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BIOCYTOGEN PHARMACEUTICALS (BEIJING) CO., LTD.

百奥赛图(北京)医药科技股份有限公司

(A joint stock company incorporated in the People's Republic of China with limited liability)

(Stock Code: 2315)

ANNOUNCEMENT OF ANNUAL RESULTS FOR THE YEAR ENDED DECEMBER 31, 2023

The board (the “**Board**”) of directors (the “**Director(s)**”) of Biocytogen Pharmaceuticals (Beijing) Co., Ltd. (the “**Company**” or “**Biocytogen**”) is pleased to announce the audited consolidated annual results of the Company and its subsidiaries (together, the “**Group**”) for the year ended December 31, 2023 (the “**Reporting Period**”), together with audited comparative figures for the same period of 2022.

FINANCIAL HIGHLIGHTS

	Year ended December 31, 2023 RMB'000	Year ended December 31, 2022 RMB'000	Year-on- year change
Revenue	716,912	533,881	34.3%
Gross profit	506,034	391,750	29.2%
Loss before taxation	(380,156)	(601,353)	(36.8%)
Loss for the year	<u>(382,952)</u>	<u>(602,157)</u>	<u>(36.4%)</u>
Loss for the year attributable to equity shareholders of the Company	(382,951)	(601,945)	(36.4%)
Total comprehensive income for the year	(383,618)	(600,716)	(36.1%)
Loss per share			
Basic and diluted (RMB)	<u>(0.96)</u>	<u>(1.58)</u>	<u>(39.2%)</u>

* Certain amounts and percentage figures included in this announcement have been subject to rounding adjustment, or have been rounded to one or two decimal places. Any discrepancies in any tables, charts or elsewhere between totals and sums of amounts listed therein are due to rounding.

CONSOLIDATED STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the year ended 31 December 2023 (Expressed in RMB)

	Note	2023 RMB'000	2022 RMB'000
Revenue	3	716,912	533,881
Cost of sales		<u>(210,878)</u>	<u>(142,131)</u>
Gross profit	3(b)	506,034	391,750
Other gains and losses, net	4	42,259	86,710
Net change in fair value of biological assets	5	4,879	3,923
Selling and marketing expenses		(62,828)	(50,248)
General and administrative expenses		(286,258)	(263,412)
Research and development expenses		<u>(474,371)</u>	<u>(699,167)</u>
Loss from operations		(270,285)	(530,444)
Finance costs	6(a)	(99,844)	(56,139)
Share of loss of associates		<u>(10,027)</u>	<u>(14,770)</u>
Loss before taxation	6	(380,156)	(601,353)
Income tax	7	<u>(2,796)</u>	<u>(804)</u>
Loss for the year		<u><u>(382,952)</u></u>	<u><u>(602,157)</u></u>
Other comprehensive income for the year			
– Exchange differences on translation of foreign operations, net of tax		<u>(666)</u>	<u>1,441</u>
Total comprehensive income for the year		<u><u>(383,618)</u></u>	<u><u>(600,716)</u></u>
Loss for the year attributable to:			
Equity shareholders of the Company		(382,951)	(601,945)
Non-controlling interests		<u>(1)</u>	<u>(212)</u>
Loss for the year		<u><u>(382,952)</u></u>	<u><u>(602,157)</u></u>
Total comprehensive income for the year attributable to:			
Equity shareholders of the Company		(383,617)	(600,504)
Non-controlling interests		<u>(1)</u>	<u>(212)</u>
Total comprehensive income for the year		<u><u>(383,618)</u></u>	<u><u>(600,716)</u></u>
Loss per share			
– Basic and diluted (RMB)	8	<u><u>(0.96)</u></u>	<u><u>(1.58)</u></u>

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

At 31 December 2023

(Expressed in RMB)

		At 31 December	
	Note	2023	2022
		RMB'000	RMB'000
Non-current assets			
Property, plant and equipment		1,450,828	1,599,079
Intangible assets		28,130	30,652
Interests in associates		188,375	197,944
Other non-current assets		59,025	52,861
		<u>1,726,358</u>	<u>1,880,536</u>
Current assets			
Inventories		7,416	18,604
Contract costs		39,333	41,361
Biological assets		81,716	76,498
Trade receivables	10	142,384	107,682
Prepayments and other receivables		26,057	40,332
Other financial assets		8,487	8,198
Cash at bank and on hand		417,657	626,621
		<u>723,050</u>	<u>919,296</u>
Current liabilities			
Trade and bills payables	11	175,234	146,190
Contract liabilities		69,224	56,377
Other payables		128,887	231,072
Bank and other loans		176,835	126,665
Lease liabilities		26,364	44,938
Current taxation		1,072	804
		<u>577,616</u>	<u>606,046</u>
Net current assets		<u>145,434</u>	<u>313,250</u>
Total assets less current liabilities		<u>1,871,792</u>	<u>2,193,786</u>

		At 31 December	
	<i>Note</i>	2023	2022
		RMB'000	RMB'000
Non-current liabilities			
Deferred income		87,071	89,934
Lease liabilities		167,005	191,507
Long-term payables		651,478	709,359
Bank and other loans		173,905	52,170
Deferred tax liabilities		1,897	–
		<u>1,081,356</u>	<u>1,042,970</u>
NET ASSETS		<u>790,436</u>	<u>1,150,816</u>
CAPITAL AND RESERVES			
Share capital	12	399,398	399,398
Reserves		386,488	746,867
		<u>785,886</u>	<u>1,146,265</u>
Total equity attributable to equity shareholders of the Company		785,886	1,146,265
Non-controlling interests		<u>4,550</u>	<u>4,551</u>
TOTAL EQUITY		<u>790,436</u>	<u>1,150,816</u>

NOTES

1 General information

Biocytogen Pharmaceuticals (Beijing) Co., Ltd. (百奧賽圖(北京)醫藥科技股份有限公司) (the “Company”), formerly known as Beijing Biocytogen Company Limited (“Biocytogen Limited”, 北京百奧賽圖基因生物技術有限公司), was established on 13 November 2009 in the People’s Republic of China (the “PRC”) and was converted into a joint stock company on 29 December 2020.

The Company was listed on the Main Board of The Stock Exchange of Hong Kong Limited (the “Stock Exchange”) (stock code: 2315.HK) on 1 September 2022.

The Company and its subsidiaries (together, the “Group”) are principally engaged in providing gene-editing services, pre-clinical pharmacology and efficacy evaluation services, animal models selling, antibody development and innovative biologic drug research and development.

2 Material accounting policies

(a) *Statement of compliance*

These financial statements have been prepared in accordance with all applicable IFRS Accounting Standards, which collective term includes all applicable individual International Financial Reporting Standards, International Accounting Standards (“IASs”) and Interpretations issued by the International Accounting Standards Board (the “IASB”) and the disclosure requirements of the Hong Kong Companies Ordinance. These financial statements also comply with the applicable disclosure provisions of the Rules Governing the Listing of Securities on the Stock Exchange (the “Listing Rules”). Material accounting policies adopted by the Group are disclosed below.

The IASB has issued certain amendments to IFRS Accounting Standards that are first effective or available for early adoption for the current accounting period of the Group. The Group has adopted these amendments consistently for the periods presented. None of these developments have had a material impact to the financial statements of the Group. The Group has not applied any new amendments that are not yet effective for the current accounting period.

