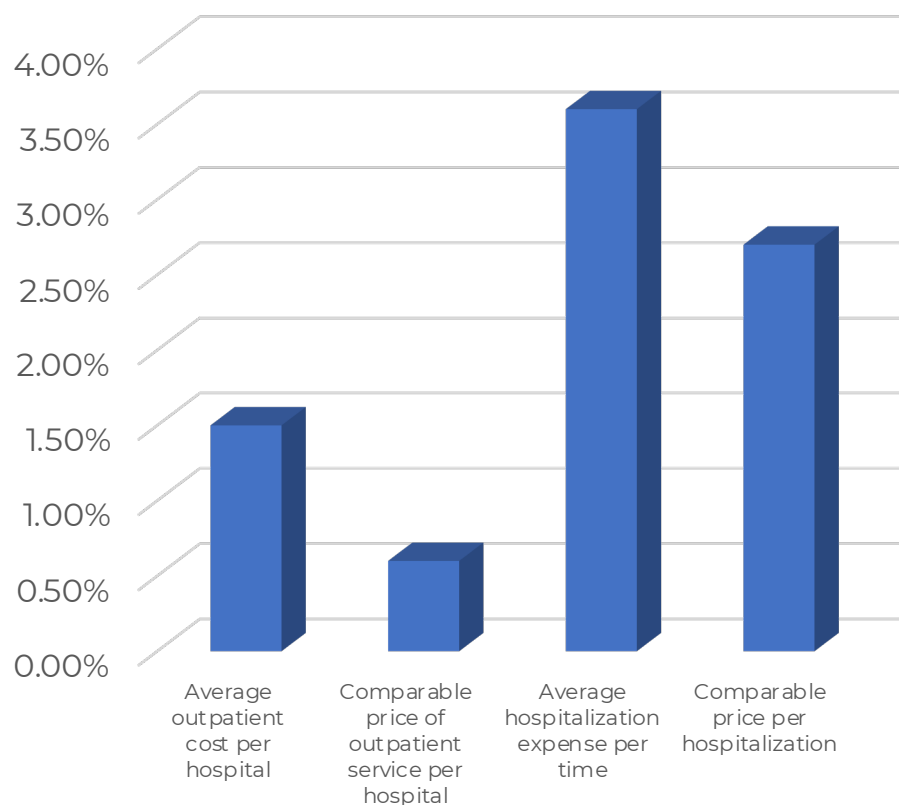


\* Source: National Health Commission 2021



# Increase in medical expenditure

Growth rate in 2021



## Total healthcare expenditure

CNY 7.55 trillion

\* Source: National Health Commission 2021

## Per capita expenditure

CNY 5,348.1 ( $\approx$  USD 800)

Compare to US per capita spending at USD 11,000

\* Source: OECD 2021

## 6.5% of GDP

Compare to US spending at 18% of GDP

\* Source: National Health Commission 2021

# Healthcare expenditure

## Outpatient cost per hospital visit

CNY 329.2 ( $\approx$  USD 45.43)

## Per capita hospitalization cost

CNY 11,002.9 ( $\approx$  USD 1518.4)

## Average daily hospitalization expense

CNY 1191.7 ( $\approx$  USD 164.45)

