

# 2024 China Healthcare M&A Outlook

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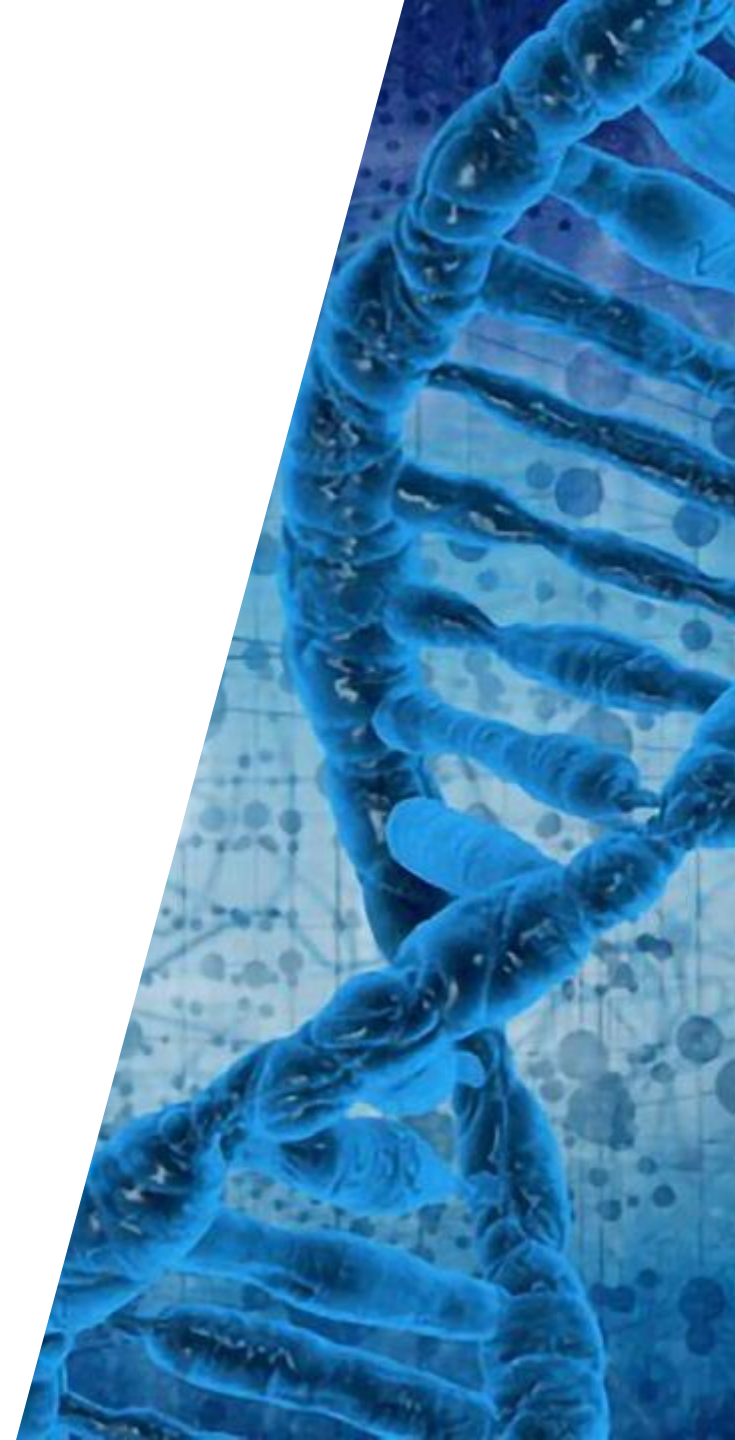
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# I. Executive summary



i.

## China healthcare M&A outlook – key themes



### **Healthcare is one of the most resilient categories in China's M&A market**

- Driven by strong macro tailwinds, including ageing population and increasing demand for consumer health
- Anticipated increase in healthcare spending in years to come



### **Rising domestic investment activities**

- Domestic strategics, government-backed funds and RMB funds are investing heavily in China's healthcare market
- Domestic liquidity leading to industry consolidation and M&A activities



### **Increasing difficulty for companies looking to raise capital in private or public markets, leading to M&A opportunities for large-cap PEs**

- Higher willingness to consider an M&A route with strong partners, creating more opportunities in the market



### **Fast-growing private healthcare sector gains support from the government and draws interest from investors**

- Chinese government promotes the growth of private healthcare sector, including the development of private hospitals and elderly and home care services



### **Narrowing valuation gap between IPO and trade sale facilitates more M&A deal completions**

- More high-quality assets become available for trade sale due to the weak IPO market
- Gap between secondary market and primary market valuations has been narrowing



### **Re-emergence of Chinese cross-border M&As**

- Increasing inbound M&A from multinational companies to invest in high-tech and innovative healthcare targets
- Rising outbound investments from Chinese healthcare strategics and sponsors to enhance capabilities overseas

ii.

## China healthcare market outlook and investment trends



### Market outlook

IPO exits in China face regulatory hurdles, paving way for industry consolidation and reshuffle

Cross-industry acquisitions set to reshape China's healthcare industry landscape

Elderly care sector draws demand amid China's ageing population boom

Increasing demand in consumer healthcare: Out-of-pocket payment services & self-testing products

Multinational conglomerates eye flexible expansion strategies in China's lucrative healthcare market



### Investment trends

Investors favor resilient healthcare sectors amid reforms: CRO/CDMO, life science tools in spotlight

Surging investments in out-of-pocket payment sectors: Home care medical devices, vision care, oral care and medical aesthetics

Chinese strategics target niche markets for expansion, eyeing market dominance

SOE-backed funds seek for healthcare targets with strong technology and high entry barriers

Chinese TMT giants and conglomerates shake up healthcare landscape with mega deals

Multinationals stick to tech-driven healthcare targets globally




Chinese expand beyond borders: SE Asia, Middle East in focus

European "hidden champions" remain top picks for Chinese investors

Licensing deals set to soar, with Chinese pharma companies leading the charge

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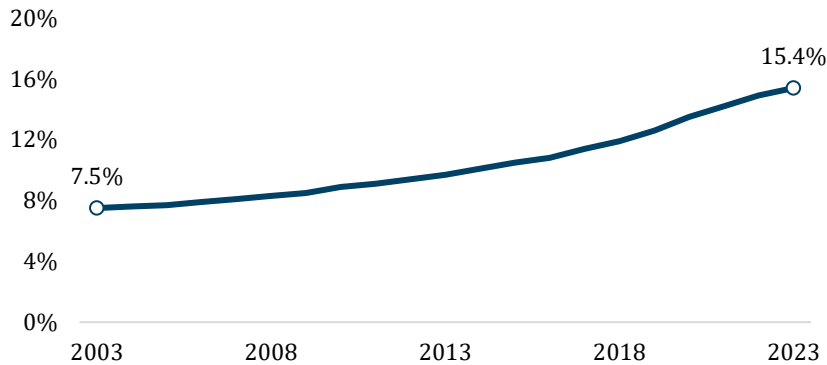
## Market trends affecting China's healthcare investment environment

<div><div>1</div><p>Ageing population in China</p></div>	<div>Trend overview</div> <div>Investment demand</div>	<p>The ageing trend has led to the elderly population (65 and older) in China to reach 15.4%, resulting in augmented demand for medical care and health management</p> <p>Increasing investments in elderly care products &amp; services focusing on orthopedics, neurology, oncology, cardiovascular, nephrology as well as services in nursing care, health monitoring and rehabilitation</p>
<div><div>2</div><p>Increasing demand for consumer health</p></div>	<div>Trend overview</div> <div>Investment demand</div>	<p>The booming consumer healthcare market in China is driven by growing health awareness, rising disposable income and shifting demand towards health management and preventive care</p> <p>Increasing investments in sectors focusing on out-of-pocket payments: ophthalmology, dental, in vitro fertilization (IVF), medical aesthetics, home-use medical products, vitamins, minerals, and supplements (VMS) and weight-management products</p>
<div><div>3</div><p>Healthcare reforms in China</p></div>	<div>Trend overview</div> <div>Investment demand</div>	<p>Policies such as the National Centralized Drug Procurement (NCDP) and volume-based procurement (VBP) are implemented to curb the increasing government and social healthcare expenditures in China</p> <p>Increasing investments in sectors less affected by reform policies (e.g., CRO/CDMO, life science tools) and regulated sectors with high entry barriers</p>

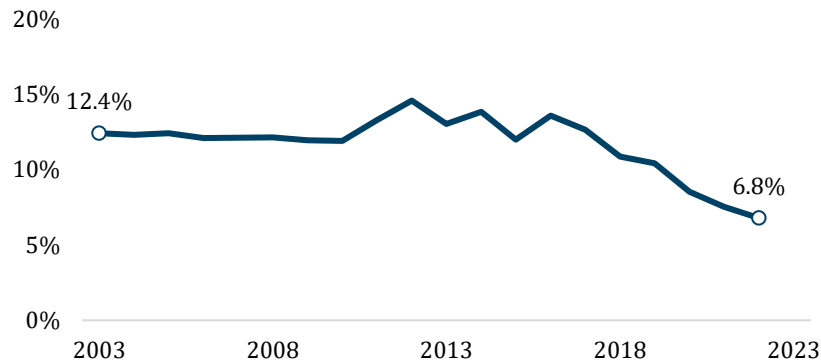
## 1 Ageing population in China

*The ageing population in China has led to a significant uptick in investments for sectors that involve products and services used for elderly care*

### Increasing proportion of elderly population in China<sup>1</sup>



### Declining birth rate in China<sup>2</sup>



### Increasing demand for elderly care products & services

- Increasing life expectancy and declining birth rate are driving the growth of elderly population and fueling the demand for healthcare services in China
- According to the National Health Commission, the proportion of the elderly population will **surpass 20%** by 2031
- The ageing trend has spurred increased fundraising and M&A activities in sectors dedicated to **products and services used for elderly care**



Orthopedics



Neurology



Oncology



Cardiovascular



Nephrology



Health monitoring



Nursing care



Rehabilitation



## Ageing population in China – case studies (1/2)

*Increasing investment activities in sectors that involve products and services dedicated to elderly care*

### Orthopedic hospital chain capital raise



invested by



#### Target description & transaction overview

- In Nov 2023, Bang Er Orthopedic Hospital, one of the largest orthopedics hospital chain in China, announced that it had secured c.US\$110m in a pre-IPO funding round led by Xiamen C&D
- The round drew the participation of Lake Bleu Capital, October Capital, GY Capital, Sunshine Insurance Group, and China Pacific Insurance Company

#### Investment rationale

- Proceeds of the financing will be used to accelerate Bang-Er Orthopedic Hospital's digital transformation of orthopedic surgeries, national market presence expansion, and recruitment of new talents

#### BDA comments

- The transaction demonstrates that businesses benefiting from growing demand driven by the ageing population are more recognised by the market
- Bang Er, as a leader in the orthopedics space, is well recognised by investors for its market-leading position and strong growth profile

### Automatic Peritoneal Dialysis (APD) machine capital raise



invested by



#### Target description & transaction overview

- In Dec 2023, Kunshan VR Medical Technology, a China-based developer and manufacturer of medical devices, announced that it has received a round of strategic funding from Fresenius, a Germany-based leading healthcare company providing products and services for dialysis, hospitals and outpatient medical care
- Valuation: post-money valuation c.US\$70m

#### Investment rationale

- Fresenius has been cooperating with VR Medical since 2021 and recognises VR Medical's expertise in the automatic peritoneal dialysis (APD) area. The investment will focus on sharing of resources and enhancing R&D and sales
- The domestic automated peritoneal dialysis machine from VR Medical is complementary to Fresenius' peritoneal dialysis product offerings in China

#### BDA comments

- The transaction indicates that global strategics, when expanding in the China market, tend to rely on existing cooperations with local players in terms of technology, manufacturing and channels

## Ageing population in China – case studies (2/2)

*Increasing investment activities in sectors that involve products and services dedicated to elderly care*

### Elderly care service center acquisition

乐颐养老  
Shanghai Leyi  
Senior Care Service

acquired by



#### Target description & transaction overview

- In Dec 2022, Taikang Insurance Group agreed to acquire 100% stake and debt of Shanghai Leyi Senior Care Service Co., Ltd., a China-based operator of elderly care center, from Shanghai Shibe Hi-Tech Co., Ltd. (SHSE:600604) for c.US\$87m

