2021 China Healthcare Market Report

Part I China Healthcare Market Overview Biotech and Drug Development Market

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- This will be the first in a series of reports providing a comprehensive overview of the rapidly developing healthcare industry in China
- This first report provides an overview of the healthcare industry in China and drivers of growth and change that will impact the market for the next decade. This report also covers an overview of the biotech and drug development market and emerging opportunities for investors within this sector.
- The report is divided into three sections:
 - Overview of China's Healthcare Market (p. 5-19)
 - Current State of China Biotech and Drug Development Market (p. 20-35)
 - China-based Biopharma Companies to Watch in 2021 (p. 36-41)
- Additional reports to follow in the second half of 2021 include, among others:
 - China MedTech and Devices Market Overview and Emerging Opportunities
 - China Digital Health and "AI+" Healthcare Market Overview and Emerging Opportunities

Executive Summary

- China's healthcare market currently leads the world in terms of growth rates due to long-term demographic trends pointing to a rapidly aging population that is expected to spend significantly on healthcare services
- In addition, a growing middle class with increasingly higher disposable incomes, along with a society that is more health conscious due to the COVID-19 pandemic, is expected to drive healthcare spend significantly in the next decade
- China's government is looking to increase healthcare spending and support the private supplemental health insurance market as growing needs for supplemental coverage and coverage gaps are addressed
- Market segments are becoming increasingly blurred as technology and the use of data leads the way towards innovation and integration in and among various players across China's healthcare industry
- China's health industry growth has been driven by strong policy support at all levels of government, adoption of technology and the integrated use of data, and robust investor and IPO interest in the capital markets
- China-based companies have become increasingly competitive within the drug development landscape which has led to rapid development within its biotech and drug development industry and a growing number of drug licensing transactions (both in- and out-bound)
- Recent developments in drug R&D and other technologies have led to growing financial and corporate investor interest in China's biopharma market, supporting a thriving environment for new companies to grow and develop
- In the drug development space, there has been strong interest in areas such as "AI +" drug discovery, mRNA technology in vaccine development, small molecule drugs, gene therapy, and ophthalmology and other specialties
- Six specific areas of China's healthcare market are expected to see significant investment activity and we provide a
 profile of 20 leading firms in China that will be exciting to watch in 2021

Overview of China's Healthcare Market

China's healthcare industry currently leads the world with double-digit growth rates and the second-largest healthcare market in terms of spend

- China's health care sector only began privatizing in the 1990s, but it is already the world's second largest pharmaceutical market and healthcare market overall
 - While estimates vary on the size of China's healthcare industry, market observers generally size the market at RMB 8-9 tr (USD 1.3-1.4 tr) in 2020.
 - This includes the pharmaceutical market at RMB 2.5 tr (USD 390 bn), medical devices and diagnostics at RMB 1 tr (USD 160 bn), and medical services and health tech at RMB 4.5-5.5 tr (USD 700-860 bn).
- Health care expenditures in China have grown at a staggering 20% annualized rate since 2003, with 35% of all health care spending coming from out-of-pocket expenses*
 - Healthcare spend in China represents just 8% of total consumption. By comparison, health care spend in the US represents over 22% of consumption expenditure.
 - China's healthcare spend is expected to more than double as a % of GDP, Source: World Health Organization and Ernst and Young as of Apr 13, 2018 particularly as China's seniors begin transferring their wealth to sole children and concentrating greater wealth within a more consumptionoriented generation.
- If the fast-growing elderly care market is also included, China's healthcare industry is projected to be worth over USD 5 tr in 2030
 - Average annual growth rate of 10%+ over the next decade
 - Among the only healthcare markets of size and scale in the world growing at double digit rates

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China's Healthcare Market Size (2010-2020) Market size (billion RMB)



Note: * Estimated figure for 2020 | Source: Open source reports

MEDICAL EXPENDITURE IN CHINA VS. US, GERMANY, AND UK



* Source: CFR. "China's Healthcare Sector and US-China Health Cooperation," May 11, 2016

- Over the long-term, China's growing wealth and aging population are expected to play a large role in powering the 10-15% annual growth in healthcare spend estimated by analysts
 - According to the latest census results released by the Chinese National Bureau of Statistics, the population of people aged 60+ has reached 260 mm (18.7% of total pop.). By 2027, analysts expect the aged 60+ category will increase to 324 mm and double to 500 mm+ (40% of total pop.) by 2050.*
 - Prevalence of chronic diseases and disability among the elderly is high, exceeding 180 mm patients with chronic diseases and 40 mm with disabilities.
 - Non-communicable diseases accounted for 71% of total deaths among the elderly, led by cardiovascular and cerebrovascular diseases, cancers, chronic respiratory diseases, and diabetes, all of which involve long and expensive treatment courses.**
 - Meanwhile, China's newborns dropped sharply from 17.6 mm in 2017 to 10 mm in 2020.
 Newborns in China are expected to fall below 7 mm by 2025. Analysts predict that by 2050, the number of deaths each year will be 10 times that of newborns.

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POPULATION HISTORY AND PROJECTIONS FOR CHINA 2027 (IN THOUSANDS)



 Growing per capita income of China's younger populations due to rising wages and the generational wealth transfer impact of China's one child policy has meant the cost of specialty drugs, biomedical devices, and services for aging relatives will increasingly fall on their shoulders – creating opportunities for a growing elderly care market

Sources:

^{*} CSIS, "Is China's health care meeting the needs of its people?" March 14, 2019

^{**} WHO, World Health Statistics 2020

Elderly healthcare market in China to grow significantly over the next decade

- An aging population will bring two opportunities to China's healthcare industry
 - The rapid increase in the elderly population and social need for affordable, high-quality healthcare services will lead to a surge in demand for such services along with ancillary needs.
 - China's future age structure will force more families to shift from supporting the elderly by themselves to entrusting the care to professional agencies and personnel. This will in turn expand the market share of elderly care services within the overall healthcare market.
 - Such services include home health and personal care, skilled nursing, long-term and hospice care, physical / occupational therapy and rehabilitation, and social services
- Furthermore, with an increase in per-capita disposable income, healthcare services focusing on anti-aging; wellness and longevity; and quality-of-life improvement for the "newly" elderly present a vast market opportunity
 - Anti-aging cosmetics, beauty, personal care products and consumer devices, as well as aesthetic services are also expected to grow significantly in the future

Market size of the elderly care in China (billion RMB)







https://www.qianzhan.com/analyst/detail/220/190130-56f185e1.html

China healthcare spend to increase as it converges with developed market norms

- While estimates vary, China's healthcare costs remain relatively low as a % of its GDP though this is expected to more than double as healthcare spend converges with developed market levels
 - The US market leads the world in healthcare spend accounting for at least 17% of its GDP
 - China's healthcare costs ranges from 5-8% of its GDP, still relatively low as compared to the US and other developed countries
- In terms of per capita spend, China's healthcare costs are less than 10% of that seen in the US, while at the same time out-of-pocket contribution as a % of overall costs is significantly higher
 - Per capita spend is expected to rise as China's healthcare consumers demand greater coverage and quality of services
 - Over time, out-of-pocket contributions are expected to trend towards developed market norms as the government promotes measures to increase funding for basic universal coverage, control drug pricing, and stimulate competition
 - Private supplemental insurance expected to grow rapidly as an increasingly affluent middle class seek access to higher quality care