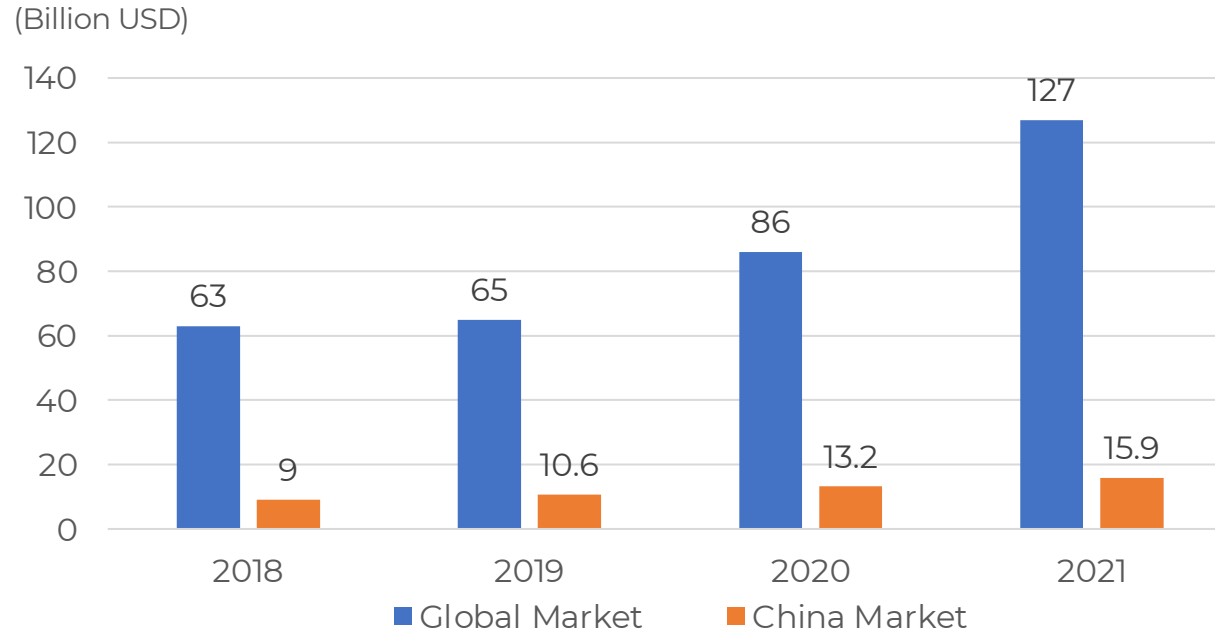


\* Source: National Health Commission 2021

## 2. China IVD Industry

# Worldwide IVD markets

Global vs China IVD Market Size



\* Source: IQVIA statistics and *Annual Report on the Data of Medical Device Industry in China, 2022*

# Worldwide IVD markets

## Europe, Middle East & Africa

- USD 50 billion
- 40% of globe
- YOY growth of 85%

## North American

- USD 38 billion
- 30% of globe
- YOY growth of 27%

## China

- USD 15.9 billion
- 12.5% of globe
- YOY growth of 20.5%

## Asia-Pacific

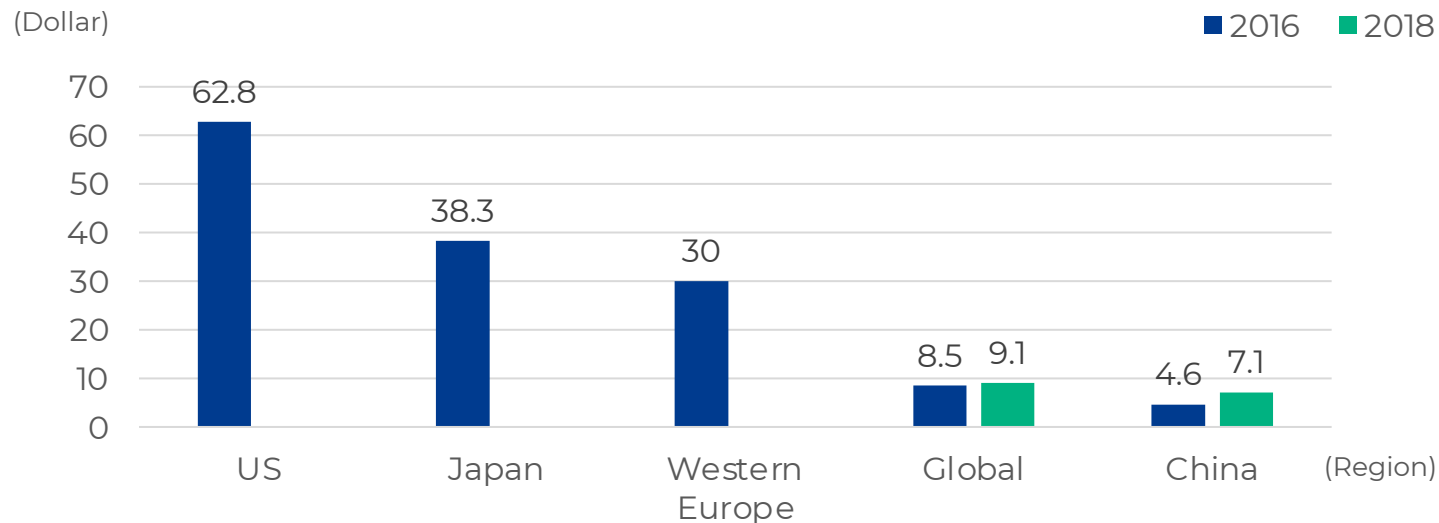
- USD 34 billion
- 27% of globe
- YOY growth of 31%