#### Investment rationale

- The acquisition of Leyi Senior Care Service is part of Taikang Insurance Group's continuing expansion in the elderly care services area. As of Dec 2022, Taikang Insurance Group has initiated 31 elderly care service projects with 7k+ residents in 27 key cities in mainland China

#### BDA comments

- The transaction remarks the insurance companies' long-term positive view and confidence in elderly care services, while China is stepping onto the track of ageing and ushering in the era of longevity

### Elderly care service sector capital raise



invested by



#### Target description & transaction overview

- In Jun 2023, Jinxin Fuxing Eldercare, a China-based provider of comprehensive elderly care services for urban citizens, raised US\$80m in the Series A round of financing led by Primavera Capital, with participation from OrbiMed

#### Investment rationale

- Proceeds of the financing will be used to develop Jinxin Fuxing Eldercare's core competitive advantages in standardisation and branding. It will focus on the integration of medical care and nursing care and aims to develop into one of the leading elderly care services providers in China

#### BDA comments

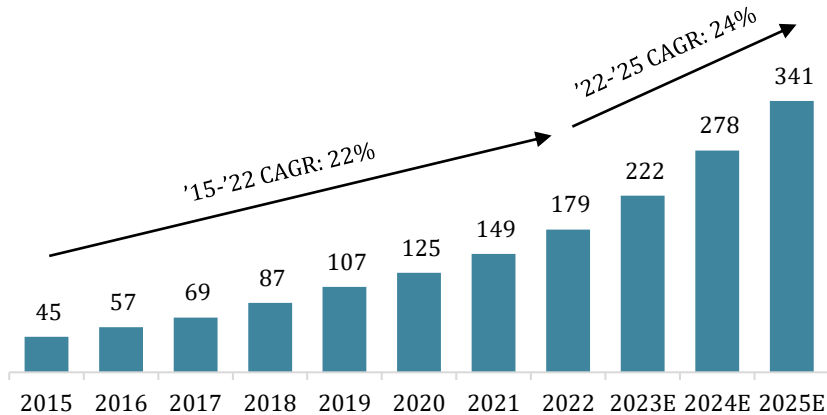
- The transaction is one of the typical fund-raising activities driven by increasing demand for services for nursing care, health monitoring and rehabilitation in the elderly care area

## Increasing demand for consumer health

*With the strong growth momentum of the consumer health market in China, investment activities have shifted to consumer health sectors that focus on out-of-pocket payments*

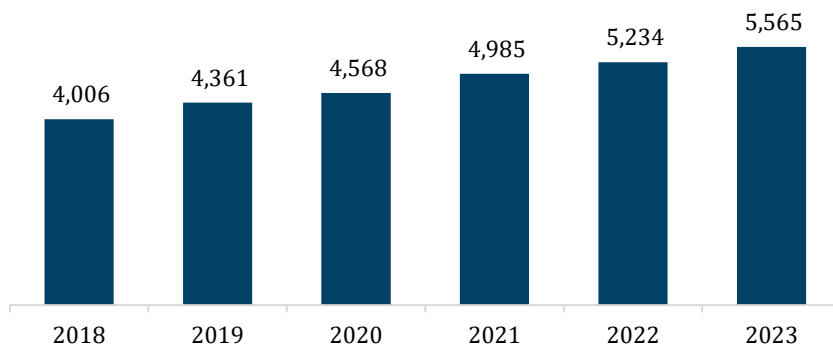
### Fast-growing consumer health market in China

US\$bn



### Rising disposable income per capita in China

US\$



### Consumer health growth drivers and key sectors

- The growing consumer healthcare market in China is driven by:
  - Increasing health awareness, especially post the covid pandemic
  - Rising disposable income per capita, with higher willingness and capability to spend on healthcare
  - Shifting demand from necessity and therapeutic treatments to preventive care and healthcare management
- Sectors with businesses driven by out-of-pocket payments are experiencing increased demand from investors



**ophthalmology**



**Dental care**



**In-vitro fertilisation**



**Medical aesthetics**



**Physical examination**



**Vitamins, minerals, and supplements**



**Home care medical products**

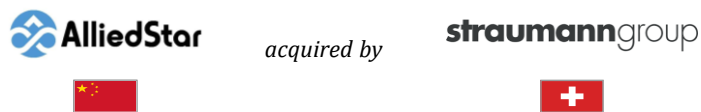


**Dietary products**

## Increasing demand for consumer health – case studies (1/2)

*Increasing investment activities in consumer health sectors that focus on out-of-pocket payments*

### Digital oral care company acquisition



#### Target description & transaction overview

- In Sep 2023, Straumann Group, a Switzerland-based provider of tooth replacement and orthodontic solutions worldwide, announced that it has agreed to acquire AlliedStar, a China-based intraoral scanner manufacturer
- AlliedStar is a pioneering company in the field of digital dentistry, specialising in offering scanning and CAD/CAM solutions to dental clinics

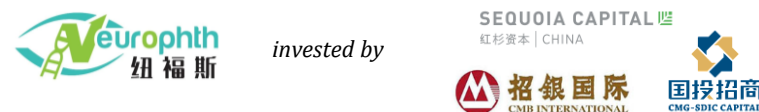
#### Investment rationale

- The transaction is in line with the Straumann Group's strategy to become a digitally-powered oral care company globally and will enable the Group to offer customers in China a competitive intraoral scanner solution and to address additional price-sensitive markets and customer segments
- As part of the Straumann Group, AlliedStar will continue to serve existing channels

#### BDA comments

- The transaction shows a typical example of an increasing global strategies' interest in Chinese consumer healthcare companies

### Ophthalmology biotech capital raise



#### Target description & transaction overview

- In Aug 2023, Neurophth, a China-based leading company engaged in gene therapy solutions for eye diseases, announced that it has received c.US\$100m in the Series C+ round of financing
- The transaction is co-led by numerous SOE institutions including Wuhan Optical Valley Financial, Wuhan Hi-tech Holding Group, Guangzhou Jinkong Fund, CMB International, among others
- Valuation: post-money valuation US\$700m+

#### Investment rationale

- Proceeds of the financing will be used towards advancing clinical trials for Neurophth's core products, enhancing the firm's R&D capabilities and expanding its pipeline
- In early 2023, Neurophth's leading candidate NR082 (rAAV2-ND4) marked a historic milestone as the first gene therapy drug to complete patient enrollment for a Phase III clinical trial in China

#### BDA comments

- The transaction demonstrates the attractiveness of leading biotech companies with niche expertise. SOE's participation would also support the target in both financing and strategic resources locally

## Increasing demand for consumer health – case studies (2/2)

*Increasing investment activities in consumer health sectors that focus on out-of-pocket payments*

### VMS product acquisition



invested by



#### Target description & transaction overview

- In Feb 2023, DCP Capital reached an agreement to invest exclusively in Jamieson Wellness, a leading VMS company and Canada's No.1 consumer health brand
- DCP will contribute c.US\$35m in capital for a 33.3% share of Jamieson's Chinese operations. Also, DCP will subscribe for c.US\$75m of preferred shares and warrants to purchase c.2.5m common shares of the Company
- Valuation: EV US\$105m of the Chinese operations; EV US\$1.6bn, EV/Revenue 4.0x and EV/EBITDA 20.8x for Jamieson Wellness

#### Investment rationale

- Upon completion of the investment, DCP and Jamieson will form a joint venture in China to enhance Jamieson's brand presence and accelerate its growth by leveraging Jamieson's premium product portfolio, high-quality manufacturing, R&D expertise, as well as DCP's local knowledge, track record of growing leading consumer businesses and operational capabilities

#### BDA comments

- The transaction marks the growing attention and recognition in potential of Chinese consumer healthcare industry, from both sponsors and global leading players

### Recombinant protein drugs cap raise



invested by



#### Target description & transaction overview

- In Nov 2023, QL Biopharm, a China-based developer of recombinant protein drugs for chronic metabolic diseases and senile diseases, received US\$28m in the Series B round of financing co-led by Imeik Technology Development, a Chinese manufacturer of biodegradable materials, hyaluronic acids for facial plastic and reconstructive surgery and Asia Green Fund
- Grandway Capital, Chengdu Science & Technology Venture Capital, Jincheng Equity and Lanchi Ventures also participated in this round
- Valuation: post-money valuation c.US\$142m

#### Investment rationale

- Proceeds of the financing will be used towards advancing clinical trials for QL Biopharm's core product pipelines such as First-in-class and Biosimilar
- As of Nov 2023, QL Biopharm has developed more than 10 biopharmaceutical product pipelines, which are fully laid out around the major indications of GLP-1 targets in the field of metabolic diseases

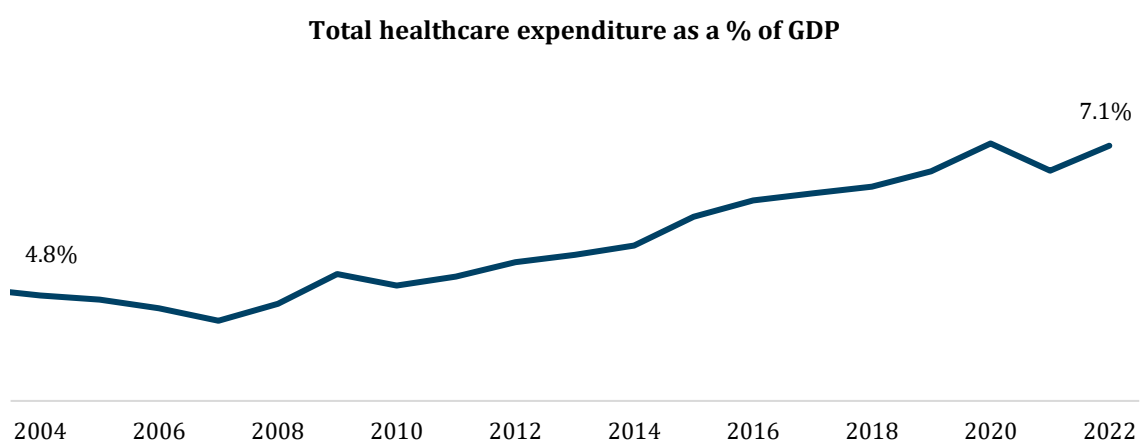
#### BDA comments

- The transaction demonstrates the market leaders' continuing effort in diversifying into GLP-1 products and the prospering weight control areas

### 3 Healthcare reforms in China

Healthcare reform policies such as NCDP and VBP have been imposed to control healthcare expenditure costs; investors are seeking for upstream players that are less affected by reform policies and regulated sectors with high entry barriers





#### Increasing healthcare expenditures leading to the need for healthcare reforms



- The proportion of health expenditure to China’s GDP has increased steadily over the past two decades, leading to pressure to control government expenditures on healthcare
- Healthcare reform policies such as the NCDP and VBP were introduced in 2018 to cut down healthcare expenditures while making healthcare more affordable for the mass population
- The reform policies are targeted toward drug and medical device manufacturers, and sectors less affected by reform policies and regulated sectors with high entry barriers are attracting interest from investors

#### Sectors with increasing investor interest due to healthcare reforms

- We have seen increasing investment activities in the following sectors:

Upstream sectors that are less affected by the reform policies	
	<b>CRO, CDMO</b>
	<b>Life science tools</b>
Regulated sectors with high entry barriers	
	<b>Blood products</b>
	<b>Nuclear drugs</b>



## Healthcare reforms in China – case studies (1/2)

*Sectors less affected by healthcare reform policies are attractive to investors, including upstream CDMOs and life science tools players*

### CDMO pre-IPO capital raise



invested by



#### Target description & transaction overview

- In Nov 2023, WuXi XDC, a subsidiary of Wuxi Biologics specializing in CDMO service for ADC and other biocoupling drugs, launched its initial public offering and raised US\$471m
- The Hong Kong offering has secured seven cornerstone investors, including Invesco, General Atlantic, Qatar Investment Authority, UBS, Hongshan, Novo Holdings and Lake Bleu Capital, for a total amount of US\$301m
- Valuation: EV US\$3.0bn, EV/Revenue 13.2x, EV/EBITDA 83.6x, P/E 95.2x

#### Investment rationale

- Proceeds will be used to enhance capabilities and capacity worldwide, including facilities construction in Singapore and manufacturing capacity expansions in China, technology platforms development and bolt-on acquisitions

#### BDA comments

- The transaction demonstrates the strong demand in the CDMO sector, which is less affected by centralised procurement and PHI coverage, especially for high-quality services in ADC and bioconjugate areas