(b) *Basis of preparation of the financial statements*

The consolidated financial statements for the year ended 31 December 2023 comprise the Company and its subsidiaries and the Group’s interests in associates.

The measurement basis used in the preparation of the consolidated financial statements is the historical cost basis except that the following assets and liabilities are stated at their fair value as explained in the accounting policies set out below:

- biological assets;
- other investment in securities; and
- derivative financial instruments.

The preparation of consolidated financial statements in conformity with IFRS Accounting Standards requires management to make judgements, estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, income and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Judgements made by management in the application of IFRS Accounting Standards that have significant effect on the consolidated financial statements and major sources of estimation uncertainty are discussed.

(c) Changes in accounting policies

New and amended IFRS Accounting Standards

The Group has applied the following new and amended IFRS Accounting Standards issued by the IASB to these financial statements for the current accounting period:

- IFRS 17, *Insurance contracts*
- Amendments to IAS 8, *Accounting policies, changes in accounting estimates and errors: Definition of accounting estimates*
- Amendments to IAS 1, *Presentation of financial statements* and IFRS Practice Statement 2, *Making materiality judgements: Disclosure of accounting policies*
- Amendments to IAS 12, *Income taxes: Deferred tax related to assets and liabilities arising from a single transaction*
- Amendments to IAS 12, *Income taxes: International tax reform – Pillar Two model rules*

3 Revenue and segment reporting

(a) Revenue

The Group is principally engaged in providing gene-editing services, pre-clinical pharmacology and efficacy evaluation services, selling animal models, antibody development, and innovative drugs development. Currently the Group have no products approved for commercial sale and have not generated any revenue from sales of innovative drugs.

Disaggregation of revenue from contracts with customers by major service lines is as follows:

	Year ended 31 December	
	2023	2022
	RMB'000	RMB'000
Gene-editing	74,325	61,075
Pre-clinical pharmacology and efficacy evaluation	193,396	176,069
Animal models selling	272,805	169,328
Antibody development	175,870	126,887
Others	516	522
	716,912	533,881

For the year ended 31 December 2023, no revenue from a single customer accounts for 10% or more of the Group's revenues. For the year ended 31 December 2022, one customer had transactions with the Group which exceeded 10% of the Group's revenue, amounting to RMB70,000,000.

The aggregated amount of the transaction price allocated to the remaining performance obligations under the Group's existing contract was RMB182,160,000 as at 31 December 2023 (2022: RMB177,112,000). These amounts represented revenue expected to be recognised in the future from unsatisfied contracts of antibody development revenue and were expected to be recognised within 3 years.

(b) Segment reporting

The Group manages its businesses by business lines. In a manner consistent with the way in which information is reported internally to the Group's most senior executive management for the purposes of resource allocation and performance assessment, the Group has presented the following five reportable segments. No operating segments have been aggregated to form the following reportable segment.

– Gene-editing services

This segment provides the customized gene-editing services based on animals as well as cells to meet the needs of basic science research and drug development of the customers.

– Pre-clinical pharmacology and efficacy evaluation

This segment provides the pre-clinical pharmacology service for drug efficacy and toxicity evaluation.

– Animal models selling

This segment breeds and sells the animal models for the external and internal use, including set of genetically engineered mice, disease mouse models and aged small animals. This segment also out-licenses certain animal models to customers.

– Antibody development

This segment utilizes the Group's own antibody discovery platforms to identify antibodies which have the potential to become our drug candidates and out-license or collaborate with partners for potential therapeutic antibody molecules.

– Innovative drugs development with partners

This segment is engaged in research and development of innovative drugs with a focus on oncology and autoimmune disease therapeutics.

(i) Segments results

For the purposes of assessing segment performance and allocating resources between segments, the Group's most senior executive management monitors the results attributable to each reportable segment on the following bases:

Revenue and expenses are allocated to the reportable segments with reference to sales generated by those segments and the expenses incurred by those segments. The measure used for reporting segment result is gross profit.

The Group's other operating income and expenses, such as other gains and losses, net and selling and administrative expenses, and assets and liabilities are not measured under individual segments. Accordingly, neither information on segment assets and liabilities nor information concerning capital expenditure, interest income and interest expenses is presented.

Disaggregation of revenue from contracts with customers by the timing of revenue recognition, as well as information regarding the Group's reportable segments as provided to the Group's most senior executive management for the purposes of resource allocation and assessment of segment performance during the year is set out below.

	Year ended 31 December 2023					Total RMB'000
	Gene-editing RMB'000	Pre-clinical pharmacology and efficacy evaluation RMB'000	Animal models selling RMB'000	Antibody development RMB'000	Others RMB'000	
Disaggregated by timing of revenue recognition						
Point in time	74,325	193,396	272,805	175,870	516	716,912
Revenue from external customers	74,325	193,396	272,805	175,870	516	716,912
Inter-segment revenue	–	–	20,872	–	–	20,872
Reportable segment revenue	74,325	193,396	293,677	175,870	516	737,784
Reportable segment gross profit	32,654	118,562	209,925	144,956	254	506,351
	Year ended 31 December 2022					
	Gene-editing RMB'000	Pre-clinical pharmacology and efficacy evaluation RMB'000	Animal models selling RMB'000	Antibody development RMB'000	Others RMB'000	Total RMB'000
Disaggregated by timing of revenue recognition						
Point in time	61,075	176,069	169,328	126,887	522	533,881
Revenue from external customers	61,075	176,069	169,328	126,887	522	533,881
Inter-segment revenue	–	–	32,927	–	–	32,927
Reportable segment revenue	61,075	176,069	202,255	126,887	522	566,808
Reportable segment gross profit	26,046	123,373	134,947	107,909	248	392,523

(ii) Reconciliations of reportable segment gross profit

	Year ended 31 December	
	2023	2022
	RMB'000	RMB'000
Reportable segment gross profit	506,351	392,523
Elimination of inter-segment gross profit	(317)	(773)
Consolidated gross profit	<u>506,034</u>	<u>391,750</u>

(c) **Geographic information**

The following tables set out information about the geographical location of the Group's revenue from external customers. The geographical information on the revenue by external customers' respective country/region of domicile is as follows:

	Year ended 31 December	
	2023	2022
	RMB'000	RMB'000
The PRC	308,610	287,736
The United States of America ("USA")	301,169	178,993
Others	107,133	67,152
	<u>716,912</u>	<u>533,881</u>

The geographical location of the specified non-current assets is based on the physical location of the asset, in the case of property, plant and equipment, and the location of the operation to which they are allocated, in the case of intangible assets.