## Latin America

- USD 4 billion
- 3% of globe
- YOY growth of 33%

\* Source: IQVIA statistics, 2022

## The average annual per capita IVD consumption



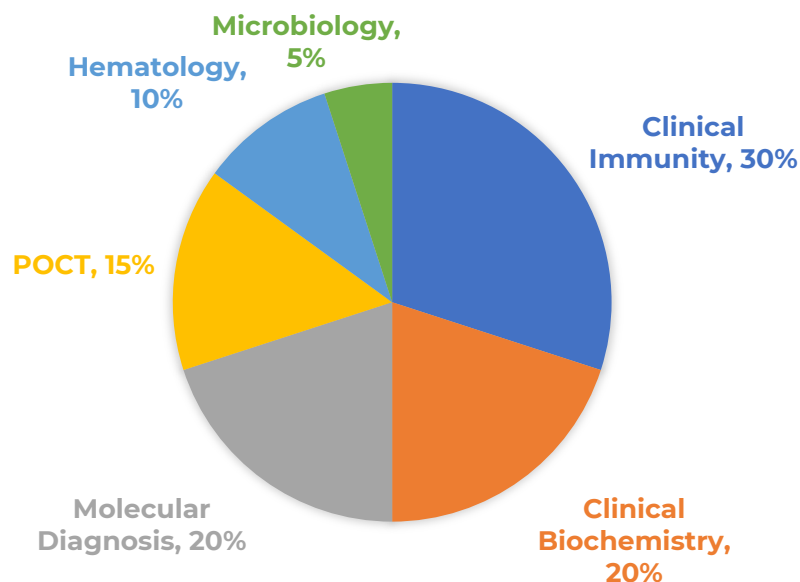
### Mind the Gap

The average annual per capital IVD consumption in China rose 54.3% from 2016 to 2018, when the global growth rate was 7% in average.

In long-term, there is still a big gap between China and the developed countries, which provides a huge potential market for further development domestically.

\* Source: China IVD Industry Annual Report 2019

# China IVD Market by Market Segment



## Clinical Biochemistry

Biochemical testing accounts for about 20% of China IVD market, with a growth rate of about 5%, of which the share of China domestic products exceeds 60%

## Clinical Immunity

Clinical Immunity, driven by the Chemiluminescence market, is the largest segment in China IVD market in recent years. The growth rate of the immunodiagnostics market is around 15%.

## Molecular Diagnosis

Molecular diagnostics is one of the fastest-growing segmentation of IVD market. Driven by the demand for COVID-19 testing, the growth rate of the molecular diagnostics market has reached 20%.

## Hematology

Hematology market includes coagulation, complete blood count, urinalysis, and urine tangible analysis. Hematology accounts for less than 10% of China IVD market, with a growth rate of about 10%.

## POCT

The current market size of POCT accounts for about 15% of China IVD market, with a growth rate of about 15%.

## Microbiology

The microbiology diagnostic field in China started late, with a market share of no more than 5% and a growth rate of 10%. At present, the microbiology market is still dominated by imports.