### Life science tools strategic capital raise

生工® Sangon Biotech

invested by



GL Capital Group  
德福资本



#### Target description & transaction overview

- In Apr 2023, Sangon Biotech, a China-based global manufacturer and supplier of life sciences products including reagents, consumables, small instruments and biological engineering-related products, announced that it had received c.US\$290m in the first round of strategic financing led by new investor, GL Capital Group
- The transaction also included participation from other new investors such as CPE, Greenwoods, Huagai Capital, CDB Technology Venture, etc.
- Valuation: post-money valuation c.US\$1.4bn

#### Investment rationale

- Proceeds of the financing will be used to speed up the growth by enhancing talent recruitment and R&D investment, enriching the product and service offerings in life sciences, expanding global coverage, M&A and digitalization

#### BDA comments

- The transaction marks the largest cap raise in the healthcare field in 2023 in terms of deal size, implying that in the context of healthcare reform in China, segment leaders who are less impacted are proving to be appealing to both SOE and non-SOE sponsors

## Healthcare reforms in China – case studies (2/2)

*Targets in regulated sectors with high entry barriers such as blood products are favored by investors seeking to enter the market via acquisition*

### Life science tools capital raise



#### Target description & transaction overview

- In Jan 2023, Tofflon Science and Tech, a China-based provider of medical freezers and drying systems, announced a private placement of c.US\$356m for c.16% of the company
- The transaction was led by Shanghai Healthcare Capital (SHC) and SDIC fund, where the funding will be used towards production capacity expansion and Tofflon's development along the industry chain to enhance its strategic layout and competitiveness
- Valuation: EV US\$1.8bn, EV/Revenue 2.5x, EV/EBITDA 12.2x, P/E 14.4x

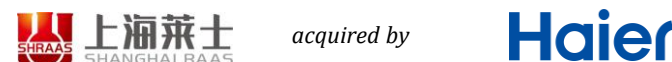
#### Investment rationale

- Proceeds of the financing will be used for the biopharmaceutical equipment industry trial production centre project, Jiangsu biomedical equipment industrialisation base project, Hangzhou life sciences industrialisation base project and to supplement working capital

#### BDA comments

- The transaction indicates that segment leaders who are less impacted by centralised procurement are more appealing to SOE-backed sponsors
- The transaction also demonstrates the opportunity for the localisation process of high-end life science equipment and consumables

### Blood product manufacturer acquisition



#### Target description & transaction overview

- In Dec 2023, Haier has agreed to acquire a 20% stake in Shanghai RAAS, a China-based provider of blood products, from Grifols for US\$1.8bn
- With 26.6% of the voting rights in Shanghai RAAS, Haier will become the company's actual controller
- Valuation: EV US\$8.1bn, EV/Revenue 7.7x, EV/EBITDA 24.3x, P/E 30.3x

#### Investment rationale

- Haier has been diversifying its portfolio into healthcare, leveraging its strong logistics and distribution network to expand market reach
- The acquisition will help build Haier's healthcare brand Yingkang Life that focuses on high-end research equipment and medical devices
- Help Haier gain a scarce blood products business license

#### BDA comments

- The acquisition demonstrates the high level of M&A activity by Chinese public strategics, reflecting their growing position in the Chinese healthcare M&A market, especially for local transactions

Note: Data points including transaction size, stake, valuation, and multiples are obtained from various data sources and should serve as references only. Deal value calculated based on exchange rate of USD/RMB 7.0467

Sources: Capital IQ, Mergermarket, IT Juzi, BDA research

#### iv.

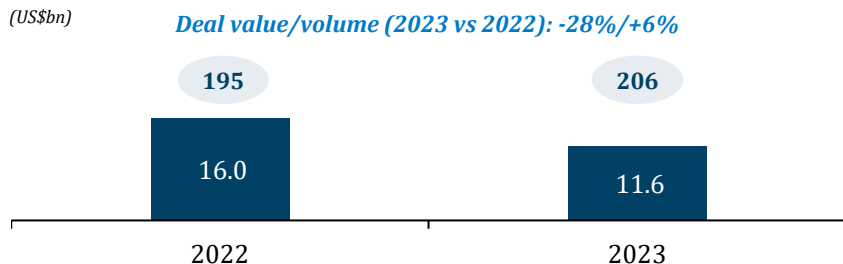
### China healthcare transactions recap (2022-2023)

M&A transactions	<ul style="list-style-type: none"><li>China's healthcare M&amp;A activities have increased by 6% in deal volume and declined by 28% in deal value YoY</li><li>CXO is the only sector experiencing growth in both deal volume and value</li></ul>
Capital raises	<ul style="list-style-type: none"><li>China's healthcare capital raise activities have declined by 36% and 25% in terms of deal value and volume respectively YoY</li><li>Biotech sector makes up the largest percentage of capital raises in both 2022 and 2023 in terms of deal volume and value</li></ul>
Licensing agreements	<ul style="list-style-type: none"><li><b>License-in:</b> deal value increased by 14% while deal volume declined by 11% in 2023 YoY; average deal size increased by 21% and average upfront payment went up from 6% to 9% in 2023 YoY</li><li><b>License-out:</b> deal value and volume have increased by 40% and 75% respectively in 2023 YoY; average deal size increased by 5% and average upfront payment went up from 5% to 9% in 2023 YoY. The growth indicates an upward trajectory in the development capabilities of innovative drugs and technologies from Chinese pharmaceutical companies</li></ul>

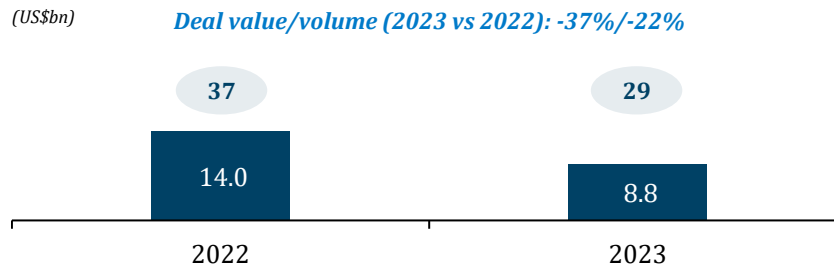
## Overview of 2022 & 2023 China healthcare transactions

*Despite the general decline in M&A and capital raise transactions in China in 2023, we have witnessed increasing demand for licensing agreements, especially license-out transactions*

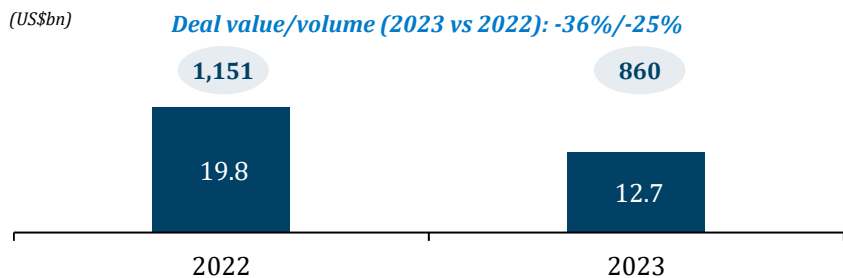
### 2022 & 2023 China healthcare M&A transactions



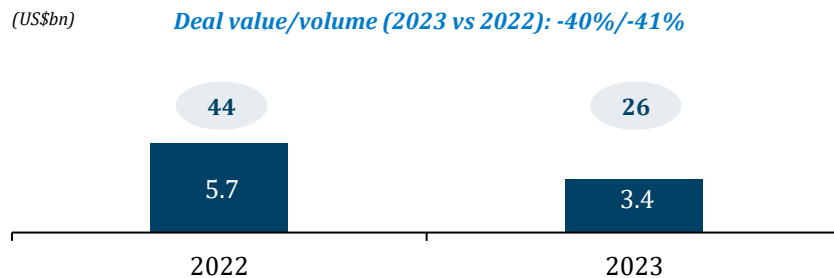
### US\$70m+ China healthcare M&A transactions



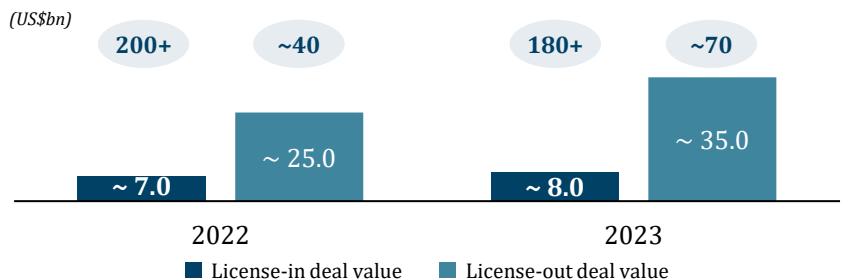
### 2022 & 2023 China healthcare capital raise transactions



### US\$70m+ China healthcare capital raise transactions



### 2022 & 2023 licensing transaction in China<sup>1</sup>



### Top 15 license-in/license-out transactions in China

Transaction type	Average deal size (US\$m)			Average upfront payment % deal value	
	2022	2023	YoY %	2022	2023
License-in	311	376	+21%	~6%	~9%
License-out	1,700	1,800	+5%	~5%	~9%

■ Deal value ■ Deal volume

Note: Total transaction value includes only the deal with disclosed amount, based on exchange rate of USD/RMB 7.0467

Sources: Capital IQ, Mergermarket, IT Juzi, BDA research

## 2022 & 2023 China healthcare transactions by sector

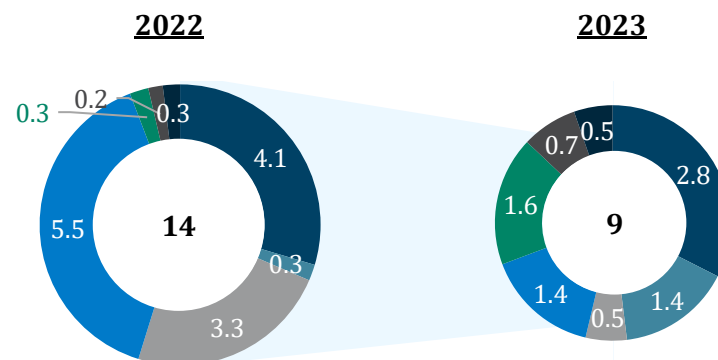
CXO sector has seen an increase in M&A activities in terms of both deal volume and value, while the biotech sector makes up the largest percentage of capital raise transactions in 2022 and 2023 in terms of deal volume and value

### US\$70m+ China healthcare M&A volume by sector

Sub sector	2022	2023	Trend
Pharma	13	6	↓
Biotech	2	2	→
Healthcare services	6	3	↓
Medical Devices	12	8	↓
CXO	2	6	↑
Pharma Distribution	1	2	↑
Others	1	2	↑
<b>Total</b>	<b>37</b>	<b>29</b>	↓

### US\$70m+ China healthcare M&A value by sector

(US\$bn)

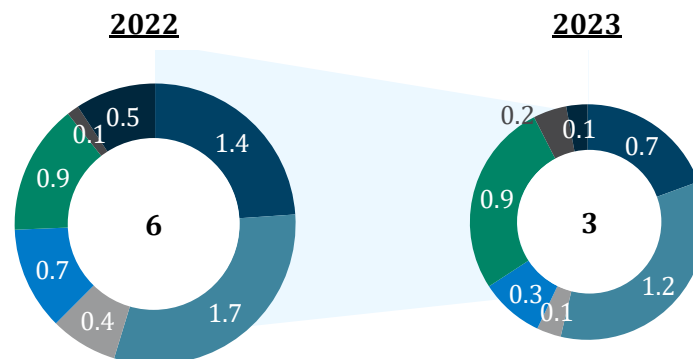


### US\$70m+ China healthcare capital raise volume by sector

Sub sector	2022	2023	Trend
Pharma	5	3	↓
Biotech	16	12	↓
Healthcare services	2	1	↓
Medical Devices	8	3	↓
CXO	7	4	↓
Pharma Distribution	1	2	↑
Others	5	1	↓
<b>Total</b>	<b>44</b>	<b>26</b>	↓

### US\$70m+ China healthcare capital raise value by sector

(US\$bn)



Note: Total transaction value includes only the deal with disclosed amount, based on exchange rate of USD/RMB FX 7.0467

Sources: Capital IQ, Mergermarket, IT Juzi, BDA research

## V.

### Investment themes: strategic investors vs. financial sponsors

#### Strategics

##### **Increasing activities from publicly-listed companies in China**

- Publicly-listed healthcare companies are seeking for targets that can help expand their business portfolio and ramp up individual business units for future spin off and listing