HEALTH COSTS

HEALTH COSTS PER CAPITA 2018



*Source: USC U.S.-China Institute; data from JHU CSSE & OECD

Structural considerations driving demand for private supplemental insurance in China

- China's health insurance system more closely resembles Germany's national social health insurance system than it does the US commercial health insurance market
 - Supervised at the national level and guided by the principle that citizens are entitled to receive basic health care; however, local governments are ultimately responsible for funding and implementing health services
- Given this local funding structure, and because China's household registration system ("hukou") determines eligibility for services according to birthplace, public coverage and quality varies widely from region to region
 - Because of budget constraints, public health insurance offers wide but shallow coverage for drugs and services, creating demand for private insurers to supplement public insurance regimes
 - Such deficiencies, along with a shortage of doctors and an increasingly health-conscious population will drive China's health insurance market to grow quickly beyond what is already an estimated \$200 billion market (in terms of premium income)*

Country	China	Germany	UK	US
Health Care System	Local Social Health Insurance	National Social Health Insurance	Universal Health Care	Commercial Health Insurance
Features	 Local social health insurance Fees paid by local governments and individuals, regulated by government Growing awareness and emphasis on market rather than government provision of social health insurance 	 Wide coverage Fee partially paid by citizens, regulated by government Emphasis on market rather than government provision of social health insurance 	 Wide coverage Heavy burden on government, which funds hospitals through tax appropriations. Services to residents are free of charge or very low cost Emphasis on social equity, lack of market mechanism 	 Narrow coverage Lighter burden on government, strong market mechanism Individuals obtain insurance through employers or individually

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* Source: Ernst & Young, "White Paper on China Commercial Health Insurance," 2018

Private supplemental insurance a key driver behind future growth in healthcare expenditures

- As prevalence of private insurance grows in the China market, high end medical treatments, and even regular checkups are all expected to increase rapidly from their current low bases
 - While the government provides nearly universal health coverage for low-end services, private health insurance offers more comprehensive coverage
 - Still, private health insurance coverage remains in just the single-digits % of population currently.
 Similarly, penetration rates for sophisticated services like radio-therapy remains in the teens.

NUMBER OF HEALTH CHECKS IN CHINA (IN MILLIONS)

Source: The Year Book of Health in China, AsiCl, Bloomberg Intelligence as of Mar 26, 2019



- China's government is seeking to expand health coverage with its "Healthy China 2030" plan
 - Bringing clinics and hospitals to smaller cities / rural areas to increase coverage
 - Reducing labor shortages of doctor/nursing staff and implementing more competitive pay policies
 - Reducing individual out-of-pocket % of spend, which is much larger than in other markets such as the US, UK and Germany
 - Fostering support of private insurance market to aid in accessibility of higher quality services

GENERAL MEDICAL PRACTITIONERS (PER 1000 PEOPLE)

Source: The Economist. OECD; Wind Info



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2.0

- Leveraging big data is an important strategic priority of the government's "Healthy China 2030" plan
 - This data covers the entire life cycle of a person, including the aggregation and processing of data related to personal health, medication and pharmaceutical, disease prevention and control, food safety, and public health
- Consumers are demanding more personalized and higher quality health care
 - Demand for more personalized care reflected in the proliferation of private dental and pediatric clinics, and greater availability of radio-, chemo- and gene-therapies
 - Related to this is the growth of online services, including virtual doctor appointments and e-commerce solutions for insurance, devices, and drugs, which both depend on and generate the data needed for personalized medicine

Chinese patients expect to use more digital services within the next five years



- The future of the healthcare industry will be integrally involved with the country's technology, service, and manufacturing industries
 - Companies like Alibaba and Tencent are applying their tech expertise to the healthcare industry by providing services like WeDoctor to optimize hospital and clinic management, drug and medical device distribution, and medical equipment maintenance
 - Many health-tech efforts are AI-based to take advantage of China's deep data pool with 1.4+ billion people and its comparatively lax regulatory environment encouraging advancements in AI

Boundaries between market segments are becoming increasingly blurred

- As collection and use of healthcare data becomes widespread, easily used, and self-reinforcing in a continuous closed loop, boundaries between segments of the industry will become increasingly blurred, with increased integration between testing and diagnosis, provisioning of medical drugs, and health management
 - As technology and the understanding of diseases continue to advance, tools such as gene sequencing will inevitably involve larger amounts of clinical and genetic data both domestically as well as globally, leading to the integration and cross-border development of multiple "-omics" (e.g., genomics, transcriptomics, proteomics, or metabolomics)
 - Enterprises have shifted towards an R&D strategy focused on comprehensively utilizing different types of products and technical means to meet clinical needs
 - In the future, insurance will become a critical factor affecting healthcare expenditures, including identifying effective treatment plans from reviewing multi-dimensional scenarios and leveraging big data analysis to facilitate early screening and diagnosis of diseases in order to maximize the effectiveness of preventative treatments
- The healthcare industry in China is far from realizing a "closed loop" of the industry; however, there is long-term confidence in the formation of a data loop between China's healthcare industry and insurance market
 - Even after the formation of a closed loop, social insurance will still play a pivotal role, while commercial insurance remains supplemental to help meet specific needs of specific groups of people.
 - China's private health insurance market will continue to play a large role in the future development of the healthcare industry; however, the role of insurers in the market will differ significantly from what has been seen in the US market
 - Private health insurance in the US has been driven largely by corporate employers and legal requirements to provide insurance for employees in addition to tax-funded "social insurance" programs such as Medicare and Medicaid
 - China's social insurance programs and public hospital system are government-funded and expected to be supplemented with the emergence of private insurance offerings designed to provide individualized coverage, ultimately hinging on the use of data

With strong policy and industry support, China's healthcare industry is better positioned than most in developing a closed loop system

Healthcare market in China moving towards a patient-centric "Digital Health + Drugs + Insurance" closed-loop model



Source: Deloitte's Six Predictions for 2020 – China's Pharmaceutical & Health Care Report (February 2020)

China's healthcare industry has benefited from strong policy support at all levels of government and across multiple regulatory agencies

- Changes at the policy level have made China's healthcare industry a national priority, including the "Healthy China 2030" plan in August 2016 and the "Basic Medical Care, Hygiene and Health" law in June 2020
 - The government's 14th Five-year Plan issued at the end of 2020 set forth plans for improving the [country's] multi-pronged social security system, comprehensively promoting the development of a healthy country, and implementing a national strategy for addressing an aging population
 - New policies to be introduced in the future will focus on supporting the following five themes: (1) healthcare accessibility and coverage for the populace; (2) cost reductions and price controls and the provisioning of basic medical insurance; (3) novel, homegrown IP and technologies, (4) healthcare supply chain restructuring to improve efficiency, and (5) the growth of the capital markets and commercial healthcare insurance market
- Various national healthcare commissions and regulatory agencies issued a series of supporting policies in the wake of COVID-19 that are likely to have a lasting impact
 - In March 2020, the National Healthcare Security Administration (NHSA) and the National Health Commission (NHC) jointly issued policy guidance on "Internet Plus" Medical Insurance Services for the prevention and control of COVID-19 during the pandemic in an effort to support the delivery of healthcare services online
 - In November 2020, the NHSA issued policy guidance on Medical Insurance Payment for "Internet Plus" Medical Services, clarifying that online medical services provided to patients with chronic and special diseases would be reimbursable through basic medical insurance
 - In February 2020, in the early days of the pandemic, the National Medical Products Administration (NMPA) opened a channel for emergency approval of certain medical devices. (10 AI-driven medical device products obtained Class III certification in 2020.)
 - In July 2020, the NMPA adopted new administrative policies for drug registration to better align with the clinical trial application review and drug approval process of the FDA in the US.