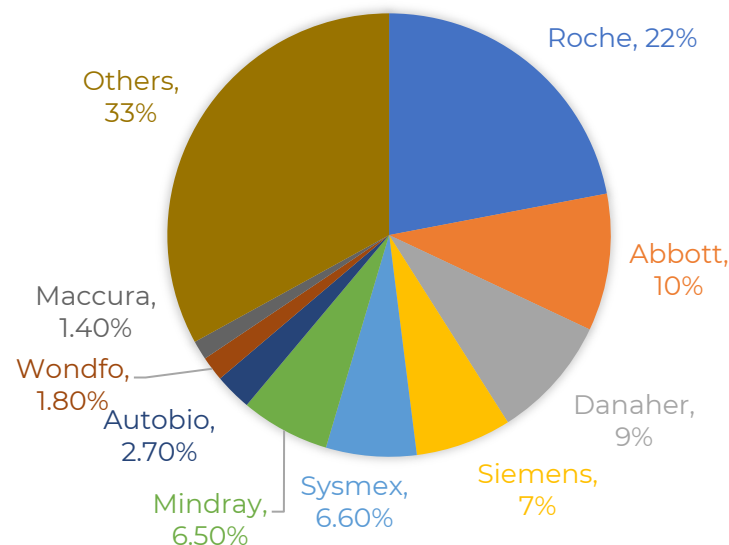
\* Source: CAIVD, China Association of In Vitro Diagnostics, 2021

# High market share of international brands

International companies like Roche, Abbott, Danaher, Siemens and Sysmex are among top 5 players in the China IVD industry and accounted for 56% of the market share in 2018.

The IVD upstream market size is about CNY 24 billion with a growth rate of about 20% per year. And 80% of this is contributed by international brands.

China IVD market share by brand (2018)



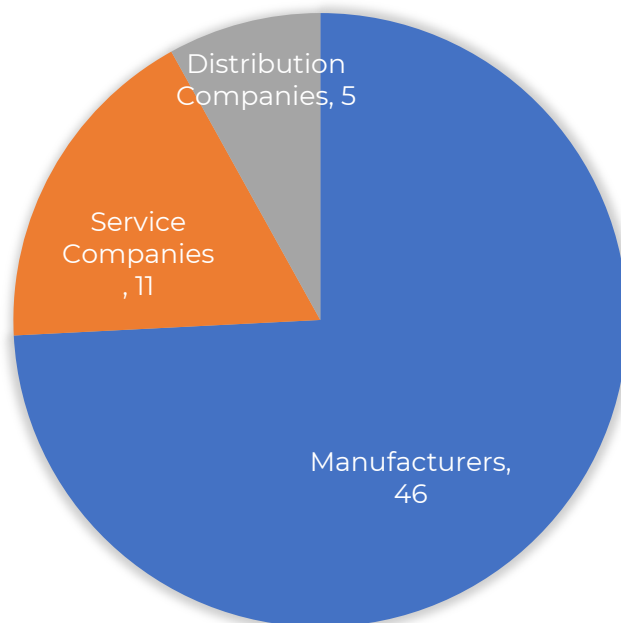
\* Source: First Capital



# China Main IVD Companies

By business natures

Public listed companies with revenues from IVD > 50%



More IVD related companies, whose IVD sales counts for over 50%, go for IPO since year 2020. Till now, there are total 62 companies listed in the stock market in mainland China.

\* Source: CAIVD, China Association of In Vitro Diagnostics , 2022

# China Main IVD Companies



\* Source: CAIVD, China Association of In Vitro Diagnostics , 2022

# Trends of Future Development

“ **Integration, High throughput, Immediacy, Portability** and **Precision medicine** are the key development trend of products and technologies in China IVD Market.

At the same time, the constant inburst, upgrade and iteration of new technologies and new products such as **Mass Spectrometry** and **Mobile Detection System** has brought broader application prospects to the China IVD field. ”



- Prof. Haibo Song

Chairman of China Association of In Vitro Diagnostics (CAIVD)

# Trends of Future Development

## The fast-growing user market

The end users of IVD products are mainly medical institutions, independent medical laboratories, blood banks, physical examination centers, food testing markets and so on.