##### **Increasing investments from healthcare diversifiers**

- Conglomerates are diversifying their business into healthcare via acquisition and building a healthcare platform via buy-and-build strategy

##### **Increasing cross-border investments**

- Increasing inbound from MNCs to acquire Chinese companies with strong technology barriers and innovative products; increasing outbound activities by Chinese healthcare groups in Europe to develop their overseas capabilities

#### Sponsors

##### **Increasing investments from government-backed funds**

- Government-backed funds in China are actively investing in domestic healthcare assets, leveraging their strong integration capability, low cost of capital and longer investment horizon to attract target interest

##### **China-headquartered USD funds focusing on investments in SE Asia**

- USD funds are strategically shifting their investment focus from China to SE Asia to balance the geopolitical tension between China and the US



## Investments made by strategics – case studies (1/2)

*Publicly-listed healthcare companies in China are seeking for investment opportunities to grow their business and spinning off their business units for future listing*

### A-share listco acquiring another A-share listco



acquired by



#### Target description & transaction overview

- In Feb 2024, Mindray (SZSE:300760), announced its intention to invest 21% stake in APT Medical (SHSE:688617), a Chinese manufacturer and supplier of electrophysiology (EP) and vascular intervention medical devices
- Mindray has used its own funds of c.US\$927m and a combination of share transfer by agreement and waiver of voting rights, to become the largest and controlling shareholder of APT Medical
- Valuation: EV/Revenue 19.7x, EV/EBITDA 53.2x, P/E 62.9x

#### Investment rationale

- Mindray is looking to expand its capabilities in the cardiovascular space
- Mindray's robust product engineering and system integration capabilities are expected to further enhance APT Medical's product performance
- The extensive global market sales and service system established by Mindray, along with diverse customer resources, opens avenues for APT Medical's innovative products to reach a broader international market

#### BDA comments

- The acquisition represents the high level of M&A activity by Chinese public strategists such as Mindray, who are seeking opportunities to expand its product portfolio and integrate industry resources

### Capital raise for future spin-off and listing



invested by



#### Target description & transaction overview

- In Nov 2023, Viva Biotech Holdings Group (HKSE:1873), a Chinese provider of drug discovery services, announced that it completed a funding round, securing approximately US\$210m and bringing in Temasek, Highlight Capital (HLC), and True Light Capital
- This transaction includes the financing of nearly US\$150m through the transfer of c.24.21% equity in its CRO business entity, Viva Biotech (Shanghai) Limited and a US\$60m convertible bond financing at the group level
- Valuation: EV/Revenue 4.9x

#### Investment rationale

- The proceeds of the financing will be used to redeem convertible bonds in a bid to settle its outstanding liabilities without occupying its internal resources
- The transaction will foster Viva Biotech's rejuvenation and sustainable growth, leading to greater value and returns
- Viva Biotech is seeking for fundraising to ramp up its CRO business for future spin-off and listing on A-share

#### BDA comments

- The transaction remarks Viva's plan to restructure its businesses and list the Shanghai subsidiary on an onshore stock exchange, underlining its early-stage drug discovery business

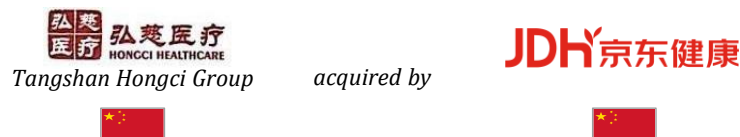
Note: Data points including transaction size, stake, valuation, and multiples are obtained from various data sources and should serve as references only. Deal value calculated based on exchange rate of USD/RMB 7.0467

Sources: Capital IQ, Mergermarket, IT Juzi, BDA research

## Investments made by strategics – case studies (2/2)

*Conglomerates are diversifying their business into healthcare, while MNCs are investing in Chinese companies with strong technology and innovative products*

### Diversifier acquires a hospital platform



#### Target description & transaction overview

- In Jan 2024, JD Health International announced its acquisition of the remaining 51% stake in Tangshan Hongci Group, a comprehensive Grade A secondary hospital integrating medical treatment, teaching, scientific research, preventive health care and first aid

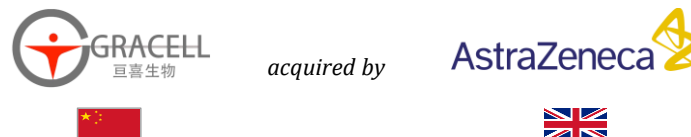
#### Investment rationale

- The acquisition will enable Tangshan Central Hospital, a subsidiary of Tangshan Hongci Group, to further strengthen its integration of online and offline healthcare services
- Leveraging JD's advanced technological experience in the fields of artificial intelligence, big data and mobile internet, the hospital is expected to become a leading large-scale internet hospital and smart hospital in China

#### BDA comments

- The acquisition represents JD's objective to diversify into the healthcare sector, with the aim of further expanding its hospital portfolio

### MNC making an inbound acquisition



#### Target description & transaction overview

- In Dec 2023, AstraZeneca has agreed to acquire a 100% stake in Gracell, a global clinical-stage biopharmaceutical company developing innovative cell therapies for the treatment of cancer and autoimmune diseases, for US\$1.2bn, representing an 86% premium to the company's pre-announcement share price

#### Investment rationale

- The acquisition will enrich AstraZeneca's growing pipeline of cell therapies with GC012F, a novel, clinical-stage FastCAR-enabled BCMA, and CD19 dual-targeting autologous chimeric antigen receptor T-cell (CAR-T) therapy, a potential new treatment for multiple myeloma, as well as other hematologic malignancies and autoimmune diseases including systemic lupus erythematosus (SLE)

#### BDA comments

- Gracell is the first Chinese biotech to be acquired by a multinational pharmaceutical company, part of a broader cross-border boom for pharmaceutical MNC inbound investment
- The acquisition represents a potential new exit path for investors in early-stage, cash-challenged Chinese drug companies

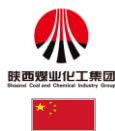
## Investments made by financial sponsors – case studies

*Government-based funds are investing in companies with leading market position and leveraging their integration capabilities to help them grow; China headquartered USD funds are shifting their investment focus to SE Asia*

### Government-backed sponsor acquisition



acquired by



#### Target description & transaction overview

- In May 2023, Shanghai Spang PE, an investment platform under SOE Shaanxi Coal and Chemical Industry Group (SHCCIG), acquired a 21% stake in Pacific Shuanglin Bio-pharmacy, a China-based provider of blood products, for US\$543m
- Valuation: EV/Rev 8.0x, EV/EBITDA 26.6x, P/E 34.0x

#### Investment rationale

- SHCCIG will gain the scarce blood products business license, capturing the strong need of the blood products market
- SHCCIG can support Pailin Bio with its abundant capital and government resources, laying the foundation for the company's future sustainability and resolving the liquidity problems plaguing the listed company

#### BDA comments

- The acquisition demonstrates the significant advantage of government-backed sponsors, including their ability to integrate local resources and financing, empowering the target for further development

### Financial sponsor making an outbound acquisition



acquired by



#### Target description & transaction overview

- In Dec 2023, Templewater, a Hong Kong-based private equity firm, acquired a 100% stake in OncoCare Medical and Novena Heart Centre (NHC) from Luye Medical Group, for US\$337m
- OncoCare is an oncology group operating seven clinics across renowned hospitals and medical centers in Singapore; NHC is a cardiology group operating three clinics at Singapore's prime locations, consisting of five cardiologists and a visiting surgeon

#### Investment rationale

- The transaction marks an important achievement for Templewater as the inaugural investment in the healthcare sector and the second investment in SE Asia, reflecting its strategy of investing in high-potential markets and its commitment to the healthcare industry in SE Asia and the APAC region

#### BDA comments

- The transaction is a landmark for the growing interest of Chinese sponsors to invest in the SE Asia healthcare sector
- The investment focus of Chinese sponsors has expanded from pharmaceuticals to broader areas including medical equipment and specialty hospitals

Note: Data points including transaction size, stake, valuation, and multiples are obtained from various data sources and should serve as references only. Deal value calculated based on exchange rate of USD/RMB 7.0467

Sources: Capital IQ, Mergermarket, IT Juzi, BDA research

A medical stethoscope with a black tube and silver chest piece is resting on a clipboard. The clipboard has a white form with various fields and text, including "NEW PATIENT REGISTRATION", "PLEASE PRINT", "Work Phone", "Insurance Name & Address", and "Insurance Number". A black pen is also on the clipboard. In the background, there is a blue pen holder with several pens and a blue bottle. The entire scene is set on a light blue surface.

## B. China healthcare transaction overview (2022-2023)

## i.

### Healthcare M&A by destination and buyer type in China (transactions >US\$70m)

*Although large-scale M&A activities in China have declined by more than 20% in 2023 compared to 2022, cross-border transactions have remained active*

Transaction Type	Deal volume	Publicly-listed strategic	Private strategic	SOE-backed fund	Other sponsors	Deal volume 2023 vs. 2022
China to China	14	9	2	2	1	-13
Cross-border	MNC inbound	3	3	-	-	+2
	EU outbound	4	3	1	-	+3
	SEA outbound	4	1	-	3	+4
	Others	4	1	-	3	-4

- Publicly-listed companies in China remain active in cross-border M&A transactions, shifting their outbound investments from the US to Europe due to geopolitical tensions between China and the US
- Conversely, privately-owned strategics in China have been more cautious in their investments, especially in large size transactions
- MNCs have increased their investments in Chinese assets with strong technology and product innovation as well as businesses that fit into their investment strategy
- Government-backed funds in China are actively investing in domestic healthcare assets, leveraging their strong integration capability, low cost of capital and longer investment horizon to attract target interest

## ii. Healthcare capital raise by investor type in China (transactions >US\$70m)

*Despite the strong decline in the number of large-scale capital raises in 2023, government-backed funds remain active in capital raises, making up more than 50% of total deal volume in 2022 and 2023*

### Sponsors make up the largest proportion of capital raises...

Investor Type	2022		2023	
	Volume	% of total	Volume	% of total
Sponsor only	37	84%	25	96%
Strategics only	3	7%	-	-
Sponsor + strategics	3	9%	1	4%
Total	44	100%	26	100%

### ...especially among the Government-backed funds

Investor Type	2022		2023	
	Volume	% of total	Volume	% of total
Government-backed funds	22	50%	17	65%
Non-government-backed funds	22	50%	9	35%

- Most sizable capital raises are done by sponsor-led consortiums, including RMB funds, USD funds and government-backed funds in China
- Limited capital raises done by strategics as they prefer M&A
- The single sizable capital raise involving a strategic investor is the capital raise done by Sinotau Pharma, a developer of generic and innovative drugs and nuclear medicine. The strategic investor, Leaddo Tech (provider of rail transportation equipment), co-invested with other government-backed funds

- Similar to M&A transactions, government-backed funds remain active in capital raises, leveraging their local resources and integration capability, lower cost of capital and established investment teams on the ground to help the target company grow
- Capital raises done by non-government backed funds have declined 60% YoY due to geopolitical issues and greater emphasis on portfolio management in preparation for future exits



## Healthcare capital raise by series in China (transactions >US\$70m)

*Large-scale capital raises in 2023 are mainly series A and series C investments, with biotech remaining the most favored sector among investors*

### 2022 & 2023 China healthcare capital raise by series

(US\$m)

Stage	Transaction volume		% of total volume		Transaction value		% of total value	
	2022	2023	2022	2023	2022	2023	2022	2023
<b>Series A</b>	<b>8</b>	<b>7</b>	<b>18%</b>	<b>27%</b>	<b>891</b>	<b>788</b>	<b>16%</b>	<b>23%</b>
Series B	14	5	32%	19%	1,525	752	27%	22%
<b>Series C</b>	<b>6</b>	<b>9</b>	<b>14%</b>	<b>35%</b>	<b>546</b>	<b>1,004</b>	<b>10%</b>	<b>30%</b>
Series D, E, Pre-IPO	12	3	27%	12%	1,870	355	33%	10%
Strategic Investment	4	2	9%	8%	835	497	15%	15%
<b>Total</b>	<b>44</b>	<b>26</b>	<b>100%</b>	<b>100%</b>	<b>5,666</b>	<b>3,395</b>	<b>100%</b>	<b>100%</b>