	As at 31 December	
	2023	2022
	RMB'000	RMB'000
The PRC	1,266,416	1,453,038
USA	212,542	176,693
	<u>1,478,958</u>	<u>1,629,731</u>

4 **Other gains and losses, net**

	Year ended 31 December	
	2023	2022
	RMB'000	RMB'000
Net gain/(loss) on disposal of property, plant and equipment	1,832	(82)
Change in fair value of financial assets at FVTPL	149	19,269
Interest income	10,158	2,167
Government grants (including amortisation of deferred income)	11,355	15,076
Gain on repayment in advance of long-term payables	9,729	–
Gains on disposal of interests in a subsidiary and an associate	–	25,427
Net realized losses on derivative financial instruments	–	(2,414)
Net foreign exchange gain	9,077	27,374
Others	(41)	(107)
	<u>42,259</u>	<u>86,710</u>

5 Net change in fair value of biological assets

Net change in fair value of biological assets represents the difference in fair value from the beginning to the end of the year. For the year ended 31 December 2023, net fair value change consists of (i) negative realised fair value changes of RMB59,940,000 (2022: RMB56,011,000) and (ii) positive unrealised fair value changes of, RMB64,819,000 (2022: RMB59,934,000).

6 Loss before taxation

Loss before taxation is arrived at after charging/(crediting):

(a) Finance costs

	Year ended 31 December	
	2023	2022
	RMB'000	RMB'000
Interest on long-term payables	76,118	39,916
Interest on lease liabilities	13,604	12,942
Interest on bank and other loans	10,122	3,281
	<u>99,844</u>	<u>56,139</u>

(b) Staff costs

	Year ended 31 December	
	2023	2022
	RMB'000	RMB'000
Salaries, wages and other benefits	336,626	371,091
Contributions to defined contribution retirement schemes (Notes)	36,464	33,491
Equity-settled share-based payment expenses	30,975	15,313
	<u>404,065</u>	<u>419,895</u>

Notes:

As stipulated by the regulations of the PRC, the Company and its subsidiaries in the PRC participates in a defined contribution retirement plan organised by municipal and provincial governments for its employees. The Group is required to make contributions to the retirement plans at certain percentages of the salaries, bonuses and certain allowances of the employees during the year.

Subsidiaries in the USA implemented a defined contribution 401(k) savings plan (the "401(k) Plan") for U.S. employees. The 401(k) Plan covers all U.S. employees, and allows participants to defer a portion of their annual compensation on a pretax basis. In addition, the Group implemented a matching contribution to the 401(k) Plan, matching employee's contribution up to a maximum of 5% of the participant's compensation.

(c) *Other items*

Year ended 31 December

	2023	2022
	<i>RMB'000</i>	<i>RMB'000</i>
Depreciation charge on property, plant and equipment	182,299	171,034
Amortisation cost of intangible assets	7,683	3,065
Recognition of expected credit losses on trade receivables and other receivables	4,282	1,422
Write-down of inventories and contract costs	9,422	3,387
Cost of inventories	121,168	189,259
Auditors' remuneration		
– audit services	3,800	3,000
– other assurance services	3,455	–
– non-audit services	80	–

7 **Income tax in the consolidated statements of profit or loss**

(a) *Taxation in the consolidated statements of profit or loss represents:*

Year ended 31 December

	2023	2022
	<i>RMB'000</i>	<i>RMB'000</i>
Current tax		
Provision for the year	906	804
Under-provision in respect of prior years	2	–
Deferred tax		
Origination and reversal of temporary differences	1,888	–
	<u>2,796</u>	<u>804</u>

(b) Reconciliation between tax expense and accounting losses at applicable tax rates:

	Year ended 31 December	
	2023	2022
	RMB'000	RMB'000
Loss before taxation	380,156	601,353
Notional tax on profit before taxation		
at PRC statutory tax rate (note (i))	95,039	150,338
Statutory tax concession (notes (iii))	(24,129)	(36,154)
Tax effect of different tax rates (notes (ii))	(629)	(562)
Tax effect of non-deductible expenses	(3,943)	(9,038)
Utilization of tax losses not recognised in prior years	1,825	2,181
Tax effect of unused tax losses and temporary differences not recognised	(119,144)	(184,768)
Additional tax deduction on research and development expenses (note (iv))	48,185	77,199
	(2,796)	(804)

Notes:

- (i) The Company and its subsidiaries established in the PRC are subject to PRC Corporate Income Tax rate of 25% during the year.
- (ii) The subsidiaries of the Group incorporated in the USA are subject to Federal Income Tax and State Income Tax. The federal income tax rate was 21% and the state income tax rate was 8% during the year. The subsidiary of the Group incorporated in Germany is subject to Corporate Income Tax, Solidarity Surcharge and Trade Tax, with the tax rate at 15% of taxable income, 5.5% of corporate income tax and 14% of taxable income in Heidelberg during the year.
- (iii) The PRC Corporate Income Tax Law allows enterprises to apply for certificate of “High and New Technology Enterprise” (“HNTE”), which entitles the qualified companies to a preferential income tax rate of 15%, subject to fulfilment of the recognition criteria.

The Company were qualified as a HNTE and accordingly are entitled to the preferential tax rate of 15% during the year.

In December 2023, Biocytogen Jiangsu’s HNTE certificate expired, and the management was still in the process of applying for the renewal of the certificate. The Group’s directors concluded Biocytogen Jiangsu could obtain the renewed HNTE certificate in the due time.

- (iv) According to the relevant tax rules in the PRC, qualified research and development expenses are allowed for additional tax deduction based on 75% of such expenses during the first nine months of 2022. For the period from 1 October 2022 to 31 December 2023, qualified research and development expenses are allowed for additional tax deduction based on 100% of such expenses.

8 Loss per share

(a) Basic loss per share

The calculation of the basic loss per share is based on the loss for the year attributable to ordinary equity shareholders of the Company of RMB382,951,000 (2022: RMB601,945,000) and the weighted average number of ordinary shares in issue during the year, calculated as follows:

(b) Weighted average number of ordinary shares

	As at 31 December	
	2023	2022
	'000	'000
Ordinary shares in issue at 1 January	399,398	374,930
Effect of ordinary shares issued	–	6,117
Effect of the shares purchased for share incentive plan	(1,084)	(43)
	<u>398,314</u>	<u>381,004</u>
Weighted average number of ordinary shares in issue at 31 December	<u><u>398,314</u></u>	<u><u>381,004</u></u>

(c) Diluted loss per share

No diluted earnings per share for both 2023 and 2022 were presented as there were no potential ordinary shares in existence during both years.

9 Dividends

No dividends have been declared or paid by the Company during the year ended 31 December 2023 (2022: nil).

10 Trade receivables

	As at 31 December	
	2023	2022
	RMB'000	RMB'000
Trade receivables due from – third parties	153,601	114,750
Less: loss allowance	(11,396)	(7,068)
	<u>142,205</u>	<u>107,682</u>
Bills receivable	179	–
	<u>142,384</u>	<u>107,682</u>

Ageing analysis

The Group generally provides a credit period of 0 – 90 days to its trade customers. The ageing analysis of trade receivables, based on the earlier of invoice date or revenue recognition date and net of allowance for doubtful debts, is as follows:

	As at 31 December	
	2023	2022
	RMB'000	RMB'000
Within 1 year	125,930	97,183
Over 1 year but within 2 years	14,174	9,157
Over 2 years but within 3 years	2,101	1,342
	<u>142,205</u>	<u>107,682</u>

11 Trade and bills payables

	As at 31 December	
	2023	2022
	RMB'000	RMB'000
Trade payables due to		
– related parties	–	533
– third parties	115,113	104,968
Bills payable	60,121	40,689
	<u>175,234</u>	<u>146,190</u>

Ageing analysis

At 31 December 2022 and 2023, the ageing analysis of trade and bills payables, based on the invoice date, is as follows:

	As at 31 December	
	2023	2022
	RMB'000	RMB'000
Within 1 year	162,128	145,467
Over 1 year but within 2 years	12,392	312
Over 2 years but within 3 years	303	411
Over 3 years	411	–
	<u>175,234</u>	<u>146,190</u>

12 Share capital

	Number of ordinary shares '000	Share capital RMB'000
Issued and fully paid:		
At 1 January 2022	374,930	374,930
Issue of new shares (i)	24,468	24,468
At 31 December 2022 and 2023	<u>399,398</u>	<u>399,398</u>

- (i) In September 2022, the Company completed the initial public offering of 24,468,500 overseas listed foreign shares (H shares), which were listed and traded on the main board of the Stock Exchange. The gross proceeds received from the Stock Exchange was HK \$617,095,570 (equivalent to RMB542,064,655), and the gross proceeds received by the Company net of the listing expense attributed to equity was RMB500,696,819, of which RMB24,468,500 was recognised as share capital.