The downstream market is expected to grow by a two-digit percentage due to the reasons:

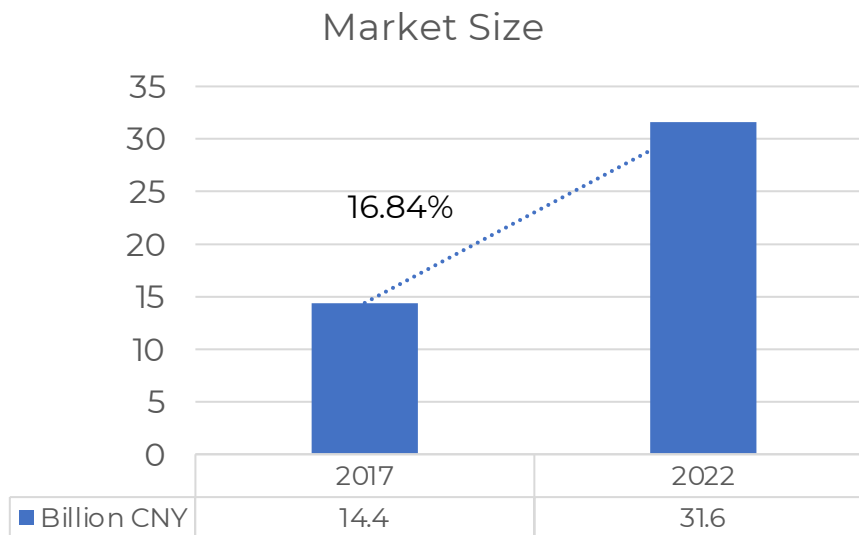
- The recovery of the routine business of medical institutions after the pandemic.
- The big number of PCR testing laboratories set up during the pandemic period will be re-used for various kinds of targets like tumor precision diagnosis, reproductive genetics, birth defects, microbial molecules etc.
- Implementation of country policies like Healthy China 2030 and 5-year plan of bioeconomy.



# Trends of Future Development

The fast-growing user market:

ICL - Independent Clinical Laboratories



**Nos of ICL**

**China – 1,570**

**USA – 6,500**

\* 2022 figure is 2022 excluded of nucleic acid testing

# Trends of Future Development

## The fast-growing user market:

### LDT - Laboratory Developed Tests

**LDT** generally refers to laboratory developed diagnostic reagents, refers to in vitro diagnostic items that have not yet obtained product registration and are only developed, verified and used within the laboratory. The main department that provides LDT services is a qualified independent clinical laboratory; or a joint laboratory model, in which the enterprise and the hospital cooperate to build a testing system for the hospital, including equipment procurement, technology import, Personnel training, etc., to establish long-term cooperation with the hospital.

With the support and promotion of China policies, Shanghai, Hangzhou and Guangzhou have started to explore and develop the LDT model and achieved excellent results.

# 3. Policy & Regulatory

# Healthy China 2030: A version for healthcare

In October 2016, President Xi Jinping announced the Healthy China (HC 2030) blueprint, a bold declaration that made public health a precondition for all future economic and social development.

In the same year, the Chinese government released the HC 2030 blueprint, including 5 goals, 13 core indicators and 29 chapters covering public health services, environment management, the Chinese medical industry, and food and drug safety.





# 5 Goals in HC 2030

These five specific goals are set to improve the level of health nationwide, control major risk factors, increase the capacity of the health service & health security, enlarge the scale of the health industry, and perfect the health service system.

1. Achieve improvement in the quality of people's physical condition and an average life expectancy of 79 years by 2030.
2. Develop healthy lifestyles; establish an energy-efficient, resource-efficient, and environment-friendly industry; ensure food and drug safety.
3. Build a high-quality, efficient, and integrated medical and health service system; refine the public health security system; promote health science and technology innovation; improve the quality and level of health services.
4. Establish an optimal health industry system; form a group of enterprises equipped with innovation ability and international competitiveness.
5. Improve the healthy relevant policies, laws and regulations; modernize management systems.