- Series C investments increased significantly in 2023, making up the highest proportion of capital raises in 2023, in terms of both deal volume and value
- Series A investments remained relatively stable in 2023, in terms of both deal volume and value
- Investment in biotech companies contributed to more than 50% of series A investments and close to one-half of series C investments

## Biotech and MedTech capital raise – case studies

*We are seeing increasing number of large-scale capital raises done by biotech and medical device companies in 2023, with government-backed funds being the main investors*

### Biotech capital raise (series C)



invested by



#### Target description & transaction overview

- In Jan 2023, HighTide Therapeutics (SEHK:2511), a globally integrated clinical-stage biopharmaceutical company developing novel multifunctional therapies for metabolic and digestive diseases, announced the closing of a US\$107m Series C/C+ financing led by the TCM Healthcare Fund of Guangdong, managed by China Development Bank Capital
- Other investors included Yuexiu Fund and Yuthai Fund
- Valuation: post-money valuation US\$536m

#### Investment rationale

- Proceeds will be used to advance multiple global development programs, including mid to late-stage clinical trials, the commercialisation and business development of the company's robust pipeline. HighTide's lead candidate HTD1801, is a novel multifunctional molecule developed for the treatment of patients suffering from complex metabolic and digestive diseases

#### BDA comments

- The transaction demonstrates the increasing interest and participation of government-backed funds in large-scale capital raises
- The healthcare industry being a key investment focus of state-owned capital, has attracted unprecedented attention from SOE investors

### MedTech capital raise (series C)



invested by



#### Target description & transaction overview

- In Sep 2023, MitrAssist, a globally leading innovative cardiovascular medical device company, announced that it has received US\$100m in a Series C round of funding co-led by existing investors Centurium Capital and 6 Dimensions Capital. Other investors include new investors Jiading State-owned Assets Management, Hefei Haiheng Capital, Hefei Industrial Investment Capital, etc.
- Valuation: post-money valuation c.US\$465m

#### Investment rationale

- Proceeds will be used to 1) leverage MitrAssist's globally leading expertise in cardiovascular products, 2) facilitate the registration of clinical trials and increase market access for its mitral valve replacement products and polymer interventional aortic valve replacement products, 3) complete clinical studies of other product candidates in the pipeline

#### BDA comments

- Apart from participating in the capital raise, the Hefei government also engaged in an agreement with MitrAssist to build a R&D base, production and commercialisation of high-valued cardiovascular products and consumables in Sep 2023

Note: Data points including transaction size, stake, valuation, and multiples are obtained from various data sources and should serve as references only. Deal value calculated based on exchange rate of USD/RMB 7.0467

Sources: Capital IQ, Mergermarket, IT Juzi, BDA research

### iii.

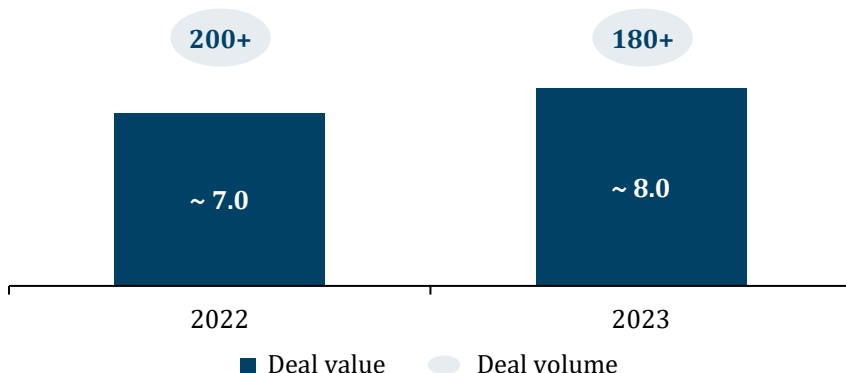
## 2022-2023 China license-in transactions

*License-in activities remain strong in China, with an increase of 14% in deal value, despite an 11% decline in deal volume*

### 2022-2023 license-in transaction in China<sup>1</sup>

US\$bn

*Deal value/volume (2022 vs 2023): -11%/+14%*



- The number of license-in transaction declined in 2023 as a result of increasing in-house development capabilities of Chinese biotechs
- c.50% and c.25% of transactions in 2023 are products in pre-clinical stage and products approved for commercialisation, respectively
- More than 50% and c.25% of transactions in 2023 are related to innovative drug products and technologies, respectively
- The increase in transactions value in 2023 is driven by the two US\$1bn+ deals done by Beigene and the eight deals done by Huadong Pharma

### 2022-2023 Top 15 license-in transaction in China<sup>1</sup>

	2022	2023	yoy%
Average deal size	US\$311m	US\$376m	+21%
Average upfront payment as a % of deal value	~6%	~9%	+3%

- In 2023, two license-in deals aggregately exceeded US\$1bn in value, while no deal exceeded US\$1bn in value in 2022
- The key targeted indications for license-in transactions in 2023 include tumors, cancer, multiple myeloma and a few rare diseases
- The rights granted for the top 15 deals only included the exclusive development and distribution within Greater China, except for the two large deals done by Beigene, which included global exclusive rights

## License-in transactions – case studies

*Leading Chinese biotech companies are licensing in complementary products from overseas to expand their revenue streams and enhance their therapeutic coverage*

### Biotech license-in



licensed in



's CDK2 inhibitor

#### Target description & transaction overview

- In Nov 2023, BeiGene, a global biotechnology company and Ensem Therapeutics, Inc. (ENSEM), a biotechnology company focusing on high-value and difficult-to-drug oncology targets, announced an agreement for BeiGene to acquire an exclusive global license to an Investigational New Drug (IND) application-ready oral cyclin-dependent kinase 2 (CDK2) inhibitor
- ENSEM will receive an upfront payment and additional payments upon certain milestones, totaling up to US\$1.33bn, in addition to tiered royalties

#### Investment rationale

- ENSEM's CDK2 inhibitor will complement BeiGene's internally discovered Phase 1 CDK4 inhibitor, which has the potential to improve upon current CDK4/6 inhibitors in some breast cancer patients and strengthens BeiGene's early development pipeline in breast cancer and other solid tumors
- While CDK2 is a preclinically validated oncology target, there is currently no CDK2-specific drug on the market

#### BDA comments

- With an eye on innovative cancer treatments, leading Chinese strategics remained relatively active in licensing transactions in 2023 and are more open to higher transaction value for truly and strategically impactful assets

### Biotech license-in



licensed in



's B7H4 ADC

#### Target description & transaction overview

- In Jul 2023, BeiGene, a global biotech company, and DualityBio, a next-generation ADC company, announced an agreement for BeiGene to acquire an exclusive option for a global clinical and commercial license to an investigational, preclinical ADC therapy for patients with select solid tumors
- DualityBio will receive an upfront payment, a payment contingent upon BeiGene exercising its option and additional payments upon certain milestones, totaling up to US\$1.3bn, in addition to tiered royalties

#### Investment rationale

- DualityBio's B7H4 ADC is one of the highly impactful therapeutic modalities that complement BeiGene's dynamic and growing pipeline in solid tumors
- Through the strategic partnership with DualityBio and BeiGene's end-to-end ADC manufacturing capabilities, the acquirer will be well-positioned to advance this asset globally alongside its internally discovered ADC assets

#### BDA comments

- Tumor treatment is one of the key focuses in 2023
- ADC, as one of the world's leading and advanced technology in drug development, raised interest from both Chinese strategics and MNCs

Note: Data points including transaction size, stake, valuation, and multiples are obtained from various data sources and should serve as references only. Deal value calculated based on exchange rate of USD/RMB 7.0467

Sources: Capital IQ, Mergermarket, IT Juzi, BDA research

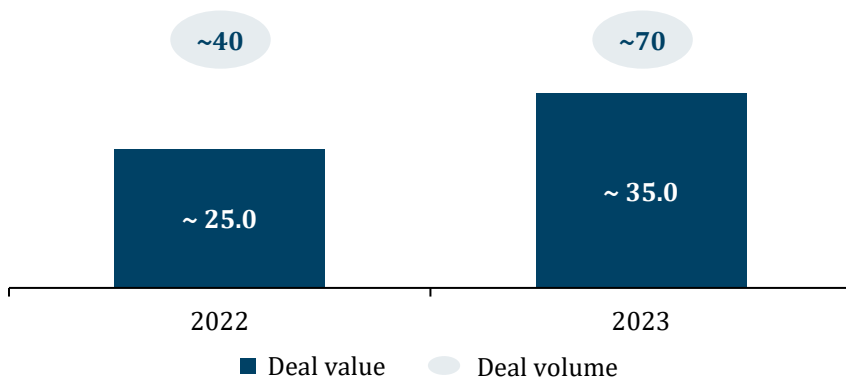
## 2022-2023 China license-out transactions

*License-out transactions have grown rapidly in 2023, with an increase in both deal value and volume by 40% and 75% respectively compared to 2022*

### 2022-2023 license-out transaction in China<sup>1</sup>

US\$bn

*Deal value/volume (2022 vs 2023): +40%/+75%*



### 2022-2023 Top 15 license-out transaction in China

	2022	2023	yoy%
Average deal size	US\$1.7bn	US\$1.8bn	+5%
Average upfront payment as a % of deal value	~5%	~9%	+4%

- Increase in license-out activities in 2023 have resulted from:
  - Growing development capabilities of innovative drugs and technologies of Chinese biotech companies are becoming increasingly recognised by MNCs
  - Increasing investment activities from MNCs
  - Declining valuation of Chinese biotech companies and the increasing challenges of the capital market
- By indication, tumor treatment is the key focus for license-out transactions in 2023

- In 2023, the top 15 license-out deals have all exceeded US\$1bn in value, compared to 7 of the top 15 license-out transactions in 2022 that have exceeded US\$1bn in value
- In 2023, ADCs dominated the top 15 license-out deals, with a total of 8 deals and a total deal value of over US\$18bn
- Chinese biotech companies have increased their partnerships with MNCs, where BioNTech and AstraZeneca have been the most active licensees, each contributing to two of the top 15 transactions

## License-out transactions – case studies

*Chinese biotech companies' R&D capabilities and product innovation are becoming increasingly recognised by MNCs, with more global pharma players participating in China's license-out deals*

### ADC license-out



's EGFRxHER3 ADC

licensed out to



#### Target description & transaction overview

- In Dec 2023, Bristol Myers Squibb (BMS) signed an agreement for the joint development and commercialisation of SystImmune's EGFRxHER3 bispecific antibody-drug conjugate (ADC), BL-B01D1 for US\$8.4bn
- BMS made an upfront payment of US\$800m, with near-term payments of US\$500m to SystImmune; SystImmune will also receive up to US\$7.1bn upon achieving certain milestones
- BMS and SystImmune will split development expenditures and P&L in the US

#### Investment rationale

- BMS is gaining control of a candidate that is designed to both block EGFR and HER3 signals to cancer cells, tackling proliferation and survival, and using the targets to deliver a cytotoxic payload without causing intolerable toxicity in healthy tissues. SystImmune expects the candidate to be "superior to anti-EGFR and anti-HER3 ADCs"
- The transaction will add another ADC to BMS's diverse pipeline and helps strengthen the approach to areas of solid tumor oncology

#### BDA comments

- The transaction demonstrates the increasing development capabilities of innovative drugs and technologies from Chinese pharma companies, which are becoming more recognised by MNCs

### GLP-1 license-out



's ECC5004 GLP-1RA

licensed out to



#### Target description & transaction overview

- In Nov 2023, AstraZeneca and Eccogene have entered into an exclusive license agreement for ECC5004, an investigational oral once-daily glucagon-like peptide 1 receptor agonist (GLP-1RA) for the treatment of obesity, type-2 diabetes, and other cardiometabolic conditions
- Eccogene will receive an upfront payment of US\$185m and up to an additional US\$1.825bn in future clinical, regulatory, and commercial milestones and tiered royalties on product net sales

#### Investment rationale

- ECC5004 is a once-daily, low-dose, small molecule GLP-1RA which is currently in a US Phase I clinical trial in healthy participants and patients with type-2 diabetes. ECC5004 has been demonstrated in preclinical studies to possess desirable efficacy and safety profiles
- The transaction will strengthen AstraZeneca's existing pipeline addressing both incretin and non-incretin pathways, including GLP-1/glucagon dual agonist [AZD9550] and long-acting amylin analogue [AZD6234]

#### BDA comments

- The transaction demonstrates (i) the declining valuation of biotech companies in China and (ii) the increasing challenges in the capital market have led to increasing investment activities from MNCs, which are actively looking for high-value products