COVID-19 has accelerated the use of online health services and is expected to create long-lasting impact on the industry

- Internet health platforms have seen significant usage and adoption in the wake of COVID-19
 - In the early days of the pandemic in March 2020, online diagnosis and treatment at hospitals administered by China's National Health Commission grew by 17x compared with the same period last year; diagnosis and treatment consultations on third-party online service platforms increased by over 20x y-o-y; and, the number of online prescriptions grew nearly 10x
 - Online hospitals also grew rapidly. According to data reported by the State Council Information Office in China, by October 2020, over 900 online diagnosis and treatment hospitals were in operation 9x the number in 2018. In addition, telemedicine collaboration networks now cover over 24,000 medical institutions in all prefecture-level cities, and over 5,500 hospitals provide online services.
- Online health consultations more than doubled as a % of total consultations in 2020
 - Expected to make up over half of all consultation sessions in the next 5 years

Online consultation market in China, 2015-2030E



Source: Frost & Sullivan, CLSA. Data as of January 2021

COVID-19 has brought global attention to China's domestic vaccine and medical equipment industries

- The pandemic brought global attention to China's domestic vaccine industry
 - To date, over 130 mm doses of COVID-19 vaccines produced by domestic China players have been administered, and another 100 million doses have been exported globally
 - Various firms in China are involved in the construction of vaccine production facilities as well as suppliers of biologically active materials used in COVID-19 vaccine production. Of 18 COVID-19 vaccines for which WHO EUL has been applied, 7 are from China.
- COVID-19 also shone a light on China's domestic ventilator manufacturers
 - The global stock of ventilators excluding China is about 430,000, but the number of ventilators needed abroad to cope with the pandemic is at least 1.33 mm, leaving a gap of 900,000. Since the recent COVID-19 flare-up in India, China has exported more than 26,000 ventilators and oxygen concentrators.
 - Production capacity of ventilators is mainly limited by the supply of upstream parts, such as turbofans and chips. In the wake of the pandemic, domestic producers will likely work to reorganize their supply chains and look for part suppliers domestically, which will result in a revamping of the domestic ventilator industry.

Capital markets have facilitated growing investment in China's rapidly developing healthcare industry

- With the rapid growth of China's healthcare industry and strong government support, domestic investors in China and foreign investors overseas have begun to focus on China's healthcare market, setting off an unprecedented wave of investment
- The Hong Kong Exchange and the Shanghai Stock Exchange (SSE) STAR Market have played a very important role in driving the growth of the capital markets for investment in China's healthcare industry
 - Relaxation of HKEX IPO listing rules (Chapter 18A) for pre-revenue biotech companies since April 2018 has resulted in a growing wave of China-based biopharma and healthcare company IPOs over the past 3 years. 146 enterprises saw IPO listings on the HKEX in 2020; among them, 23 were in healthcare, accounting for up to 16% (vs 7% in 2018). Total funding raised from IPO listings was close to HKD 100 bn (USD 13 bn), which is 3x that of 2018.
 - The SSE STAR Market launched in 2019 has recently become a popular IPO destination for healthcare companies (especially, drug developers) in China. Since launch, healthcare has accounted for nearly one-fifth of the total number of IPO listings on the SSE STAR Market. In 2020, a total of 29 healthcare companies listed on the SSE STAR Market, raising a total of RMB 50 bn (USD 8 bn).
- Robust IPO markets on the HKEX / SSE STAR Market and renewed importance placed on the sector, in part triggered by COVID-19, has driven growth and VC investment in China's healthcare sector
 - In 2020, a total of 470 financing events occurred in the primary market of China's healthcare industry, with an aggregate financing amount of RMB 162.7 bn (USD 25 bn), up 58% y-o-y
 - The number of institutions investing in the healthcare industry has grown rapidly, and funds that previously focused on TMT investment have begun to quickly build out capabilities in investing into the sector
- The capital markets for China's healthcare industry is expected to continue to grow rapidly as it plays a growing role in supporting the development of the industry

- The shift from a generic healthcare model within China to an industry focused on innovation and competition supported by government policy has become increasingly attractive to global investors and pharmaceutical MNCs
- Foreign investor interest in Chinese biotechnology IPOs has resulted in USD 8.1 billion in new funding in 2020 alone along with strong VC and PE investment
- A growing number of Chinese biotech companies are building partnerships with global pharmaceutical MNCs to develop and commercialize innovative drugs in new markets
- In addition, 2020 witnessed a surge in licensingout deals with foreign and multinational firms, indicating the growing global demand for drugs produced in China
- China's rapidly aging population among its 1.4 billion citizens has been the key driver behind increased investment in the market, along with increased disposable income across the population



Source: Bloomberg CLSA. Data as of January 2021

Current State of China Biotech and Drug Development Market

Current State of China Biotech and Drug Development Market

- After years of development, domestic drug innovation has reached a mature stage, as so-called "fast follow" companies can now make "me too" and even "me better" molecules within a period of 2-3 years. However, competition for the same target is extremely fierce. For example, the recent Claudin 18.2 target is being developed by more than 20 companies.
- Drug developers in China have continued to focus on the essence of their business which is designing clinical trials to achieve optimal approval, quickly conducting clinical trials at home and abroad, driving commercialization of their drug candidates, and developing and managing their product pipeline. More emphasis has been placed on the aforementioned as compared to target or mechanism innovation given the fact that biopharma investors in China still have not gained enough confidence in "first-in-class" drug developers in the domestic China market.
- As the product pipeline matures for pharmaceutical companies and a generation of biotech companies enter the commercialization stage, commercial partnerships and transactions will become more frequent in a variety of forms (e.g., licensing, M&A, joint ventures, contract sales organizations, etc.). These have historically focused on pipeline products in late clinical or near-commercialization stage. However, due to scarcity and the hefty valuations of late-stage assets, partnership activity is expected to increasingly focus on early-stage assets.
- Increased competition in the innovative drug market has led to lower returns for drug companies under the traditional R&D path. Improving the efficiency of R&D investment has become a pressing issue for the entire industry. With the maturation of AI technology and massive amounts of drug development data accumulated over the years, multinational pharmaceutical companies and technology giants have begun using AI-driven drug discovery platforms to seek a more cost-effective process for drug development.
 - Schrodinger and Relay Therapeutics have gone public, and several AI-driven drug candidates have entered the clinical or INDenabling stage, all of which have brought unprecedented attention to the AI+drug discovery field
 - Although AI may not revolutionize the drug development process in the short-term, in the long-run AI is expected to drive innovation that will generate significant economic and social value