MANAGEMENT DISCUSSION AND ANALYSIS

I. Business Overview

OVERVIEW

Founded in 2009, we are a global biotechnology company that drives the research and development of novel antibody-based drugs with innovative technologies. Using its proprietary RenMab™/RenLite®/RenNano® mice platforms for fully human monoclonal, bispecific/multispecific antibody and nanobody development, Biocytogen has integrated its *in vivo* drug efficacy screening platforms and strong clinical development expertise to streamline the entire drug development process.

Through the year ended December 31, 2023, due to the impact of the global macroeconomic situation, the financing situation and business operating environment of the global biopharmaceutical industry have faced severe challenges, and the Chinese market has also been seriously affected, with biopharmaceutical and biotechnology companies making adjustments by reducing their drug pipelines and scaling back R&D expenditures, among other things. In the face of the severe external environment, we have also been making internal adjustments to better cope with the challenges. Firstly, the continuous R&D investment over the years have consistently propelled the Company's globally leading innovative products and services into the market, establishing high technological barriers for our business. This has led to strong market competitiveness and higher levels of gross profit margins. Specifically, both the antibody development business and the animal model sales business have maintained rapid growth in the current fiscal year. Secondly, differentiated marketing strategies tailored to various markets have fostered the rapid and healthy development of the Company's business. Significant results have been achieved in expanding overseas markets, with continuous rapid growth in overseas sales revenue. Simultaneously, the Company has strengthened its leading position in domestic operations, maintaining steady and healthy growth. Thirdly, the R&D phase of the Project Integrum has been completed, entering a phase of reaping rewards. The development of the drug pipeline is transitioning through licensing or transfer, advancing research and development in collaboration with partners. The Company's large-scale research and development investment phase has concluded, with a significant year-on-year decrease in R&D investment in 2023, and it is expected to continue to decline noticeably in 2024. Additionally, the Company continues to enhance overall operational efficiency through adjustments to production and research facilities and improved procurement efficiency, resulting in reduced operational costs.

Our business model, correspondingly, consists of transferring early-stage antibody sequences generated by Project Integrum, as well as joint development/authorization of transfer/transfer of development pre-clinical and early-clinical drug molecules through our drug development business and providing innovative animal models and pre-clinical research services with high technological barriers, which are two distinctive business segments. Through our unique technological advantages and high-quality R&D services, the Company's business lines maintained rapid growth in sales revenue in 2023, with orders and revenue growth in overseas markets particularly prominent, and the Company's sales revenue maintained a rapid growth of over 34.3% in 2023. In 2023, the revenue from the antibody development business amounted to RMB175.9 million, representing a growth of 38.6% compared to the previous year. The revenue from animal model selling reached RMB272.8 million, marking a 61.1% increase compared to the same period last year. In 2023, overseas revenue accounted for RMB408.3 million, constituting 57.0% of the total revenue, with a 65.9% growth compared to the same period last year. With the phased completion of the Project

Integrum, the Company's large-scale research and development investment phase has ended. Research and development expenses decreased from RMB699.2 million last year to RMB474.4 million in 2023, representing a year-on-year decrease of approximately 32.2%. By adjusting our R&D strategy and enhancing our operational efficiency, the Company's expenses were effectively controlled, and the Company's loss in 2023 was narrowed by approximately 36.4% year-on-year. In 2024, we plan to further expand into high-margin overseas markets to sustain revenue and profit growth. Simultaneously, we aim to control research and development expenses and enhance operational efficiency to save costs, striving to achieve a near breakeven point by the end of 2024.

Our drug development business includes (i) antibody development business that we utilize our own antibody discovery platforms RenMice and Project Integrum to form 400,000 to 500,000 antibody sequences library for more than 1,000 targets which have the potential to identify potential therapeutic antibody molecules and via out-licensing or collaboration with partners to suit their various antibody modalities and continuous innovation requirements. In addition to licensing antibody sequences, we also provide early drug discovery services to our collaborators; (ii) selecting a small number of potential drug targets in the field of oncology and self-immunity, screen and obtain potential PCC molecules, independently advance to pre-clinical stage, and in the process of R&D advancement, joint development/authorization of transfer/transfer of development all or part of the product interests to other drug companies to obtain the upfront fee, the milestones payment and royalties, so as to achieve the sustainable growth of revenues in the short-term and the medium-to-long-term, fulfilling our vision of becoming a global headstream of new drugs.

Our pre-clinical research services include gene editing, pre-clinical pharmacology and efficacy evaluation, and animal models selling. We keep pace with the R&D needs of global biopharmaceutical companies, providing innovative and cutting-edge pre-clinical services and animal models for a wider range of indications. Our capabilities are validated through our years of services provided to multinational companies and domestic biotechnology companies and evidenced by our drug candidates cooperated with many partners. Our services and products are widely recognized by overseas and domestic customers and have provided the basis for our fast-growing revenues and high gross margins.

PRODUCTS AND PIPELINE

Relying on our original gene editing technology, we continue to expand our unique RenMice antibody development platform, and we continue to generate more promising antibody drug molecules for innovative drug targets. Through the large animal translational medicine platform, we continue to improve the success rate of clinical translation. On the other hand, our overall R&D strategy is to self-direct the early discovery of drug molecules, or a small number of promising drug molecules are autonomously advanced to the pre-clinical stage to form pre-clinical drug molecule assets, then enter into transfer or co-development deals with biotech and biopharmaceutical partners which will primarily drive the acceleration of the following pre-clinical development, clinical development and commercialization of individual antibody drug molecules. Through a large number of external transfers of antibody molecules at different development stages, we are entitled to receive upfront payments, milestone payments and sales royalties, which are our core business line to maintain revenue growth.

We have initially completed research and development of Project Integrum (千鼠萬抗) at the end of the third quarter of 2023, and have established a huge library of antibody sequences. Based on the highly differentiated antibody library, we intend to proactively explore and build strategic and synergistic partnerships with leading biopharmaceutical companies. We believe that the complementary expertise and resources of our partners and us will increase the success probability of our drug candidates and maximize their clinical and commercial value on a global scale. As of December 31, 2023, we have reached 103 co-development/out-licensing/transfer development deals, including but not limited to Merck Healthcare KgaA, Gilead Sciences, Inc. (“**Gilead**”), Neurocrine Biosciences, Inc. (“**Neurocrine**”), ADC Therapeutics, Radiance Biopharma Inc. (“**Radiance**”), Hansoh Pharma and Nanjing Chia-Tai Tianqing Pharmaceutical Company. More than 60 new deals were signed in 2023, nearly 30 of them have reached authorization, achieving rapid growth over last year.