Note: Data points including transaction size, stake, valuation, and multiples are obtained from various data sources and should serve as references only. Deal value calculated based on exchange rate of USD/RMB 7.0467

Sources: Capital IQ, Mergermarket, IT Juzi, BDA research





## C. Appendix: transaction list

## Transaction screening criteria

### M&A transactions screening criteria

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- Either the target is based in China, or the leading buyer(s) is (are) from China
- Transaction date range: 2022.01.01 – 2024.02.29
- Transaction value > US\$70m
- Manual exclusions: M&A transactions that have failed or been terminated; transactions repeatedly disclosed by the acquiring and selling parties; related party transaction

### Capital raises screening criteria

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- Target is based in China
- Transaction date range: 2022.01.01 – 2024.02.29
- Transaction value > US\$70m
- Manual exclusions: Capital raise transactions that have failed or been terminated; transactions repeatedly disclosed by both parties

### Licensing agreements screening criteria

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- License-in refer to inbound transactions in China
- License-out refers to outbound transactions from China
- Transaction date range: 2022.01.01 – 2024.02.29

#### Note:

- The transactions listed herein are abstracted from various databases and public sources and may not have captured all the transactions that have occurred in 2022 and 2023. Transactions which deal sizes are not publicly disclosed are excluded
- **Definition of sectors:** 'Pharma' includes pharma companies that are revenue generating; 'Biotech' includes pre-revenue pharma companies; 'Healthcare services' includes health services and hospital services; 'Medical Devices' includes medical consumables and devices; 'CXO' includes CRO, CDMO, SMO, and other outsourced services; 'Digital Health' includes digital health and AI-based health solutions; 'Pharmaceutical Distribution' includes pharma supply chain and (e-) pharmacies; 'Others' includes consumer health products, medical insurance and other healthcare subsectors
- An exchange of USD/RMB 7.0467 has been applied to transactions that have occurred in RMB
- Included the transactions for the first 2 months of 2024 to show the trend

## 2024 Jan-Feb China healthcare transactions (transactions >US\$70m)

### M&A transactions

No.	Target	Buyer	Sub-sector	% acquired	Amount (US\$m)
1	China Traditional Chinese Medicine	China National Pharmaceutical Group	Pharma	100%	2,956
2	APT Medical	Mindray Technology Holdings	Medical consumables and devices	25%	929
3	CP Pharmaceutical (Qingdao)	Qingdao Guoxin Development	Pharma	67%	268
4	Upsher-Smith Laboratories	Bora Pharmaceuticals	CXO	100%	210
5	BenQ BM Holding	Qisda Corp	Healthcare services	25%	195

### Capital raise transactions

No.	Target	Buyer	Sub-sector	Series	Amount (US\$m)
1	Jixing Bio	RTW Investments, Bayer	Biotech companies	D	162
2	Simcere Zaiming	SDIC Fund, Apricot Capital, Zhonghe Capital.	Biotech companies	Strategic investment	138
3	Lanfan Baisheng	Health Industry (Beijing) Fund , Linkong Group, Linqu High Tech Industrial Fund	Medical consumables and devices	Strategic investment	128
4	Profound Bio	OrbiMed, LAV, Jifeng Ventures, RA Capital Management, Logos Capital, Surveyor Capital and others	Biotech companies	B	112
5	Evopoint	Tencent, S Capital, Loyal Valley Capital, Pudong Venture Capital, Guoxin Investment and others	Biotech companies	E	100
6	OnCusp Therapeutics	OrbiMed, F-Prime Capital Partners, Novo Holdings, Sofinnova Investments, Catalio Capital Management, Marshall Wace and others	Biotech companies	A	100
7	I-mab Biopharma (Hangzhou)	Tailong Investment, Hoda Investment, I-Mab, Bruggemooon Limited, Kaixin Hanrun Capital, Qiantang City Development	Biotech companies	C	71

Note: Data points including stake and amount are obtained from various data sources and should be used as references only; calculated based on USD/RMB FX of 7.0467  
Sources: Capital IQ, Mergermarket, IT Juzi, BDA research

## 2024 Jan-Feb license-in & license-out transactions

### License-in transactions

No.	Licensor & Target	Licensee	Licensing rights	Indication	Transaction value (US\$m)	Upfront payment (US\$m)	Milestone fee (US\$m)
1	Praxis – Ulixacaltamide	Tenacia Biotechnology	Commercialisation in Greater China	Essential tremor	279	15	264
2	Windtree – istaroxime, rostafuroxin	Lee's Pharmaceutical	Global	Respiratory distress syndrome	138	NA	NA
3	VBI – BRII-179	Brii Biosciences	Global	HBV	NA	25	NA

### License-out transactions

No.	Licensor & Target	Licensee	Licensing rights	Indication	Transaction value (US\$m)	Upfront payment (US\$m)	Milestone fee (US\$m)
1	Argo Biopharma – RNAi therapeutics	Novartis	Global	Cardiovascular	4,165	185	NA
2	Ribo Life Science – Innovative therapies with mini-nucleic acids	Boehringer Ingelheim	Global	NASH	2,000	NA	NA
3	MediLink Therapeutics – YL211 ADC	Roche	Global	Tumor	1,050	50	NA
4	Allorion Therapeutics – ARTS-021	Avenzo Therapeutics	Commercialisation outside of Greater China	Tumor	1,000	40	NA
5	BridGene – IMTAC	Galapagos	Global	Tumor	727	27	700
6	Alphamab Oncology & 3D Medicines – KN035	Glenmark	India, APAC, EMEA, Russia, South America	Tumor	701	NA	NA
7	Allorion Therapeutics – EGFR L858R inhibitor	AstraZeneca	Global	Tumor	540	40	500

## China healthcare M&A transactions in 2023 (transactions >US\$70m) – 1/2

### Pharma

No.	Target	Buyer	% acquired	Amount (US\$m)
1	Shanghai RAAS	Haier Group	20%	1,800
2	Pacific Shuanglin Bio-pharmacy	Shanghai Spang PE	21%	545
3	Foci Pharmaceutical	Gansu Provincial State-owned Asset Investment	38%	265
4	Sandoz China	Aspen Pharmacare	100%	102
5	Langhua Pharma	Viva Biotech	20%	91
6	Hanfang Pharma	Guizhou Sanli Health	50%	71

### Biotech companies

No.	Target	Buyer	% acquired	Amount (US\$m)
1	Gracell Biotechnologies	AstraZeneca	100%	1,200
2	F-star Therapeutics	Sino Biopharm	100%	161

### Medical consumables and devices

No.	Target	Buyer	% acquired	Amount (US\$m)
1	Acotec	Boston Scientific	65%	523
2	Insighta (Blood test kit JV between Prenetics, Dr. Lo)	Prenetics; Dr. Dennis Lo Yuk-ming	100%	200
3	Genetron Health	Wealth Strategy Holding, CICC, Wuxi Guolian Development, CCB Investment Funds, Wuxi Huizhisheng Enterprise	100%	170
4	DiaSys Diagnostic Systems	Mindray	75%	165
5	Stanleys Biotechnology	LePure Biotech	75%	100
6	Panther Healthcare	Xiamen ITG	51%	165
7	Chuanshi Bio	Chongqing Zybion	100%	170
8	HBM Protections	Zhonghong Medical	70%	165

Note: Data points including stake and amount are obtained from various data sources and should be used as references only; calculated based on USD/RMB FX of 7.0467  
Sources: Capital IQ, Mergermarket, IT Juzi, BDA research

## China healthcare M&A transactions in 2023 (transactions >US\$70m) – 2/2

### Healthcare services

No.	Target	Buyer	% acquired	Amount (US\$m)
1	Changan Hospital	Hygeia	100%	236
2	Luye Medical SG (oncology and cardiology hospitals)	Templewater	51%	337
3	5 of Mingzhou's rehabilitation hospitals	Aux Group	100%	84

### CXO

No.	Target	Buyer	% acquired	Amount (US\$m)
1	Quasar Engineering	Boyu Capital	100%	600
2	George Clinical	Hillhouse	100%	340
3	Cenexi SAS	Fosun Pharma	100%	220
4	Best Formulations	Sirio Pharma	71%	180
5	Cromsource	ClinChoice	100%	100
6	Fong's Engineering	LYFE Capital	100%	100

### Pharmaceutical distribution

No.	Target	Buyer	% acquired	Amount (US\$m)
1	Ruirentang Pharmacy	KKR	80%	570
2	Tasly Pharmacy	Shu Yu Civilian Pharmacy	100%	101

### Others

No.	Target	Buyer	% acquired	Amount (US\$m)
1	MediCard Philippines	AIA	100%	350
2	Jamieson Wellness and the JV in China	DCP	33%	110

## China healthcare M&A transactions in 2022 (transactions >US\$70m) – 1/3

### Pharma

No.	Target	Buyer	% acquired	Amount (US\$m)
1	Shanghai Pharma	Yunnan Baiyao	18%	1,548
2	Yisheng Bio	Summit Acquisition (CBC SPAC)	100%	850
3	KPC Pharma	CR Sanjiu	28%	412
4	Tangren Pharmacy	Jianzhijia	100%	294
5	Lihua Pharmaceutical (biopharma business)	Anglikang Pharmaceutical, Shengchuang Pharmaceutical, and other investors	100%	185
6	Huangshan Capsule	Shandong Lutai	30%	153
7	Guangzhou Pharma	Baiyunshan Pharma	18%	142
8	Weimei Bio-Tech	Joinn Lab	100%	138
9	Taloph Pharmaceutical	Zhengzhou Tairong	14%	114
10	Xinwei Pharma	Rongkun	100%	79
11	Kerey Pharmaceutical	Anglikang	61%	79
12	Acv Biotech	Jinan Hi-tech Investment	60%	71
13	Shenzhou Biotech	China Resources Double-Crane Pharmaceutical	50%	71

### Biotech companies

No.	Target	Buyer	% acquired	Amount (US\$m)
1	Bogen	Duoning Biotechnology	100%	142
2	Yinmore BIO-TECH	Joinn Lab	100%	118

## China healthcare M&A transactions in 2022 (transactions >US\$70m) – 2/3

### Medical consumables and devices

No.	Target	Buyer	% acquired	Amount (US\$m)
1	Hugel	CBC; IMM Investment	43.2%	1,419
2	Prenetics	Artisan Acquisition Corp. (SPAC)	100%	1,200
3	Ginko	BPEA	53.2%	741
4	Phenox	Wallaby Medical	100%	540
5	Yaneng Biotechnology	CBC	29%	355
6	Cardiovalve Ltd	Venus Medtech	100%	300
7	Jiecheng Medical	Genesis MedTech	60%	284
8	Mitraltech Holdings Ltd.	Venus Medtech, Athena Medtech	100%	250
9	Weiyu Pharmaceutical	Rongfeng	100%	122
10	Hunan pingan	Winner Medical	69%	106
11	Longterm Medical	Winner Medical	55%	104
12	Ruijian Biotechnology	PW Medtech	58%	82

### Healthcare services

No.	Target	Buyer	% acquired	Amount (US\$m)
1	Amcare Healthcare	Bytedance	100%	1,419
2	New Frontier Health	Warburg Pincus, GSPIA, Vivo Capital, Hysan, Fosun International, Proprium	60.2%	950
3	Suzhou Hongtian	TaiKang Insurance	96%	542
4	Jiuzhou Hospital, Hewanjia Maternity Hospital	Jinxin Fertility	96.5%; 96.5%	135
5	5 Mingzhou rehabilitation hospitals – Ningbo, Changzhou, Nanjing, Changsha, Wuhan	Aux Group	100%	119
6	Leyi Senior Care Services	Taikang Insurance	100%	85



## China healthcare M&A transactions in 2022 (transactions >US\$70m) – 3/3

### CXO

No.	Target	Buyer	% acquired	Amount (US\$m)
1	Quantum Hi-tech Biological Engineering	Tate & Lyle	100%	237
2	Experimur	Frontage	100%	76

### Pharmaceutical distribution

No.	Target	Buyer	% acquired	Amount (US\$m)
1	Huaihua Huairen	LBX Pharmacy	72%	233