China's biotech companies are catching up with global peers in terms of R&D progress

- Numerous drugs have obtained Fast Track, Accelerated Approval, Breakthrough Therapy and Orphan Drug designations
- Some have also obtained FDA approvals

Designation	Date	Drug	Company
	April 2020	Taitaxi (BLySxAPRIL)	RemeGen
	April 2020	Sofantini (mTKI)	Hutchmed
Fast Track	May 2020	HQP1351 (BCR-ABL)	Ascentage Pharma
	June 2020	Elunate (VEGFR)	Hutchmed
	July 2020	DB102 (PKCp)	Denovo Biopharma
Breakthrough	September 2020	Tuoyi (PD-1)	Junshi
Therapy	September 2020	Shugema monoclonal antibody (PD-L1)	CStone Pharmaceuticals
Accelerated June 2020 HM		HMPL-012 (mTKI)	Hutchmed
	January 2020	KN035 (PD-L1)	3D Medicines
	February 2020	HBM9167 (PD-L1)	Harbour BioMed
	February 2020	NIP292 (ROCK)	CR Pharma
Orphan	March 2020	Tuoyi (PD-1)	TopAlliance
Drug	April 2020	Daboshu (PD-1)	Innovent
Designation	May 2020	HQP1351 (BCR-ABL)	Ascentage Pharma
	July 2020	CS1003 (PD-1)	CStone Pharmaceuticals
	September 2020	KN046 (PD-I/CTLA-4)	Alphamab Oncology
	September 2020	APG-2575 (Bcl-2)	Ascentage Pharma

China's pharmaceutical R&D growth expected to outpace global R&D rates

- Looking into the future, R&D spend for China's pharmaceutical industry is expected to grow at over a 20% clip over the next three to five years, exceeding global R&D spending growth
 - Trial registrations are also on the rise for China's pharmaceutical industry, with more than 1,424 phase I/II/III trials registered in 2020, up from 1,218 in 2019



China Pharma R&D

Source: JP Morgan. Data as of December 2020

- 2020 witnessed significant growth in license-out deals with foreign and multinational firms, a sign of growing validation of the innovation and R&D capabilities of China's biotechnology industry
 - 21 such deals were signed in 2020, compared to only 12 in 2019
 - Number of license-out deals as % of total China license deals has also risen substantially since 2017
- R&D spending, patents, newly registered trials, and innovative drug approvals are all key indicators of progress for the industry
 - Approvals for innovative, non-generic drugs in China jumped from just 143 in 2019 to 203 in 2020
 - Many of the recently approved drugs were developed by smaller biotech companies, which have seen valuations increase as a result



Number of China-involved licensing deals

Source: CLSA, McKinsey. Data as of December 2020

Select Out-licensing Deals Ranked by Transaction Size

Lieoneen	1:	Davia	Therapeutic	Deal Value
Licensor	Licensee	Drug	Area	(USD mm)
I-Mab	AbbVie	Lemzoparlimab	Oncology	\$3,000.0
CStone Pharmaceuticals	EQRx	Shugeli monoclonal antibody (PD-L1) and CS1003 (PD-1)	Oncology	\$1,300.0
Innovent	Lilly	Xindili monoclonal antibody (PD-1)	Oncology	\$1,000.0
Jacobio	AbbVie	JAB-3068 (SHP2 inhibitor)	Oncology	\$800.1
Henlius	Binacea Pharma	HLX35 (EGFR/4-IBB dual antibody)	Oncology	\$700.6
Hua Medicine	Bayer	Dorzagliatin	Diabetes	\$600.1
Oneness Biotech, Shanghai Zhongtian Bio	LEO Pharma	FB825 (anti-IgE antibody)	Atopic dermatitis and asthma	\$500.7
Fochon Pharmaceuticals	Lilly	FCN-338 (BCL-2 inhibitor)	Hematology	\$400.4
TransThera	LG Chen	TT-01025	Non-alcoholic fatty liver disease	\$300.5
I-Mab	Kalbe Genexine	TJD5 (CD73 antibody)	Oncology	\$300.4
Gen House	HUYABIO	GH21 (SHP2 inhibitor)	Oncology	\$200.8
TopAlliance	Lilly	JS016 (ACE2 neutralizing antibody)	Covid neutralizing antibody	\$200.6
Shanghai Original Energy Cellular Medicine	Not disclosed	Bispecific antibody products	Oncology	\$140
Heng Rui Pharmaceuticals	Korea East Asia	SHR-1701(PD-L1/TGF-β RII bispecific Antibody)	Oncology	\$140
Heng Rui Pharmaceuticals	HLB Life Science	Pyrrolitinib (EGFR inhibitor)	Oncology	\$110
Heng Rui Pharmaceuticals	Crystal Genomics	Carrilizumab monoclonal antibody (PD-1)	Oncology	\$90
Innovent	Coherus	IBI305 (bevacizumab biosimilar)	Oncology	\$50
Henlius	Mabxience	HLX02 (EGFR/4-IBB bispecific antibody)	Oncology	\$0.75
Alphamab Oncology	Sanofi	KN026 (HER2 monoclonal antibody)	Oncology	Not Disclosed
HitGen	Mitsubishi Tanabe Pharma	Small molecule compounds	Not disclosed	Not Disclosed

Investment in China's biopharma market grew at an unprecedented rate in 2020

- Private capital investment in the biopharma sector in the US and Europe set a record in 2020
 - Total funding grew 56% from 2019 to \$24.5 billion
 - Neurology saw the largest jump in funding (+155% from 2019) with four \$100 million+ deals
- Primary market investment in the biopharma market in China also experienced dramatic growth in 2020
 - Total funding more than doubled from 2019 to \$6.4 billion
- China's venture-backed biopharma startups have predominantly been funded by domestic investors, with more than 75% of participating investors in 2020 fundraisings headquartered in China
 - Most active investors in China-based biopharma startups include: Hillhouse Capital, Qiming Venture Partners, Sequoia Capital China, and Lilly Asia Ventures
- Establishment of Shanghai STAR Market in 2019 and HKEX's New Listing Regime in 2018 have provided attractive exit pathways for pre-revenue biotech companies in the region
 - Secondary market performance of recent biotech IPOs have exceeded expectations

Private Placements in Biopharma (US and Europe)





Frontier technologies continue to see rapid development with validation from real-world data