Our pipeline includes drug candidates targeting novel targets or drug candidates with differentiated efficacy or safety profiles demonstrated in pre-clinical and clinical studies. As of December 31 2023, six out of our drug candidates are with out-licensing arrangements with different collaborators. Four of the five clinical-stage candidates have reached transfer authorization, and two of the five preclinical candidates have reached transfer authorization. We continue to cooperate with other pharmaceutical companies to co-develop antibody molecules no matter at clinical stage or at preclinical stage, leveraging the resources of partners to accelerate the drug development process. All of our drug candidates were discovered through our own antibody discovery platforms. We currently have no plans to invest our own resources to lead later Phase clinical for pipeline candidates development and commercialization in the near future.

The following chart summarizes our pipeline and the development status of each drug candidate as of the date of this announcement:

Candidate	Target	Combination	Indication	Pre-clinical	IND	Phase I	Phase II	Phase III	Right	Partner
★ YH001	CTLA-4	PD-L1+chemo	Sarcoma	America					Outside North America	TRACON Pharmaceuticals (North America)
YH002	OX40	YH003+YH001	Intratumoral Immunotherapy	Investigator Initiated Trials						Syncromune, Inc.
★ YH003	CD40	PD-1+chemo	Pancreatic ductal adenocarcinoma (first-line/second-line)	Global MRCT					Global	
		PD-1+chemo	Mucosal melanoma	China						
		PD-1+YH001	Solid tumors	Global MRCT						
YH004	4-1BB	Monotherapy	Solid tumors	Australia and China					Global	
YH008	PD-1 x CD40 BsAb	Monotherapy	Solid tumors	China					Outside Greater China	Chipscreen NewWay (Greater China)
YH012	HER2 x TROP2 BsADC		Solid tumors	CMC						Radiance
YH013	EGFR x MET BsADC		Solid tumors	CMC						Doma Biopharmaceutical
YH015	CD40 inhibitor		Autoimmunity	CMC					Global	
YH016	Undisclosed		Oncology	Discovery					Global	
YH017	Undisclosed		Autoimmunity	Discovery					Global	

Notes: ★ Core Product  Out-licensing/Co-development  Oncology  Non-oncology

- We jointly develop YH001 with TRACON Pharmaceuticals, and have an interest in product development and commercialization in China and royalties on net sales in North America.
- We granted Syncromune an exclusive license to use YH001, YH002 and YH003 as active compounds to develop intratumoral injection products globally using Syncrovax™ technology, with the right to receive upfront payments, milestone payments and royalties on net sales.
- We can collect licensing fee from RemeGen for licensing YH005.
- We and Chipscreen Biosciences Co., Ltd.'s holding company, Chipscreen NewWay, have reached an exclusive clinical development and commercialization agreement for the YH008 bispecific antibody in Greater China, including mainland China, Hong Kong, Macau, and Taiwan. And we retain global rights for YH008 outside of Greater China.
- We can collect licensing fee from Gene Quantum for PD-L1 mAb, and both parties jointly own the intellectual property rights.
- Full term of each abbreviation used:
 CD40: Cluster of Differentiation 40
 CTLA-4: Cytotoxic T-Lymphocyte-Associated protein 4
 OX40: Also known as TNFRSF4, Tumor Necrosis Factor Receptor Superfamily, member 4
 4-1BB: Also known as TNFRSF9, Tumor Necrosis Factor Receptor Superfamily, member 9
 PD-1: Programmed Death-1
 PD-L1: Programmed Death-1ligand 1
 ADC: Antibody Drug Conjugate
 CMC: Chemistry, Manufacturing, and Controls
 MRCT: Multi-regional Clinical Trial(s)
 HER2: Human epidermal growth factor receptor 2
 TROP2: Trophoblast cell surface antigen 2
 EGFR: Epidermal growth factor receptor
 MET: MET proto-oncogene

PROJECT INTEGRUM (千鼠萬抗)

Project Integrum (千鼠萬抗) is our proprietary large scale fully human antibody screening program that discovers promising antibody sequences and antibody molecules for external monetization or internal development. Project Integrum is our key R&D project, we have completed most of the work on Project Integrum by December 31, 2023. As of December 31, 2023, Project Integrum is progressing well, approximately 1,000 targets have been evaluated and more than 800 of them have been developed. Among others, we have knocked out more than 680 target genes in target knockout RenMab, and more than 270 target genes in target knockout RenLite, and are expected to obtain a library of 400,000 to 500,000 fully human antibody sequences covering more than 1,000 innovative targets. This antibody library is of high quality and rich in diversity, and can fully and adequately cover all antigenic epitopes of targets, forming a fully human antibody library to meet the different antibody development needs of various partner pharmaceutical companies. In the future, based on our RenLite and RenNano technology platforms, we plan to continue to introduce innovative drug-ready molecules, such as bis-antibodies and nano-antibodies, in order to expand the richness of the antibody library formed by Project Integrum.

Unlike traditional antibody development strategies, we have changed our approach from “preparing antibodies based on customer demand” to “developing hundreds of thousands of antibody molecules in advance for shelf-ready supply against thousands of targets”, which allows our customers to obtain high-quality antibody molecules for the drug targets they intend to develop instantly according to their R&D plans, without having to develop them from scratch. Based on the advantages of RenMice technology platform and RenMice knockout followed by immunization, we have formed a unique scale-up antibody development process, forming a globally unique library of high-quality, fully human antibody molecules, with a great diversity of antibody molecule libraries and complete antibody molecule data that can be used by various pharmaceutical companies to screen and obtain ideal antibody molecules according to their R&D needs. Generally, compared with the traditional drug development method, we can save more than 1-2 years of pre-clinical development time for our partners, thus greatly accelerating the progress of new drug development.

In respect of business model, we utilized co-development, out-licensing, transfer development and other collaboration opportunities to commercialise the generated antibodies. We have entered into collaborations with many drug discovery companies through upfront fees, milestone fees and royalties for the transfer of a large number of antibody molecules/sequences generated by Project Integrum, achieving revenue growth in the antibody development business in both the short and medium to long term. At the current stage, most of the annual sales revenue is from upfront fee and a small amount of milestone fee. In the future, as more antibody molecules/sequences are transferred, the growth of milestone fee and royalty revenue will become very significant, which is a very important source of revenue for us in the future.

In terms of cooperation, as at December 31, 2023, we have reached 103 co-development/out-licensing/transfer development deals, including but not limited to Merck Healthcare KgaA, Gilead, Neurocrine, ADC Therapeutics, Radiance, Hansoh Pharma and Nanjing Chia-Tai Tianqing Pharmaceutical Company. More than 60 new deals were signed in 2023, nearly 30 of them have reached authorization, achieving rapid growth over last year.