### Others

No.	Target	Buyer	% acquired	Amount (US\$m)
1	Blue Cross	AIA	100%	277

## China healthcare capital raise transactions in 2023 (transactions >US\$70m) – 1/3

### Pharma

No.	Target	Buyer	Series	Amount (US\$m)
1	Haisen Biopharma	CBC Group, Mubadala Investment Company	B	315
2	BrightGene Biomedical	Taizhou State-owned Asset Investment Group, Fuyang Investment Group	Strategic investment	213
3	Sinotau Pharma	Consortium of government-backed funds, including Lotus Lake Ventures, Goldstone Investment, CITIC Securities, China Life PE, General Tech VC, Guangdong Tech Financial Group, among other funds; Leaddo Technology	E	156

### Biotech companies

No.	Target	Buyer	Series	Amount (US\$m)
1	BMX Biotech	Detong Capital, Bayland Capital, Bairun Investment, YSIM, among others	C	156
2	Avistone Biotech	IDG Capital, Cathay Capital, Bain Capital, SDIC, YanChuang Capital	B	142
3	Neurophth	Sequoia China, CMB Int'l Capital, SDIC, Tiantang Silicon Valley VC, Changjiang Industrial PE, Guangzhou Finance Group, among other funds	C+	100
4	Pyrotech Therapeutics	Lotus Lake Ventures, Lily Asia Ventures, MSA Capital, Zhongguancun Development Group, Frees Fund, Taiping Insurance, SDIC, China VC Fund, BioTrack Capital, among other funds	A	100
5	HighTide Therapeutics	CDB Capital, Yuexiu Industrial Fund, Yuthai Investment, Guangdong TCM VC	C	107
6	Coherent Biopharma	Shanghai Alliance Investment, Hefei Industrial Fund, Suzhou Leader VC, Shendi Investments, Suzhou Industrial Park Fund	B+	92
7	Jiachen Xihai Biotech	China Growth Capital, Zhejiang VC, Co-win Ventures, Yuexiu Industrial Fund, Tigeryeah Investment, GL Ventures, C&D Emerging Industry Investment	A+	92
8	Huisheng Biopharma	Jilin Baixingbairong Investment, Jiling Equity Investment, Wuxi Shangwei	A+	82
9	Atom Biopharma	Fortune VC, Kaitai Capital, Xinyi Capital, Huajin Capital, Unifortune Group	D	85
10	Sanegene Bio	Northern Light VC, Qiming Venture, Shenzhen Capital, Tencent Investment, Suzhou Oriza, TEDA VC, TF Capital, Yuanbio VC, C&D Emerging Industry Investment, SHC Capital, among other funds	A+	80
11	Langlai Sceicen & tech	Vivo Capital, Lily Asia Ventures, Vinno Cap	A	71
12	IASO Biopharma	Efung Capital, Hosen Care, SDIC Gaoxin, Shanghai Waigaoqiao FTZ, Nanjing Jiangbei New Area Construction Investment, UMC Capital	C+	71

Note: Data points including stake and amount are obtained from various data sources and should be used as references only; calculated based on USD/RMB FX of 7.0467  
Sources: Capital IQ, Mergermarket, IT Juzi, BDA research

## China healthcare capital raise transactions in 2023 (transactions >US\$70m) – 2/3

### Medical consumables and devices

No.	Target	Buyer	Series	Amount (US\$m)
1	Cornerstone Robotics	Shenzhen Daohe PE, Lenovo Capital, Tsing Song Capital, Meituan Dragonball Capital, Qiming Venture, Asia Lily Ventures, New World Development, K2VC	C	114
2	Yixin Medical	6 Dimensions Capital, Centurium Capital, Anhui Anyuan Investment, Shanghai Jiading VC, Hefei Industrial Funds	C	100
3	Evaheart	Vivo Capital, Taiping Insurance, Sinovace	A	92

### Healthcare services

No.	Target	Buyer	Series	Amount (US\$m)
1	Banger Orthopedic Hospital	China Pacific Insurance, Sunshine Insurance, Lake Bleu Capital, C&D Emerging Industry Equity Investment, GY Capital, among other funds	Pre-IPO	114

### CXO

No.	Target	Buyer	Series	Amount (US\$m)
1	Sangon Biotech	Greenwoods Investment, Novo Holdings, CPE, GL Capital, Huagai Capital, Guokai Tech Venture, Huasheng Capital	Strategic investment	284
2	ATLATL Innovation	GL Ventures	A	277
3	GenScript ProBio	Legend Capital, Hillhouse Capital, GF Xinde Investment, Highlight Capital, New Alliance Capital, Huatai Zijin Capital, C&D Emerging Industry Equity Investment, China Industrial Int'l Trust Asset Management, China Trade in Service Innovation Investment Fund	C	220
4	Cheerland Biotech	China Capital Investment Group	B	142

### Digital health

No.	Target	Buyer	Series	Amount (US\$m)
1	DP Technology	MSA Capital, Loyal Valley Capital, Source Capital, Evergreen SciTech Delta	C	100

Note: Data points including stake and amount are obtained from various data sources and should be used as references only; calculated based on USD/RMB FX of 7.0467  
Sources: Capital IQ, Mergermarket, IT Juzi, BDA research

## China healthcare capital raise transactions in 2023 (transactions >US\$70m) – 3/3

### Pharmaceutical distribution

No.	Target	Buyer	Series	Amount (US\$m)
1	Shanghai Pharma Health Commerce	SHC Capital, Shanghai State-owned Capital Investment, Gongrong Yunkang (under ICBC Financial Asset Investment)	C	71
2	China Resources Biomedical	Guangdong Tech Financial Group, Wuxi Guolian VC, China State-owned Enterprise Structural Adjustment Fund, China State-owned Enterprise Mixed Ownership Reform Fund, China Construction Bank PE Investment	B	85

## China healthcare capital raise transactions in 2022 (transactions >US\$70m) – 1/4

### Pharma

No.	Target	Buyer	Series	Amount (US\$m)
1	Giant Biogene	Legend Capital, CDH Investment, Jinglin Investment, CPE, Gaorong Capital, Hillhouse Capital, CDB Financial, Black Ant Capital, CICC Capital, Ocean Pine Capital, Jinyi Capital, Sanrenxing Media, Qianxun	Pre-IPO	630
2	Taibang Biologic Group	GIC, China Life Equity, ADIA, Cinda Kunpeng	Strategic investment	300
3	Tidetrone	IDG Capital, Legend Capital	A+	277
4	TECON	Shenzhen Venture Capital, CITIC Construction Capital, Yuanfeng Capital, Xinjiang Populus Euphratica Fund, Yuanchuang Duoying Capital, Xinjiang Corps State-owned Assets Company	Strategic investment	142
5	Healthgen Biotechnology	Betta Pharmaceuticals	Pre-IPO	79

### Biotech companies (1/2)

No.	Target	Buyer	Series	Amount (US\$m)
1	Sironax	Yunfeng Capital, Eight Roads Capital (Fidelity Asia), Temasek, Gaorong Capital, Heyu Capital, Arch Venture Partners, Kangqiao Capital, Xianfeng Qiyun, F-Prime Capital Partners, Future Fund, Invus, ADIA, and others	B	200
2	Kelun Biotech	IDG Capital, Sherpa Investment, SDIC Investment, MSD, Cinda Asset Management, Ginkgo Ling, Guanghua Wutong	B	200
3	Fronter Therapeutics	Sequoia Capital China, OrbiMed, Zhengxingu Capital, Boyu Capital, Starr Investments, Hongyuan Capital	B	160
4	Doma Bio	China Taiping, China Life Equity, PICC Capital, CMB International, SDIC Venture Capital, Biocytogen, Suzhou Industrial Park	A	135
5	Cloudbreak Pharmaceutical	CDH Investment, Chuangdongfang Investment, Gaotejia Investment, Yingke Capital, Yifeng Capital, Deyi Capital, CCB International, Industrial Securities Capital, CDH Baifu, Guanzi Capital, CNCBI Yuanda Medical, Yuejun Investment	C	130
6	Innorna	CDH Investment, CPE, E Fund, Huaxing New Economy Fund, Blue Ocean Capital, BOCG, HHF Capital, Huayi Capital, Fangyuan Capital	B	120
7	Origincell Therapeutics	Qiming Venture Partners	B	120
8	Trinomab Biotech	Yifeng Capital, Wuxi Guolian Venture Capital, New Taige Asset, Xicheng Jinrui, China Medical System, Gree Financial Investment, Shenhonggejin, Jiaxing Weilong, Haichuang Anda, Qinwan Capital, Jinhang Group	Pre-IPO	106

Note: Data points including stake and amount are obtained from various data sources and should be used as references only; calculated based on USD/RMB FX of 7.0467  
Sources: Capital IQ, Mergermarket, IT Juzi, BDA research

## China healthcare capital raise transactions in 2022 (transactions >US\$70m) – 2/4

### Biotech companies (2/2)

No.	Target	Buyer	Series	Amount (US\$m)
9	Bao Pharma	Dongfang Fuhai, Yuanchuang Duoying, Haitong Innovation Capital, Shengshi Capital, Center Lab	B	100
10	Reistone Bio	Zero2IPO Ventures, Huagai Capital, Zhangjiang Group, Hanyi Capital, Yinglian Health Industry Fund, Capital Health Fund	A	92
11	ImmuneOnco	Chuangdongfang Investment, Guoke Jiahe, Fosun Pharma, Eli Lilly Asia Fund, Founder Hesheng Investment, Sunshine Insurance, Li Cheng Asset, CCB Trust, Rongchang Biotech, Kuanyu Capital	C+	100
12	Xuanzhu Bio	DNV Capital, Bank of China Investment, Taikang Insurance, Yifeng Capital, Sunshine Insurance, Huayi Capital, Zhongji Investment, Taijin Capital, Haichuang Fund of Funds, Jinjiang Xuanhong, Shaanxi Financial Holdings, Wanxin Capital	B	85
13	Novatim Immune Therapeutics	Kequan Fund	A	71
14	Imunopharma	North Venture Capital, Zhongguancun Science City	D+	71
15	Maxvax	China Life Equity, Sherpa Investment, Hillhouse Venture Capital, Xinshang Capital, Shizhen Capital	B	71
16	Huisheng Pharma	Yuanyi Investment, China Life Equity, Ginkgo Capital, Tonghe Dingtai Capital	A	71

### Healthcare services

No.	Target	Buyer	Series	Amount (US\$m)
1	Hong Kong Asia Medical Holding	Legend Capital, Primavera Capital, BOCOM International, ICBC International, ABC International, Sherpa Investments, Country Garden Venture Capital, Taikang Life Insurance, Hudson Bay Capital, General Atlantic	D	400
2	Cloudbreak Pharmaceutical	CDH Investment, Chuangdongfang Investment, Gaotejia Investment, Yingke Capital, Yifeng Capital, Deyi Capital, CCB International, Industrial Securities Capital, CDH Baifu, Guanzi Capital, CNCBI Yuanda Medical, Yuejun Investment	C	120
3	Smartee	Taikang Insurance, Yuansheng Venture Capital, China Resources National Investment Co., Ltd.	D	71

Note: Data points including stake and amount are obtained from various data sources and should be used as references only; calculated based on USD/RMB FX of 7.0467  
Sources: Capital IQ, Mergermarket, IT Juzi, BDA research

## China healthcare capital raise transactions in 2022 (transactions >US\$70m) – 3/4

### Medical consumables and devices

No.	Target	Buyer	Series	Amount (US\$m)
1	QitanTechnology	Huagai Capital, Meituan, Yahui Investment, Boyuan Capital	C	100
2	Axbio	Wuyuan Capital, Yunfeng Fund, Kangqiao Capital, SDIC Investment, AstraZeneca CICC Medical Industry Fund	B	92
3	VIRTUE Diagnostics	Sequoia Capital China, Yuanhe Holdings, Eli Lilly Asia Fund, Morningside Venture Partners, PerkinElmer Venture Partners	B	92
4	Lichi Medical	Nexus Point	A+	100
5	Hongtong Industrials	Huitai Medical	Strategic investment	83
6	Shenzhen Sibionics	Jiacheng Capital, Industrial Securities Capital, Shanghai Biomedical Fund, Guangdong Traditional Chinese Medicine Health Fund, China New Town	D	71
7	Shenzhen Sibionics	CPE Yuanfeng, China Life, China Life Equity, Qianhai Fund of Funds, Huaxin Capital, Jiangu Capital, C&D Emerging Investments, Jingming Assets	C+	71
8	Dekang Medical Equipment	Blue Mountain Investment, Haibang Investment, Hongda Junhe Capital, Xiaochi Capital, Hangzhou Bay Smart Medical Industry Fund, Gongqingcheng Yongqian, Shouzheng Zefu	B	71