- mRNA technology is leading the development of COVID-19 vaccines and will rewrite the vaccine industry landscape
 - Traditional vaccines usually take at least 8 years to hit the market. mRNA vaccines, given fast design and production processes, have quickly become favored contenders for COVID-19 vaccines and have been among the first to market
 - The success of mRNA vaccines has been demonstrated by Pfizer and BioNTech's 90% efficacy rate in Phase III clinical trials and Moderna's 94% efficacy rate
 - COVID-19 mRNA vaccines are currently the most widely deployed worldwide, and their safety and efficacy are abundantly supported by real-world data, bringing to light the potential of mRNA technology to ward off future infectious disease outbreaks
 - Vaccine development using mRNA technology is no longer in question scientifically, but is now more of an engineering problem
 - The vaccine industry landscape is expected to be rewritten with wider adoption of mRNA technology. Researchers are also
 expecting to use mRNA vaccines to attack tumors in ways similar to the mechanism of action demonstrated by COVID-19 mRNA
 vaccines
- Artificial intelligence is transforming the drug R&D process and integration of the technology is expected to accelerate going forward
 - The drug development process typically takes decades and costs billions of dollars to fund, with a failure rate of 90%+. AI-driven
 drug discovery, in principle, has the potential to be faster, cheaper and allow for better decisions to be made, especially with
 appropriate data and simulation capabilities
 - The technology can be applied to the entire R&D process
 - Drug target discovery, virtual screening, drug synthesis, ADME-T property prediction and physicochemical property (e.g. crystal shape) prediction, drug repositioning
 - Drug clinical trial management, patient recruitment, pharmacovigilance applications and real-world evidence generation

New players are investing into China market in pursuit of growth and return on capital

- As the biotech industry in China continues to evolve, an increasing number of new players are expected to enter the market
 - Traditional pharmaceutical companies (generic manufacturers) are gradually expanding their innovative drug business units both organically and through external collaborations
 - Scientists with many years of MNC experience and credentials are increasingly establishing their own biotech firms
 - Foreign pharmaceutical companies and institutional investors are also setting up investment bases in China to partake in the expected growth of the industry

New Drug Development Status of Select Pharmaceutical Firms in China

Enterprise	Product	Target	Indication	Progress
Livzon	Ilaprazole	PPI	Anti-gastric Acid	Commercial- ization
Sihuan	Degludec		Diabetes	Phase III
Pharmaceutical	Janagliflozin	SGLT-2i	Diabetes	Phase III
Luoxin	Tegoprazan	P-CAB	Anti-gastric Acid	Pre-NDA
Pharmaceuticais	Plecanatide	GCC	Constipation	Phase III
	Allisartan isoproxil	ARB	Hyper- tension	Commercial- ization
Salubris Pharmaceutical	Enarodustat	HIF-PH	Renal Anemia	Phase I
	Fotagliptin	DPP-4	Diabetes	Phase III
Jingxin Pharmaceutical	EVT201	GABAa	Insomnia	Phase III
Guanhao Biotech	Benvitimod	ΤΑΜΑ	Psoriasis	Commercial- ization
Hiteck Biological Pharma	СРТ	rmhTRAIL	Multiple myeloma	Pre-NDA

Ophthalmology and other specialties attracting strong interest

- Compared to the extremely competitive field of oncology, ophthalmology remains a "blue ocean" market
- China's aging population, combined with changes in lifestyle, an increase in working hours, and increased presence of environmental allergens, has led to rapid growth in eye infections, keratoconjunctivitis, xeropthalmia, corneal damage, retinopathy, cataracts, glaucoma, and other eye diseases
- China's ophthalmology market has grown in step with increased eye disease. China's eye disease patient base is very large and includes more than 75 mm patients with xerophthalmia, 51 mm patients with AMD, and 6 mm patients with glaucoma.
- Though China has a large eye disease patient population, consumer awareness and treatment of such diseases is still lower than that of Europe or the US
 - R&D in areas such as uveitis and retinopathy still relatively nascent in China
 - In the case of the US, however, in addition to anti-VEGF therapy, multiple emerging treatments exist including gene and cell therapy for the treatment of eye diseases, many of which have made promising progress in the clinic
- China's ophthalmology industry has seen strong growth and investment in the past 1-2 years
 - Anti-VEGF therapy has been invested into by OcuMension, Qilu Pharmaceutical, Essex Bio-Technology and others. This is currently
 the most common ophthalmic drug R&D pathway that has seen investment in China
 - In China's very large myopia and presbyopia market, Zhaoke, a subsidiary of Lee's Pharmaceutical, announced a product development agreement with Nevakar to obtain exclusive commercialization rights for low-concentration atropine. Arctic Vision has also introduced MicroPine into the China market from Eyenovia using Optejet's micro-drug delivery platform.
 - In the xerophthalmia space, Heng Rui Pharmaceuticals has introduced two drugs from Novaliq, disrupting the xerophthalmia market, which currently has very limited treatment options

Small molecule drugs attracting interest with new targets and validated MOAs

- Compared with chemotherapy, targeted small-molecule drugs have clear mechanisms of action and fewer side effects. Compared with larger molecules, small-molecule drugs can be taken orally and thus have better patient compliance and lower production costs.
- Over the past few years, due to the growing popularity of immunotherapy, large-molecule drugs have historically dominated the market, but with the clinical validation of KRAS, once a non-druggable target, small molecules have once again captured R&D attention
 - Expected to become a primary focus of the drug development market in China
- There were three major advances in the small molecule field in 2020
 - Amgen submitted a New Drug Application for Sotorasib, a KRAS target that received FDA Breakthrough Therapy approval. Mirati's KRAS G12C inhibitor Adagrasib was reported to have a DCR of 96% in NSCLC patients with specific mutations in clinical phase 1/2. Drugs for SOS1, SHP2 and other targets on related pathways are now entering the clinical stage.
 - Small molecules have entered the field of self-immunization, traditionally a space occupied by biologics. AbbVie's Upadacitinib has reached the clinical endpoint in its Phase III clinic trial for atopic dermatitis. Reistone's self-developed highly selective JAK1 inhibitor SHR0302 has reached the clinical endpoint in its Phase II clinic trial for atopic dermatitis.
 - A major breakthrough in PROTAC technology rocketed Arvinas' share price up 95%, resulting in a market capitalization of USD 2.37 billion following the release of positive efficacy data for ARV-110 and ARV-471 in prostate and breast cancer patients, respectively. Nurix Therapeutics completed a number of transactions, including a USD 2.35 billion global strategic partnership with Gilead and a USD 2.5 billion strategic partnership with Sanofi.

Global race for COVID-19 vaccine continues in wake of COVID-19 pandemic

In 2020, due to the pandemic, COVID-19 vaccine efforts saw significant investment activity globally, with over 200 COVID-19 vaccine candidates being developed worldwide using different vaccination methods. mRNA technology in particular saw renewed interest from investors. The demonstrated efficacy of mRNA-based vaccines from Pfizer and Moderna have spurred further R&D by major pharma players.