# 13 core indicators in HC 2030

- Average life expectancy: 79.0 in 2030
- Infant mortality rate (‰): 5.0 in 2030
- Under-5 mortality rate (‰): 6.0 in 2030
- Maternal mortality rate (1/100,000): 12.0 in 2030
- The proportion of urban and rural residents meeting the national standard for physical well-being (%): 92.2 in 2023
- Health literacy level of residents (%): 30 in 2030
- Number of people who regularly participate in physical exercise (100 million people): 5.3 in 2030
- Premature mortality from major chronic diseases (%): by 2030, reduce by 30% compared with 2015
- Number of three certified or assistant doctors for every 1000 residents: 3.0 in 2030
- The proportion of personal health expenditure in total health expenditure (%): around 25 in 2030
- Ratio of days with fine air quality in cities (%): >80 in 2020, continuous improvement in 2030
- Proportion of high-quality surface water(%): >70 in 2020, continuous improvement in 2030
- **Total scale of health service industry CNY 16 Trillion in 2030**

# What is the meaning of Healthy China 2030?

With the implementation of the Healthy China 2030 blueprint, the healthcare industry will lead a new wave of domestic economic development in the future, and medical devices will play a vital role in it.

The medical and healthcare industry is expected to become the fastest growing industry in the development of the national economy, and become the pillar and new driving force of the Chinese economic development.



# China's first five-year plan for bioeconomy

On 10th May 2022, China released its first five-year plan on bioeconomy. The plan clearly states the goal of making bioeconomy a strong driving force for quality development, aiming to create a CNY 22 trillion economy by the end of 2025, with focuses on healthcare.

The new document, released by the National Development and Reform Commission, said it is important to boost the bioeconomy during the next five years, to help meet the rising domestic demand for healthcare and better lives, foster high-quality economic development, prevent and control biosecurity risks and modernize China's system and capacity for governance.



# Policy support in life science and biotechnology

According to the 5-yr plan, China will take steps to boost biotechnological innovation and accelerate the development of healthcare, bio-agriculture, bioenergy and biological environmental protection, as well as bioinformatics.

1. From 2021 to 2025, the government will support innovation in life science and biotechnology, particularly the advancements in next generation sequencing, microfluidic technologies, and high-sensitivity diagnostic technologies.
2. The Plan encourages domestic biological scientific research institutions to initiate and participate in international major scientific projects and the setting of international rules and standards.
3. Bio-enterprises are encouraged to establish overseas R&D centres, production bases, sales networks and service bodies.
4. Accelerate the integration into the international market and the construction of international bio-industrial parks. International cooperation will focus on the field of medical and healthcare to explore the development and application of advanced biotherapeutic and diagnostic technologies.

# Healthy China and 5-yr bioeconomy plan



In recent years, the innovation of the biological industry has continued to be active, and the biological field has become a hot spot for investment.

The developments of 'Healthy China' and bioeconomy are central to the Chinese medical and healthcare industry – and has the potential to reap huge benefits for the rest of the world. CACLP will play an indispensable role in leading technological innovation to create the highest-quality business community, supporting the 'Healthy China' initiative and serving the further development of bioeconomy.