PRODUCTS AND PIPELINES

The following chart summarizes our pipeline and the development status of each drug candidate as of the date of this announcement:

Our Core Products

YH001 – a humanized anti-CTLA-4 IgG1 monoclonal antibody

YH001 is one of our Core Products. YH001 is a recombinant humanized anti-CTLA-4 IgG1 monoclonal antibody.

We completed a Phase I clinical trial in Australia to evaluate the safety, tolerability and pharmacokinetics of YH001 when combined with toripalimab in patients with advanced solid tumors, with the RP2D identified in April 2021. Data from the Phase I clinical trial showed a favorable safety and efficacy profile of YH001.

Data from the Phase I of YH001 combined with PD-1 in Australia is set out below. As of December 31, 2023, this study has been completed. YH001 was well tolerated up to 4.0mg/kg dose levels when combined with toripalimab. Among 26 evaluable patients out of 29 enrolled patients, five patients achieved PR and 11 patients achieved SD. The ORR was 19.2% (95% CI: 6.6, 39.4) and the DCR was 61.5% (95% CI: 40.6, 79.8) according to RECIST v1.1. We completed a Phase I clinical trial of YH001 as a single agent in patients with advanced solid tumors in China. Data from the Phase I clinical trial demonstrated that YH001 was well tolerated up to 6.0mg/kg dose levels and showed promising antitumor activity in some types of cancers.

We have reached an agreement with Tracon in the USA to explore indications such as sarcoma and other indications. The Phase I/II clinical trial of YH001 in combination with Envafolelimab and doxorubicin for the treatment of soft tissue sarcoma patients was approved by FDA in August 2022 and dosed the first patient in November 2022.

In addition, we intend to further explore the clinical research for additional solid tumor and other types of indications for YH001 by aligning with the partners' R&D programs.

YH001 – Collaboration with Tracon

Study on YH001/KN035SAR101 is a Phase I/II clinical trial sponsored by Tracon Pharmaceuticals expected to enroll 176 patients at multiple cancer centers in the USA. The primary objective of the Phase I portion of the study is to evaluate safety and tolerability and determine the recommended Phase II dose of YH001 when given in combination with the PD-L1 antibody envafolimab or given in combination with envafolimab and doxorubicin in patients with advanced or metastatic sarcoma. The primary objective of the Phase II portion of the study is to determine the objective response rate of envafolimab, YH001 and doxorubicin in patients with leiomyosarcoma and dedifferentiated liposarcoma who have not received immune checkpoint inhibitors or doxorubicin, and to determine the objective response rate of envafolimab and YH001 in patients with alveolar soft parts sarcoma and chondrosarcoma who have not received immune checkpoint inhibitors. The study began enrollment in November 2022 and the study is ongoing.

WE MAY NOT BE ABLE TO ULTIMATELY DEVELOP AND MARKET YH001 SUCCESSFULLY.

YH003 – a humanized IgG2 agonistic monoclonal antibody targeting CD40

YH003, a recombinant, humanized agonistic anti-CD40 IgG2 monoclonal antibody (mAb), is one of our Core Products.

We initiated the R&D of YH003 in 2017, and conducted a Phase I clinical trial in Australia to evaluate the safety, tolerability, efficacy and pharmacokinetics of YH003 in combination with toripalimab (anti-PD-1 mAb) in patients with advanced solid tumors. We also obtained the IND approval from the NMPA and conducted a Phase I clinical trial of YH003 as monotherapy in advanced solid tumor patients in China.

The Phase I clinical trial of YH003 in combination with PD-1 in Australia is now completed. A total of 26 patients (20 in part I dose escalation stage and 6 in part II expansion stage) were enrolled and received at least 1 dose of study treatment. Subjects in part I dose escalation stage received YH003 at 0.03, 0.1, 0.3, 1 and 3mg/kg and Toripalimab at a fixed dose of 240mg, iv q3W. Among the 26 enrolled patients, three patients achieved PR and six patients achieved SD. One subject after nearly 2 years of study treatment, achieved a tumor assessment of complete response (CR) in August 2022, and was keeping at CR status as of June 30, 2023.

Data from the Phase I clinical trial demonstrated that YH003 in combination with toripalimab was well tolerated and showed promising antitumor activity in some types of cancers, such as pancreatic cancer.

We received the IND approval for the Phase II MRCT from the USA FDA in June 2021, from the TGA in August 2021, from the MedSafe in November 2021, from the NMPA in October 2021 and from the Taiwan FDA in November 2021, and are conducting the study in patients pancreatic duct adenocarcinoma (PDAC) to explore the safety and efficacy of YH003 in combination with toripalimab, with or without chemotherapy, in the USA, mainland China, Australia, New Zealand, and Taiwan. The first patient was dosed in Australia in December 2021.

As of December 31, 2023, a total of 92 PDAC subjects were enrolled and received at least one dose of any study drug, including 47 subjects in the first line treatment group and 45 subjects in the second and later line treatment group. During the study, YH003 in combination with toripalimab, with or without chemotherapy, are well tolerated and achieved promising clinical efficacy. The study is ongoing and the results are expected to be reported in first half of 2024.

Study YH003006 is a Phase II clinical trial of YH003 in China to evaluate the efficacy and safety of YH003 in combination with pembrolizumab and albumin paclitaxel in the first-line treatment of patients with unresectable/metastatic mucosal melanoma.

As of December 31, 2023, 20 subjects were enrolled and exposed to YH003. During the study, YH003 was well tolerated and achieved promising clinical efficacy in this subtype of melanoma, which is highly prevalent in Asia. The study is on-going and the results are expected to be reported in the first half of 2024.

Study YH003005 is a phase I study of YH003 in combination with anti – PD1 and YH001 for the treatment of advanced solid tumors in China and Australia to evaluate the safety, tolerability and pharmacokinetics of the combination of YH003, YH001 and pembrolizumab in subjects with advanced solid tumors. As of December 31, 2023, 15 subjects in total were enrolled and exposed to YH003.

YH003 – Collaboration with Syncromune

The Company has entered into collaboration with Syncromune, Inc. (“**Syncromune**”), a clinical-stage USA biopharmaceutical company, to jointly develop and commercialize an intratumoral immunotherapy based on Syncrovax™ technology, a next-generation personalized oncology therapy, on YH003, please refer to “YH002 – Collaboration with Syncromune” for details.

WE MAY NOT BE ABLE TO ULTIMATELY DEVELOP AND MARKET YH003 SUCCESSFULLY.

Other Products

YH002 – an anti-OX40 mAb, with potential to combine with YH001

YH002 is a recombinant humanized IgG1 antibody that targets the human OX40 receptor (the “**TNFRSF4**”).

Study YH002002

We completed the FIH, multicenter, open-label and Phase I dose-escalation study in Australia to evaluate the safety, tolerability and pharmacokinetics and determine the MTD/RP2D of YH002 in subjects with advanced solid malignancies.