Company	Financing Status	Progress of Vaccine R&D
Clover Biopharma (China)	Completed 3 rounds of financing of hundreds of millions of dollars in 2020 and 2021, including well-known institutions such as Qianhai FOF, GL Ventures, De Ao Wei Lan and Temasek	Phase 1 clinical trial of S-triplex COVID-19 vaccine has been completed, advancing global Phase II/III clinical trial
CanSinoBio (China)	Listed on the STAR Market in August 2020, raising RMB 5.2 billion	Conditional approval of COVID-19 vaccine in February 2021, the first domestic adenovirus vector COVID-19 vaccine to be approved
Advaccine (China)	Completed 3 rounds of financing of hundreds of millions of RMB in 2020, including Series B financing of over RMB 200 million	DNA vaccine; Phase II clinical trial completed in January 2021
StemiRNA Therapeutics (China)	Completed 2 rounds of financing in 2020	Collaboration with Tibetan Pharmaceutical; being approved to conduct clinical trials in China as of January 2021
Abogen (China)	Completed 3 rounds of financing of RMB 100+ million in 2020, including a Series A of RMB 150 million, led by SDIC Venture Capital	Collaboration with Walvax Biotechnology and Academy of Military Science, the first COVID-19 mRNA vaccine being approved for clinical trial in China; currently in clinical trials and expected to achieve product launch in the H2 of 2021
CureVac (Germany)	Completed 3 rounds of financing in 2020, with cumulative investment of €375mm + £120mm from KfW, EIB, GSK, etc. and listed on NASDAQ in August 2020, raising USD 213mm	Founded in 2000. The first company to successfully apply mRNA to the medical field and started its Phase 1 clinical trial of COVID-19 vaccine in late 2020
Immunity Bio (US)	Merged with natural killer cell therapy company NantK West in December 2020 in a share swap; Immunity Bio shareholders will own approximately 72% of surviving company, with share price rising by 56.1% on the day the deal was disclosed, and a market cap of USD 3.1 billion as of March 8, 2021	Human adenovirus (hAd5) vector vaccine; in Phase III clinical trial and FDA approval for an expanded trial to validate a combination of conventional subcutaneous + oral/sublingual dosing
eTheRNA (Belgium)	34 million Euro investment in June 2020 from Grand Pharm and Yijing Capital; exclusive strategic collaboration and license agreement with Grand Pharm for the development and production of mRNA technology in November 2020	The mRNA COVID-19 vaccine being developed by eTheRNA is capable of causing the patient's cells to produce a mixture of SARS-CoV-2. In addition to causing the immune system to produce antibodies, the vaccine activates T cells. Expected to enter clinical trials in early 2021

AI + drug discovery laying down "infrastructure" for new drug development

 Over the past year, AI-driven drug development has seen strong interest from investors, with 17 AI + drug discovery-related companies completing more than 20 rounds of funding worth USD 10+ mm in 2020, for an aggregate funding amount of around USD 3 bn

Date	Company	Amount	Round
2/11/2020	Schrodinger	USD 232.3 mm	Public Round
5/8/2020	OWKIN	USD 25 mm	Series A
5/26/2020	Insitro	USD 143 mm	Series B
5/26/2020	Exscientia	USD 60 mm	Series C
6/24/2020	Cyclica	CAD 23 mm	Series B
6/30/2020	OWKIN	USD 18 mm	Series A
7/15/2020	Recursion	USD 121 mm	Series C
7/16/2020	Relay Therapeutics	USD 400 mm	Public Round
8/11/2020	Atomwise	USD 123 mm	Series B
8/13/2020	Schrodinger	USD 313.75 mm	Additional Issuance
9/9/2020	Recursion	USD 239 mm	Series D
9/10/2020	Totient	USD 10 mm	Series Seed
9/28/2020	XtalPi	USD 318.8 mm	Series C
10/30/2020	LabGenius	USD 15 mm	Series A
11/12/2020	Fermion	Hundreds of mm's of RMB	Series A
12/2/2020	Genesis Therapeutics	USD 52 mm	Series A
12/3/2020	METIS Pharmaceuticals	Hundreds of mm's of RMB	Series Angel+ and Pre-A
12/8/2020	Accutar Biotech	Tens of mm's of dollars	Unknown
12/14/2020	NUTSHELL Biotech	RMB 100 mm (approx.)	Series Pre-A
12/15/2020	AbCellera	USD 555.5 mm	Public Round
12/29/2020	Galixir	Tens of mm's of dollars	Strategic investment

Gene therapy continues to attract interest from investors in China

- Over the past few years, several gene therapy products have flooded the market. For example, in 2016, GSK's Strimvelis was approved in Europe. In 2017, Novartis and Gilead were approved in the U.S. for CAR-T therapies Kymriah and Yescarta, respectively. In addition, Spark Therapeutics was approved in 2017 for an AAV vector-based gene therapy drug Luxturna, among others.
- The gene therapy market saw a number of IPOs globally in 2020, with 7 companies listed, raising USD 1.2 bn in funding. In China, in addition to gene therapy products Gendicine and Oncorine, there are more than 20 ongoing clinical trials in the field of gene therapy, targeting a wide range of indications such as hemophilia A/B, β-thalassemia, metastatic non-small cell lung cancer, esophageal cancer, Leber hereditary optic neuropathy (LHON), autoimmune deficiency diseases and various solid tumors.
- In tandem with the growth of gene therapy clinical trials, investment in China's gene therapy industry in 2020 was also very active. A number of China-based gene therapy companies completed financings in 2020, with many completing more than one round.

Company	Date	Round	Amount	Investor
	3/10/2020	Series B+	Undisclosed	Efung Capital, Sinowisdom, GPRO Investment
OBiO	7/7/2020	Series Pre-C	RMB 200 mm	Fenghang Investment, Chobe Capital, Efung Capital, Fu Rong Investment, Zhangijang Investment, Loyal Valley Capital, Spinnotec, Wisdo Mont, GPRO Investment
	9/23/2020	Series C	RMB 300 mm	
	12/7/2020	Series C+	Undisclosed	Tencent Investment
	1/18/2020	Equity financing	Undisclosed	Tianjin Zhiyuan Investment
Pregene	9/21/2020	Equity transfer	RMB 133 mm	Huapont Life
	11/16/2020	Series B	RMB 140 mm	Haier Medical, Huapont Life, Hi-Tech Venture Capital, Cash Capital
	9/14/2020	Equity financing	Undisclosed	Sequoia Capital China, Alwin Capital, Kunlun Fund
EdiGene	10/13/2020	Series B	RMB 450 mm	3H Health, Sequoia Capital China, Alwin Capital, Kunlun Fund, IDG Capital, Lilly Asia Ventures, Huangai Capital, Green Pine Capital
Poforgono Madicina	1/19/2020	Series angel	Undisclosed	Legend Holdings
Relorgene Medicine	11/2/2020	Series A	RMB 100 mm (approx.)	Alwin Capital, Legend Star, Weifu Capital
Waisika Bio	7/14/2020	Equity financing	Undisclosed	
VVEISIKE DIO	11/17/2020	Strategic financing	RMB 300 mm	Shanghai Pharma, Sichuan Development
Anlong Bio	7/8/2020	Series A	RMB 40 mm	Yingke PE

CXOs continuing to build supply chain advantages and scale up development

- Entering 2021, CROs / CDMOs (CXOs) have penetrated across the entire range of the pharmaceutical lifecycle. With the rapid development of China's pharmaceutical industry, the domestic pharmaceutical outsourcing industry has also experienced rapid growth. Leading platforms in the market include WuXi AppTec and Pharmaron, while WuXi Biologics, Tigermed and Asymchem have quickly emerged as players in the industry.
- The market size of the CXO industry is mainly influenced by downstream R&D investment and penetration rate. As competition in the new drug R&D market has become increasingly fierce, investment in R&D has risen and requirements for R&D efficiency and quality have also gone up. This, coupled with the MAH system and other favorable policies, should continue to drive CXO penetration higher, with leading companies in the category continuing to build scale and supply chain advantages.
- In 2020, financing in the CXO market in China saw significant activity. One company to highlight is Tigermed, which was listed in Hong Kong for an IPO of HKD 10.7 bn in fundraising. CROs with obvious technical or scale advantages are being recognized and sought after by investors.