# 4. Practical info for entering the market

# Main Conferences and Exhibitions

- China Association of Clinical Laboratory Practice Expo (CACLP): once a year
- China IVD Supply Chain Expo (CISCE): once a year
- China International Medical Equipment Fair (CMEF): twice a year
- Chinese Medical Association Annual Meeting of Laboratory Medicine: once a year
- China International Scientific Instrument and Laboratory Equipment Exhibition (CISILE): once a year



# IVD related Associations

China Association of In-Vitro Diagnostics (CAIVD)

Professional Community of Experimental Medicine (PCEM)

In Vitro Diagnostics of China Association for Medical Devices Industry

Chinese Society of Laboratory Medicine (CSLM)

Chinese Medical Doctor Association (CMDA)

China Association for Instrumental Analysis (CAIA)

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# CACLP 2022

26-28 October, Nanchang City



**120,000 m<sup>2</sup>**

Exhibiting Space

**+49%**



**1,400+**

Exhibitors

**+20%**



**Near 30,000**

Visitors



**350+**

Speakers

**+16%**



**120+**

Business meetings

**+19%**

# CACLP 2022

26-28 October, Nanchang City

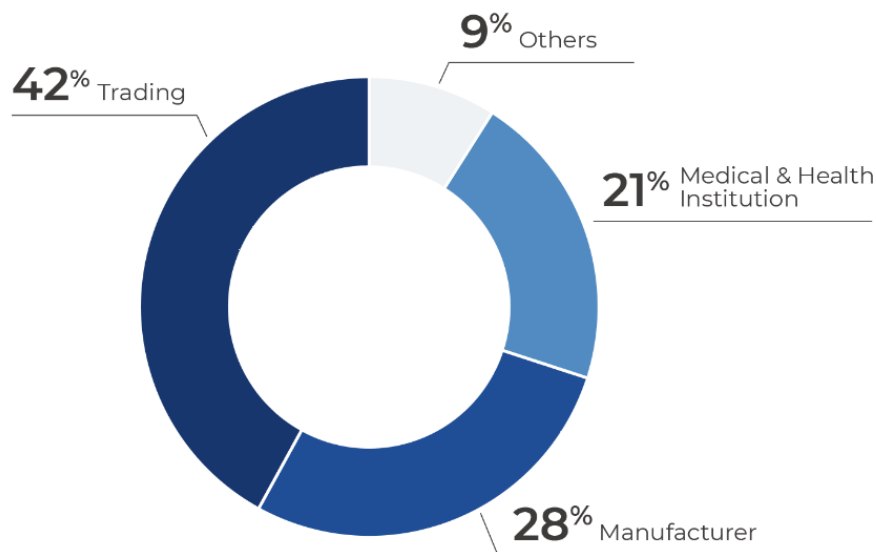
**97.9%**

EXHIBITORS  
SATISFIED WITH  
RESULTS

**98.5%**

VISITORS  
SATISFIED WITH  
THEIR VISIT

## BUSINESS NATURE OF VISITORS



# Concurrent academic activities



**20+**

Conferences  
& Forums



**5,000+**

Professionals



**The 9<sup>th</sup> China IVD Industry Development Conference (CIIDC)** focuses on the industrial development, the latest trend, capital operation and business management. Several elites and entrepreneurs in the IVD industry will discuss artificial intelligence, business models, international opportunities, etc.



**The 7<sup>th</sup> China Experimental Medicine Conference (CEMC)** invited academicians, experts, and scholars to report on IVD-related topics: experimental medicine, biomedical engineering, molecular diagnosis, pathology, mass spectrometry, blood transfusion, clinical and laboratory and other IVD-relevant topics.



**Enlightening Lab Med – The 5<sup>th</sup> IVD Youth Entrepreneur Forum (ELMY)**, organised by CAIVD, puts more attention on startups in the IVD industry. The conference invites successful entrepreneurs, investors, and bankers to share their experience of building up a business and producing value.



**The 4<sup>th</sup> China IVD Distribution Enterprise Forum (CIDEF)** stresses the development of distribution in the field of IVD. The forum invites agencies, distributors, dealers, as well as leaders in relevant supervising institutions to talk about supervision, business development, operating experience of distributors.



**The 2<sup>nd</sup> China Key Raw Material & Parts Forum (CKRMPF)** is set to emphasize the sustainable development of raw material, logistics and packaging in IVD supply chain by CAIVD. The forum features several thematic reports about the current situations, opportunities and challenges, technologies and applications of key raw material and parts in IVD industry.

**Welcome  
to China!**

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