### Digital health

No.	Target	Buyer	Series	Amount (US\$m)
1	WeDoctor	not disclosed	Pre-IPO	142
2	METiS	Sequoia Capital China, Wuyuan Capital, Lightspeed Photosynthesis, Fengrui Capital, China Life Equity, PICC Capital, CMB International, Lisi Capital	B	150
3	SoonSolid	Chende Capital, Zhongwei Capital, Yuanyi Capital, SoftBank Vision Fund, Yiheng Capital	D	100
4	Helixon	Wuyuan Capital, Gaorong Capital, Xianghe Capital, Hillhouse Venture Capital, Neumann Capital, Qingzhi Capital	A	71

## China healthcare capital raise transactions in 2022 (transactions >US\$70m) – 4/4

### CXO

No.	Target	Buyer	Series	Amount (US\$m)
1	Asymchem Laboratories	Hillhouse Capital, Haihe Industrial Fund, Asymchem, Tianjin Haihe Asymchem Fund	Strategic investment	333
2	ClinChoice	Legend Capital, Eli Lilly Asia Fund, Taikang Insurance, Yuanhe Origin, Apricot Capital, Sherpa Investment	E	150
3	Zencore Biologics	IDG Capital, Qiming Venture Partners, Tongchuang Weiye, Goldman Sachs (China), Sofina, Junxin Capital, Novo Holdings, LYFE Capital	C	100
4	Porton Pharma	China Merchants Capital, Hillhouse Investment, Fosun Pharma, Huatai Zijin, China Merchants Securities, Advanced Manufacturing Industry Investment Fund, Guangdong Mint Investment, Huimei Capital, Huatai Health Fund, Shanghai Chuangfeng Medic	B	74
5	Intellective Biologics	Gaorong Capital, Fuhui Venture Capital, Wenhua Haihui, Qingsong Capital, CNCBI Investment, Founder Securities	C	100
6	SAFE Pharmaceutical Technology	Pacific Insurance, Lianxing Medical, CICC Kai Tak, China State-owned Capital Venture Capital Fund (State Venture Capital Fund), SDIC Venture Capital, Fangfu Venture Capital, Taiping Medical Health Fund	D	71
7	Biointron	Gaorong Capital, Cornerstone Capital, Jifeng Capital, Jiangsu Hi-tech Investment, Langzi Asiana, Binfu Capital, Chengshu Investment, Tianhui Capital, West Shanghai, Haitong Venture Capital, Yuexi Capital, October Capital, Furuong Investment	B	71

### Pharmaceutical distribution

No.	Target	Buyer	Series	Amount (US\$m)
1	YSB	Baidu, Songhe Capital, Sunshine Insurance, Guangzhou Fund, Pearl River Investment	E+	85

### Others

No.	Target	Buyer	Series	Amount (US\$m)
1	Chongqing Fuling Sanhailanling	Hualan Biotechnology	A	82



## Top 15 license-in transactions in 2023 (by transaction value)

No.	Licensor & Target	Licensee	Licensing rights	Indication	Transaction value (US\$m)	Upfront payment (US\$m)	Milestone fee (US\$m)
1	Ensem Therapeutics – CDK2 inhibitor ETX-197	Beigene	Global	Breast cancer	1,330	NA	NA
2	Ensem Therapeutics – antibody drug conjugate (ADC) B7H4	Beigene	Global	Tumor	1,300	NA	NA
3	VBI Vaccines – PreHevbri (preventive vaccine for adults)	Brii Biosciences	Greater China & core APAC countries	Hepatitis B	437	12	422
4	C4 Therapeutics – orally bioavailable BiDAC degrader CFT8919	Betta Pharma	Commercialisation in Greater China	Non-small cell lung cancer	392	10	357
5	Daewoong Pharma – PRS inhibitor Bersiporocin	CS Pharma	Commercialisation in Greater China	idiopathic pulmonary fibrosis	336	76	NA
6	LIB Therapeutics – inhibitor Ierodalcibep	Hasten Pharma	Commercialisation in Greater China	Hyperlipidemia	325	20	305
7	BioLineRx – Motixafortide	Gloria Biosciences	Commercialisation in APAC	Multiple myeloma	280	15	250
8	Abbisko Therapeutics – EGFR inhibitor ABK3376	Allist	Greater China	Non-small cell lung cancer	188	NA	NA
9	Zelgen Biopharma – recombinant human thrombin	Yuanda Life Science	Greater China	Hematological disease	186	37	150
10	CARsgen Therapeutics – Zeveorcabtagene Autoleucel CT053	Huadong Medicine	Commercialisation in China	Multiple myeloma	174	28	145
11	Senti Biosciences – SENTI-301A	Celest Therapeutics	Commercialisation in Greater China	Hepatocellular carcinoma	156+	NA	156
12	Connect Biopharm – IL-4Rα MAb Rademikibart CBP-201	Simcere	Commercialisation in Greater China	Atopic dermatitis and asthma	145	21	124
13	Acorda Therapeutics – levodopa inhalation powder INBRIJA	Chance Pharma	Commercialisation in Greater China	Parkinson disease	144	3	142
14	Kezar Life Sciences – inhibitor Zetomipzomib KZR-616	Everest Medicines	Clinical development & commercialisation in Greater China and other Asian markets	autoimmune disease	133	7	126
15	Aligos Therapeutics – oligonucleotide compounds	Amoytop Biotech	Clinical development & commercialisation in Greater China	Liver disease	116	7	109

## Top 15 license-out transactions in 2023 (by transaction value)

No.	Licensor & Target	Licensee	Licensing rights	Indication	Transaction value (US\$m)	Upfront payment (US\$m)	Milestone fee (US\$m)
1	Baili Pharm – SystImmune EGFRxHER3 ADC	BMS	Commercialisation outside of Greater China	Lung/breast cancer	8,400	800	7,100
2	Eccogene – oral, glucagon-like peptide 1 receptor agonist (GLP-1RA) ECC5004	AstraZeneca	Global	Type 2 diabetes	2,010	185	1,825
3	BlissBio – ADC BB-1701	Eisai	Commercialisation outside of Greater China	Tumor	2,000	NA	2,000
4	Duality Biologics – 2 ADC (DB-1303, DB-1313)	BioNTech	Commercialisation outside of Greater China	Tumor	1,670	170	1,500
5	Hansoh Pharma – targeted B7-H4 ADC HS-20089	GSK	Commercialisation outside of Greater China	Gynecologic cancer	1,570	85	1,485
6	Wuxi Biologics – 4 T cell engaging (TCE) antibodies	GSK	Global	Tumor	1,500	40	1,460
7	Hengrui Pharma – PARP1 inhibitor HRS-1167, ADC SHR-A1904	Merck KGaA	US, Japan, Europe	Tumor	1,499	171	NA
8	KBP Biosciences – non-steroidal mineralocorticoid receptor antagonist (nsMRA) Ocedurenone	Novo Nordisk	Global	Cardiovascular and kidney disease	1,300	NA	NA
9	Lepu Biopharma – Claudin 18.2 ADC CMG901	AstraZeneca	Global	Tumor	1,188	63	1,125
10	Hutchmed – inhibitor of vascular endothelial growth factor receptors (“VEGFR”) Fruquintinib	Takeda	Commercialisation outside of Greater China	Metastatic colorectal cancer	1,130	400	730
11	Legend Biotech – CAR-T cell therapy candidate for Delta-like ligand protein 3 (DLL3) LB2102	Novartis	Global	Small cell lung cancer, large cell neuroendocrine cancer	1,110	100	1,010
12	Harbour BioMed – MSLN-targeted ADC HBM9033	Pfizer	Global	Tumor	1,103	53	1,050
13	Biotheus – PD-L1/VEGF bispecific antibody PM8002	BioNTech	Commercialisation outside of Greater China	Tumor	1,055	55	1,000
14	Hengrui Pharma – anti-TSLP monoclonal antibody SHR-1905	Aiolos Bio	Commercialisation outside of Greater China	Asthma	1,050	22	1,029
15	GeneQuantum Healthcare – TROP2 targeted ADC GQ1010	Pyramid Biosciences	Commercialisation outside of Greater China	Non-small cell lung cancer, triple-negative breast cancer	1,020	20	1,000

## Top 15 license-in transactions in 2022 (by transaction value)

No.	Licensor & Target	Licensee	Licensing rights	Indication	Transaction value (US\$m)	Upfront payment (US\$m)	Milestone fee (US\$m)
1	Heidelberg Pharma – HDP-101, HDP-103, HDP-102 and HDP-104	Huadong Medicine	Global	Multiple Myeloma, NHL	930	NA	NA
2	Kiniksa Pharma – Arcalyst and Mavrilimumab	Huadong Medicine	APAC	Autoimmune diseases	662	22	640
3	Voronoi – pan-RAF	METiS Pharmaceuticals	Global	BRAF	482	2	480
4	Inventiva – Lanifibranor	Chia Tai-Tianqing Pharma	Commercialisation in Greater China	NASH	307	17	290
5	Sanofi – ADC SAR408701 and SAR444245	Innovent Biologics	Commercialisation in Greater China	NSCLC, Stomach cancer	300	60	240
6	Seagen – ADC Tivdak	Zai Lab	Commercialisation in Greater China	Cervical cancer	293	30	263
7	Marinus Pharma – Ganaxolone	Tenacia Biotech	Commercialisation in Greater China	Epilepsy	256	10	246
8	Bavarian Nordic – MVA-BN RSV	Nuance Pharma	Greater China, Korea. SE Asia	Respiratory syncytial virus	225	NA	NA
9	Bavarian Nordic – MVA-BN RSV	Nuance Pharma	Greater China, Korea. SE Asia	RSV	213	13	NA
10	Everest Medicine – EDDC-2214	Everest Medicines	Global	Covid-19	205	3	NA
11	OBI Pharma – OB1-833 and OB1-999	Odeon Therapeutics	Commercialisation in Greater China	Tumor	200	12	NA
12	NiKang Therapeutics – NKT2152	Hansoh Pharma	Commercialisation in Greater China	Renal cell carcinoma	164	5	NA
13	Sunshine Guojian Pharma – Inetetamab	Kelinyuan Biotech	Global	Breast cancer	152	NA	NA
14	Hanmi Pharma – risuteganib	AffaMed Therapeutics	Commercialisation in Greater China	Diabetic retinopathy	151	6	145
15	Verlimmune – VERI-101	Fosun Pharma	Commercialisation in Greater China	Tumor	125	NA	NA

## Top 15 license-out transactions in 2022 (by transaction value)

No.	Licensor & Target	Licensee	Licensing rights	Indication	Transaction value (US\$m)	Upfront payment (US\$m)	Milestone fee (US\$m)
1	Sichuan Kelun – 7 ADC products	MSD	Commercialisation outside of Greater China	Tumor	9,300	175	9,125
2	Akeso Biopharma – AK112	Summit Therapeutics	The US, Canada, Japan	NSCLC	5,000	500	4,500
3	Adagene – Safebody Multi-Target Collaboration	Sanofi	Global	Tumor	2,500	18	NA
4	Sichuan Kelun – SKB-264	MSD	Commercialisation outside of Greater China	Tumor	1,410	17	NA
5	Insilico Medicine Pharma – AI platform collaboration	Sanofi	Global	IPF	1,200	22	NA
6	CSPC – SYSA1801	Elevation Oncology	Commercialisation outside of Greater China	Tumor	1,195	27	1,168
7	Lanova Medicines – LM-302	Turning Point	Commercialisation outside of Greater China and Korea	Tumor	1,410	47	1,363
8	Sichuan Kelun – SKB-315	MSD	Global	Tumor	936	35	901
9	Jemincare – JMKX002992	Roche	Global	Prostate cancer	650	60	590
10	Henlius Biotech – HLX11、HLX14	Organon	Commercialisation outside of Greater China	TNBC	541	73	468
11	Harbour BioMed – antibody discovery platform HCAb	Moderna	Global	-	500	NA	NA
12	Simcere – SIM0278	Almirall	Commercialisation outside of Greater China	Autoimmune disease	507	15	492
13	Everest Medicines – Trodelvy	Gilead Sciences	Asia	TNBC	455	28	NA
14	Harbour BioMed – HBM7022	AstraZeneca	Global	Stomach cancer	350	25	325
15	Biosion – BSI-060T	Pyxis Oncology	Commercialisation outside of Greater China	Tumor	233	10	223

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