Company	Segments	Round	Date	Amount
		Series C+	7/12/2020	Not disclosed
	Gene therapy and cell therapy	Series C	9/23/2020	RMB 300 mm+
OBIO	CRO+CDMO	Series Pre-C	7/7/2020	RMB 200 mm
		Series B+	3/10/2020	Hundreds of mm's of RMB
Thousand OAKS	Biopharmaceutical CDMO +	Series B	7/23/2020	RMB 450 mm
mousanu OAKS	culture base	Equity financing	6/19/2020	Not disclosed
SAFE	Preclinical + clinical CRO	Series B	10/11/2020	RMB 200 mm (approx.)
Pharmaceutical		Series D	8/10/2020	RMB 600 mm+
Research Institute	Cliffical CRO	Series C+	8/9/2020	Not disclosed
Biortus	Structural biology CRO	Series A	10/9/2020	RMB 100 mm+
Zgbiotech	Large molecule biologics CRO + CDMO + culture media	Series A	3/30/2020	USD 51 mm
Tigermed	Clinical CRO	IPO listing	8/7/2020	HKD 10.707 bn
HitGen	Drug R&D CRO	IPO listing	4/16/.2020	RMB 835 mm

CXOs continuing to build supply chain advantages and scale up development

- CRO / CDMO (CXO) penetration is expected to continue to increase in China driven by:
 - Increasingly competitive environment for novel drug R&D globally and in China, heightening the need for greater R&D efficiency
 - China's newly administered MAH system and other favorable policies for drug developers, making it easier to receive approvals by allowing for outsourced (and avoiding need for in-house) production, but increasing safety, efficacy and quality burdens on drug developer – which, in turn, is increasing expectations on CXOs



CRO Outsourcing Penetration Rate Estimate

Source: JP Morgan. Data as of January 2021

China-based Biopharma Companies to Watch in 2021

Areas of Strong Interest in 2021

- China's biopharma market is expected to see "hotspots" of significant investment activity in the following areas:
 - Gene Therapy
 - RNA Therapy
 - Cellular Immunotherapy
 - Small molecule-targeted drug technologies, such as proteolysis targeting chimera (PROTAC) and others
 - Antibody Drug Conjugates (ADC)
 - AI + Drug Discovery
- The following slides provide a brief profile of 20 emerging leaders in "hotspot" categories that will be exciting to watch in 2021

Company Name	Business Description	Latest Financing (USD mm)	Select Existing Investors
VISEN V	Visen Pharma is committed to becoming an expert in endocrine- related therapeutics, bringing leading global treatments and medicines to China. Visen Pharma has obtained the exclusive license of its endocrine treatment protocol from Ascendis and will develop and promote the treatment protocol in Greater China.	Total Raised: \$190.0 Latest Round: Series B \$150.0	Sequoia China, OrbiMed, Sherpa Healthcare Partners, Cormorant, HBM Healthcare Investments, Pivotal bioVenture Partners China, Logos Capital, and CDG Capital, Ascendis Pharma A/S, Vivo Capital, Sofinnova Investments
EXEGENESIS BIO	Exgenesis is a pharmaceutical company with extensive GMP scale- up capabilities in the field of gene therapy. The Company is expected to become an innovative and influential gene therapy company in the international arena with a vision to provide epoch- making, one-time curative, safe, effective and affordable gene therapy drugs for patients to overcome difficult-to-treat diseases.	Total Raised: \$30.0 Latest Round: Series B \$20.0	Hillhouse Capital, CPE Funds Management, BioTrack Capital, LYFE Capital, Temasek Holdings, Lake Bleu Capital , Legend Capital, Kaitai Capital
Stem [®] RNA	StemiRNA Therapeutics is a leader in mRNA drugs and high-end nano-formulation platforms in China. It has a unique and innovative mRNA synthesis platform and LPP nano-delivery platform, and its COVID-19 vaccine is expected to be launched within 2021.	Total Raised: \$208.4 Latest Round: Series A \$186.6	Tsing Song Capital, Shanghai Zhangjiang Torch Venture Capital, Sequoia Capital China, CITIC Securities, China Merchants Venture Capital, CMBI, GT Fund, Forebright Capital, Orbimed, Advantech
LYNK PHARMACEUTICALS	LYNK Pharmaceuticals is dedicated to the discovery and development of new drugs for the treatment of cancer and immune and inflammatory diseases. LYNK has developed a number of first-in-class drugs and has completed three IND filings in 2020.	Total Raised: \$20.0 Latest Round: Series A \$20.0	Decheng Capital, Kaitai Capital, Legend Capital, Medfine Capital, QS Capital, Sinopharm Capital, Zheshang Innovest Capital Management
(KiraPharma	Kira Pharmaceuticals is a biotechnology company developing complement-targeted therapies to treat immune-mediated diseases. Enabled by its LOGIC drug discovery platform, the company is committed to advancing first-in-class and best-in-class therapies to transform the lives of patients with complement- driven diseases.	Total Raised: \$93.0 Latest Round: Series B \$53.5	RA Capital, Vivo Capital, Foresite Capital, APlus Partners, Quan Capital, Qiming Venture Partners

Company Name	Business Description	Latest Financing (USD mm)	Select Existing Investors
愛 2875 YL-PHARMA	Yingli Pharma is developing BIC and FIC treatments of cancer, metabolic and autoimmune diseases. Yingli Pharma currently has three investigational agents in clinical development, linperlisib (YY-20394) and YL-13027 in advanced cancers, as well as YL-90148, an investigational oral URAT-1 inhibitor for hyperuricemia/gout. Several additional oncology programs are in IND-enabling or candidate development stages.	Undisclosed	Hongsen Investment, Shanghai Zhangjiang Science & Technology Venture Capital, ShangPharma Innovation, South China Venture Capital
bliss	BlissBio is a biopharmaceutical R&D-based clinical-stage enterprise with independent IP rights, focusing on the development and industrialization of anti-tumor bio-innovative drugs. BlissBio works closely with domestic and international biopharmaceutical companies to promote internationally competitive FIC/BIC bio-innovative drugs.	Total Raised: \$61.1 Latest Round: Series B \$61.1	Cormorant Asset Management, Guangzhou Changce Investment, Hillhouse Capital Group, Oriental Fortune Capital, Sherpa Healthcare Partners, VMS Asset Management
	Accro Bioscience is an innovative drug company focusing on FIC or BIC. Accro Bioscience's research is focused on the "cell death- inflammation", and one of its main focuses is the mechanism of action of regulatory cell death in disease and the druggability of the associated targets.	Undisclosed	Undisclosed
AnHeart	Anheart is an international, oncology-focused and clinical-stage biopharmaceutical company with operations in China and the United States. Currently, Anheart is developing three clinical-stage oncology assets, with Taletrectinib (ROS1/NTRK) in Phase II clinical trials in China and globally.	Total Raised: \$34.8 Latest Round: Series B \$20.0	China Merchants Venture Capital, Kunwu Jiuding Capital, Decheng Capital, Vertex Ventures China, Fulin Venture Capital
参 方 医药 GENFLEET	Genfleet is dedicated to the development of original "global new" drugs by focusing on unmet clinical needs, biological mechanisms of diseases and clinical translational medicine, and in-depth research on the latest biological mechanisms of tumor signaling pathways, tumor immune microenvironment and immune regulation.	Total Raised: \$89.6 Latest Round: Series B \$60.0	Northern Light, Panlin Capital, Ally Bridge Group, CDH Investments, China Shijiazhuang Pharmaceuticals Group, Hidragon Capital, Shanjin Capital, Shenzhen Capital Group, Sinopharm Capital, South China Venture Capital, TF Capital