The study, starting dose at 0.01mg/kg, utilized accelerated titration and traditional “3+3” dose-escalation methodology with 8 dose levels of 0.03, 0.1, 0.3, 1.0, 3.0, 6.0, and 12.0mg/kg in sequential dose increments. This first-in-human (FIH) study of YH002 was completed with a 46.7% incidence of YH002-associated adverse events across all levels in the safety analysis set (n=15), the majority of which were Grade 1 or 2. A total of 2 (13.3%) subjects reported Grade 3 or 4 YH001-related TEAEs, and no Grade 5 drug-related TEAEs were reported. 3 (20%) subjects (all in the highest dose 3.0mg/kg group) reported serious adverse events related to the study drug, and there were no drug-related deaths. 1 case was observed in 3 subjects in the 3.0mg/kg dose group DLT, the results of this dose-escalation study showed that YH002 monotherapy was well tolerated at dose levels up to 2.0mg/kg.

All subjects in the study (n=15) experienced disease progression after at least one line of anticancer therapy, of which 5 (33.3%) were patients with advanced solid tumors who had experienced disease progression after 3 or more lines of prior therapy. Of the 15 subjects with at least one post-dose tumor imaging assessment, the investigators assessed that the best efficacy was stable disease (SD) in 3 subjects according to RECIST v1.1. Based on the efficacy analysis set, the investigator-adjudicated disease control rate (DCR) was 20%.

YH002 – Collaboration with Syncromune

In 2022, we entered into a license agreement with Syncromune. Syncromune will acquire an intratumoral immunotherapy consisting of YH002 and other active ingredients. It has subsequently been agreed that YH001 and YH003 are also included in the scope of the collaboration as selected active ingredients. In 2023, we have established technology transfer agreement with Syncromune. Under the newly signed agreement, Syncromune will be granted an option right and upon option-exercise, we will provide technical transfer to Syncromune for the manufacture of YH002 and other clinical-stage antibodies for its use of intratumoral immunotherapy based on Syncrovax™ technology. Under the newly signed agreement, Syncromune will pay an upfront fee and Eucure (Beijing) Biopharma Co., Ltd. (“**Eucure**”) is entitled to receive potential milestone fees. Currently, Syncromune has started clinical trials for this Syncrovax™ therapy in Mexico and obtained promising anti-tumor activity preliminary clinical data.

WE MAY NOT BE ABLE TO ULTIMATELY DEVELOP AND MARKET YH002 SUCCESSFULLY.

YH004 – a humanized anti-4-1BB Agonists

YH004 is a humanized anti-4-1BB IgG1 antibody, with a unique mechanism of action that differentiates itself from other anti-4-1BB antibodies.

We have initiated a Phase I clinical trial of YH004 in Australia and have completed the dosing of the first patient in December 2021. We have also received IND approval from the USA FDA in October 2021 and IND approval from NMPA in January 2022. The Phase I clinical trial is a FIH, multi-center, open-label and Phase I dose escalation study of YH004 as a single agent in subjects with advanced solid tumors or relapsed/refractory non-Hodgkin lymphoma. As of December 31, 2023, 17 subjects were enrolled and received 0.01mg/kg (n=1), 0.03mg/kg (n=1), 0.1mg/kg (n=3), 0.3mg/kg (n=3), 1.0mg/kg (n=3) and 3.0mg/kg (n=3) iv q3W. To date, YH004 monotherapy is safe and well tolerated up to 3.0mg/kg dose levels.

WE MAY NOT BE ABLE TO ULTIMATELY DEVELOP AND MARKET YH004 SUCCESSFULLY.

YH005 – Collaboration with RemeGen

YH005 is an anti-Claudin 18.2 antibody generated using our Claudin 18.2 knock-out mice. We have out-licensed Claudin 18.2 antibody YH005 to RemeGen to develop a YH005 ADC, which is also known as RC118. On September 6, 2017, we entered into an exclusive technology transfer agreement (the “**RemeGen Agreement**”) with RemeGen concerning the development and commercialization of the RC118 which we have transferred the global rights of YH005. The RC118 has obtained approval for Phase I clinical trials in Australia in August 2021, and has obtained approval for Phase I clinical trials in China in September 2021. The clinical studies are currently in smooth progress and ongoing dose creep study demonstrates good safety and tolerability. In December 2022, the RC118 has been granted two orphan drug designations by the USA FDA for the treatment of gastric cancer, including gastroesophageal junction cancer, and pancreatic cancer. In April 2023, the Phase I/IIa clinical study of RC118 in combination with PD-1 monoclonal antibody in Claudin18.2 expression-positive locally advanced unresectable or metastatic malignant solid tumors was formally approved by the CDE.

RemeGen initially reached out for co-development of YH005 after our successful development of Claudin 18.2 knock-out mice. We entered into collaboration with RemeGen as the tumoral and tissue-specific expression of Claudin 18.2 has great potential for ADC drugs and RemeGen has strong capabilities in the development of ADC drugs. We believe our collaboration with RemeGen is win-win for both parties and contributes to the value maximization of YH005.

WE MAY NOT BE ABLE TO ULTIMATELY DEVELOP AND MARKET YH005 SUCCESSFULLY.

YH008 – Collaboration with Chipscreen Biosciences

On February 27, 2023, Eucure Biopharma has reached an exclusive license agreement with Chipscreen NewWay Biosciences (“**Chipscreen New Way**”), a holding subsidiary of Shenzhen Chipscreen Biosciences Co., Ltd. (“**Chipscreen Biosciences**”, stock code: 688321.SH) for the clinical development and commercialization of YH008 bispecific antibody in Greater China (including Mainland China, Hong Kong, Macau and Taiwan). Eucure Biopharma reserves YH008’s global rights outside Greater China. Under the agreement, Chipscreen NewWay will pay Eucure Biopharma an upfront payment of RMB40 million, a potential development milestone payment of up to RMB360 million, a potential sales milestone payment of up to RMB196 million, as well as tiered royalties on net sales. For details, please refer to the announcement of the Company dated February 27, 2023. By December 31, 2023, Eucure Biopharma has received upfront fee and NMPA IND milestone payment.

YH008 will be advanced to clinical development stage by the Chipscreen NewWay R&D team. The target combination is the first of its kind in the world and belongs to therapeutic biologics category 1: innovative biologics. The molecule has been approved by China’s NMPA for a multi-center Phase I dose-escalation clinical study that will evaluate the safety, tolerability and preliminary efficacy of NWY001 (YH008) in subjects with advanced tumors. The study is currently in progress and patient enrollment for the Phase I study has begun on January 5, 2024.

WE MAY NOT BE ABLE TO ULTIMATELY DEVELOP AND MARKET YH008 SUCCESSFULLY.

YH012 – fully human anti-HER2/TROP2 bispecific antibody drug conjugate

YH012 is a first-in-class fully human anti-HER2/TROP2 bispecific antibody drug conjugate (“**BsADC**”) for therapeutic product development, manufacturing and commercialization for all human indications which is developed by using our RenLite platform.

HER2 and TROP2 are two tumor-associated antigens (“**TAA**s”) that have been found to be commonly expressed and co-expressed by multiple tumor types, including breast, gastric, colorectal, bladder, pancreatic, and non-small-cell lung cancer.

Based on fully human anti-HER2/TROP2 bispecific antibody, we entered into an exclusive option and license agreement with Radiance in January 2024. Under the terms of the agreement, upon the option exercised, we will be entitled to receive option fee, licensing fee, development and commercialization milestone payments, as well as single-digit royalties on net sales. In addition, we have the right to collect the sharing of sublicensing fee if any between Radiance and third party.