Company Name	Business Description	Latest Financing (USD mm)	Select Existing Investors
O arctic VISION	Arctic Vision is committed to becoming the leading ophthalmology company in China, focusing on the development of new breakthrough ophthalmic drugs with high commercial value, and utilizing gene therapy for rare diseases to address unmet clinical treatment needs in ophthalmic diseases.	Total Raised: \$142.0 Latest Round: Series B \$110.0	5Y Capital, Loyal Valley Capital, Nan Fung Life Sciences, Octagon Capital Advisors, Pivotal BioVenture Partners China, Tencent Holdings
CF PharmTech	CF Pharmtech is a high-tech innovative pharmaceutical company that focuses on the development of inhalation drug delivery technology, integrating R&D, manufacturing and sales, and develops products in a number of therapeutic areas with high clinical demand, such as asthma, chronic obstructive pulmonary disease (COPD) and allergic rhinitis.	Total Raised: \$205.7 Latest Round: Series E \$50.8	BioTrack Capital, CCB International, China Resources Capital Management, CICC Capital, Everest VC, Finnova Capital, GT Capital, SDIC Innovation Investment Management, Shenzhen GTJA Investment Group
THOUSAND @AKS * Biopharmaccoticals	Thousand Oaks Biopharmaceuticals is a world-class integrated CMC organization which enables its partners to provide affordable and accessible biologics for patients worldwide.	Total Raised: \$170.8 Latest Round: Series C \$61.8	Hillhouse Capital Group, CICC Capital, Gold Stone Investment, CDH Investments, Sanyi Fund, Asia Green Fund, Highlight Capital
「 Sperogenix Sperogenix	Sperogenix Therapeutics is a platform company dedicated to developing and commercializing rare disease therapeutics in China with a focus on mid-to-late clinical stage and commercial stage products. Sperogenix is dedicated to establishing an innovative commercial model tailored to the China rare disease field, in order to provide affordable and reliable products and services to Chinese physicians and patients.	Undisclosed	5Y Capital, Lilly Asia Ventures
	METiS Pharmaceuticals Inc is the world's first AI-driven drug formulation company. Through the integration of machine learning, quantum simulation, and high-throughput experimentation, the company enables formulation scientists to rapidly, comprehensively, and intelligently develop novel drug candidates.	Undisclosed	5Y Capital, Frees Fund, Lightspeed China Partners, Sequoia Capital China, Source Code Capital, XtalPi

	Company Name	Business Description	Latest Financing (USD mm)	Select Existing Investors
	Abbisko	Abbisko Therapeutics is a small molecule targeted drug developer, focusing on innovative drugs for the treatment of various disease categories such as oncology, infections, liver disease and central nervous system. The company has distribution rights for several drugs in China and globally, and has formed a collaboration with AstraZeneca.	Total Raised: \$316.0 Latest Round: Series D \$123.0	Warburg Pincus, The Carlyle Group, OrbiMed, CICC Capital, Lilly Asia Ventures, Qiming Venture Partners, Shanghai Jianxin Capital, Greater Bay Area Homeland, SIIC Holdings, Janchor Partners, Sage Partners (Hong Kong), Temasek Holdings
ť	OBiO	OBiO is a company with three major directions: basic research, gene therapy drug development and industrial production of clinical grade AAVs. The company provides comprehensive solutions for gene therapy research CRO services for research universities, medical institutions, and pharmaceutical companies.	Total Raised: \$119.6 Latest Round: Series C1 \$15.2	BioTrack Capital, CITIC Securities, Efung Capital, Furong Capital, Golden Partners Capital, GP Hi- Tech Capital, HY Energy Group, Kunlun Investment, Shengshan Asset Management, Sherpa Healthcare Partners, SinoWisdom, Spinnotec, Tencent Industry Win-Win Fund
	大 THERAPEUTICS	Genolmmune is a leading AI-driven personalized tumor immunotherapy company. Genolmmune relies on BGI's leading data accumulation and uses AI to predict tumor neoantigens and develop individualized tumor immunotherapies based on the team's top-notch deep learning, biomedical and tumor immunology experience.	Total Raised: \$33.1 Latest Round: Series A1 \$15.2	BGI Genomics, Gaolin Capital, GF Xinde Investment Management, Hillhouse Capital Group, Knowcell, Optical Valley Venture Capital
	EDISENE 博雅辑因	EdiGene is a clinical-stage biotechnology company focused on leveraging cutting-edge genome editing technologies to accelerate drug discovery and develop novel therapeutics for genetic diseases and cancer. Edigene has established its proprietary ex vivo genome- editing platforms for hematopoietic stem cells and T cells, in vivo therapeutic platform based on RNA base editing, and high-throughput genome-editing screening to discover novel targeted therapies.	Total Raised: \$163.7 Latest Round: Series B1 \$61.1	Loyal Valley Capital, Kunlun Technology Company, Sequoia Capital China, Alwin Capital, 3H Health Investment, BioTrack Capital, Sherpa Healthcare Partners, Lilly Asia Ventures, IDG Capital and Huagai Capital
	Sınotau ^o	Sinotau is an innovative pharmaceutical player specializing in radiopharmaceuticals. Sinotau has a number of targeted therapeutic and precision diagnostic radiopharmaceuticals in the fields of oncology, neurodegenerative diseases and cardiovascular diseases. Currently, four diagnostic drugs and two therapeutic drugs in its pipeline have entered clinical trials.	Total Raised: \$126.7 Latest Round: Series D \$49.5	CASH Capital, CICC Capital, Everest VC, Longmen Capital, Lotus Lake Ventures, Sinopharm Capital, Winning Ventures
	SINOTAU ^S	neurodegenerative diseases and cardiovascular diseases. Currently, four diagnostic drugs and two therapeutic drugs in its pipeline have entered clinical trials.	Latest Round: Series D \$49.5	Capital, Lotus Lake Ventures, Sinopharm Cap Winning Ventures

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