YH013 – fully human anti-EGFR/MET bispecific antibody drug conjugate

YH013 is a first-in-class fully human anti-EGFR/MET bispecific antibody drug conjugate (“BsADC”) for therapeutic product development, manufacturing and commercialization for all human indications which is developed using our RenLite platform.

EGFR and MET are two TAAs that have been found to be commonly expressed and co-expressed by multiple tumor types, including lung, colorectal, stomach, liver and pancreatic cancers.

Based on fully human anti-EGFR/MET bispecific antibody, we entered into an exclusive option and license agreement with Doma Biopharmaceutical (Suzhou) Co., Ltd in 2023. Under the terms of the agreement, we are entitled to receive upfront fee, development and commercialization milestone payments, as well as single-digit royalties on net sales. In addition, we have the right to collect the sharing of sublicensing fee if any between Doma and third party.

WE MAY NOT BE ABLE TO ULTIMATELY DEVELOP AND MARKET YH012 AND YH013 SUCCESSFULLY.

YH015 – a fully human IgG1 antagonistic monoclonal antibody targeting CD40

YH015 is based on RenMice, our fully human antibody mouse platform, and a unique *in vivo* drug screening strategy to rapidly obtain fully human antibodies with good *in vivo* and *in vitro* inhibitory activity and physicochemical properties. Meanwhile, the mutation modification of the Fc end of the antibody reduced the ADCC effect, prolonged the half-life of the drug, reduced the frequency of dosing, and had better clinical application value. CD40 inhibitors have the potential to be developed into drugs for autoimmune diseases, multiple sclerosis and organ transplantation. YH015 is currently at the CMC stage.

WE MAY NOT BE ABLE TO ULTIMATELY DEVELOP AND MARKET YH015 SUCCESSFULLY.

YH016 and YH017 – two novel molecules

YH016 is a novel fully human monoclonal antibody drug discovered with the RenMab platform. It specifically binds to a newly identified receptor that is restricted to myeloid lineage. The target of YH016 is shown to be highly enriched in multiple types of cancer, rendering YH016 is a promising therapeutics. Now, several candidates with excellent *in vivo* and *in vitro* activities have been obtained. YH017 is another fully human antibody drug based on the RenMab technology. It recognizes a key cytokine receptor expressed on T cells and natural killer cells. Blocking the cognate ligand binding can present the downstream signaling cascade that is essential for proper T cell activation, especially in the scenario of immune cell overactivation. YH017 has a strong potential for the treatment of multiple autoimmune diseases, e.g. colitis and rheumatoid arthritis. Currently, we have discovered an optimal candidate molecule with ultra-high affinity and blocking activity.

WE MAY NOT BE ABLE TO ULTIMATELY DEVELOP AND MARKET YH016 AND YH017 SUCCESSFULLY.

PRE-CLINICAL RESEARCH SERVICES AND PRODUCTS

Our pre-clinical research services and products primarily include CRO services such as pre-clinical pharmacology and efficacy evaluation, R&D and sale of innovative target animal models, and gene editing customization service business. These services lines are important business segments for the Company. The rapid sales revenue growth and higher profit level have continuously generated business cash flow for the Company and buttressed the soundness of our financial conditions.

In the face of the challenging market environment at home and abroad, the Company focuses its resources on markets and business lines with the potential for high growth. In the business line of pre-clinical CRO services such as animal model selling, the Company continuously expands the categories of animal models. Meanwhile, the Company complements the overseas sales team, enhancing coverage of local customers. A German subsidiary in Europe was established in 2022 and expanding and commissioned the Boston, USA test site, in the hope of better serving overseas pharmaceutical customers and leveraging the proportion of overseas sales. In 2023, the Company has further expanded the Boston, USA facility to triple its original size, which has officially opened in August. These measures achieved significant sales growth in the Reporting Period.

As one of the core drivers of our sales revenue growth, we continue to maintain a high level of R&D investment for the development of globally competitive and enriched animal models, as well as providing high-quality pre-clinical CRO services to domestic and international pharmaceutical clients, maintaining high gross margins and rapid revenue growth despite the challenging market environment.

Animal Model Selling

Leveraging our advanced gene editing technologies, we have created a comprehensive set of antibody discovery and disease mouse models by editing the gene of mice, creating animal models suitable for *in vivo* efficacy evaluation. Our antibody discovery and disease mouse models included more than 3,100 unique gene-edited mouse/cell line projects.

The combination of an extensive portfolio of animal models and large-scale animal production and *in vivo* efficacy studies has enabled us to successfully conduct large-scale *in vivo* antibody discovery and screening for our own internal assets and initiatives as well as providing disease animal models and *in vivo* pharmacology services to biotechnology and large pharmaceutical company clients worldwide.

In the business line of R&D and sales of innovative animal models, the Company keeps launching hundreds of new animal models in the market every year, while expanding the customer base at home and abroad, and leveraging the scale of the animal facility in Nantong, Jiangsu Province, to provide more customers with better animal model products. These initiatives ensured that the Company made satisfactory sales growth in the Reporting Period.

Animal Models

Animal models that mimic human pathological environments through the modification of key genes are essential tools in the current drug development process. Drug evaluations using these models are considered the “gold standard” for validating the efficacy of pre-clinical drugs. Based on the gene editing humanized mouse model, we have developed mouse models for tumor and autoimmune diseases, which are used for gene function research and drug development. Using marketed and self-developed antibody drugs for *in vivo* drug efficacy testing in mice, combined with physiological, biochemical, blood, toxicity and other factors, we are able to verify the validity of the models and sell disease model mice to our customers.

Current disease types of animal models are mainly focused on tumor and autoimmune. We are actively investigating new animal models and cellular assay models, constructing tumor models using gene-edited humanized mice, testing the inhibitory effects of anti-tumor antibody drugs, chemotherapy drugs and targeted small molecule drugs on tumor growth, and providing more data support for drug screening of tumor drugs and clinical declarations. For autoimmune, we are focusing on inducing autoimmune diseases (asthma, experimental autoimmune encephalomyelitis, psoriasis, etc.) in gene-edited humanized mice and testing the therapeutic effects of cytokine-based antibody drugs.

In addition to tumor and autoimmune diseases, we are further expanding the disease areas of animal models, such as neurological, cardiovascular and metabolic diseases, to provide pre-clinical *in vivo* and *in vitro* drug efficacy testing for drug development.

(i) Humanized Mice

Immune Checkpoint and other Humanized Mice

Most human antibody drugs can only recognize and interact with human antigens, and due to species differences, pre-clinical pharmacodynamic and pharmacokinetic evaluation and testing cannot be performed directly with wild-type mice. Therefore, it is necessary to humanize mouse immune checkpoints as well as other targets such as GPCR and express human-related antigens in mice, so that human antibody drugs can produce normal drug responses in mice.

Relying on an efficient and stable gene technology platform and a scientific and standardized model animal production center, we considered the factors that may interfere with the expression of humanized proteins, carried out detailed evaluation and made a precise design for each subject and developed a series of immune checkpoint and other humanized mice based on the genetic background of C57BL/6. In order to ensure that the mouse model is fully humanized, we excluded the influence of external environment factors on the expression and signaling of humanized proteins, and provided an effective model and powerful tool for drug validation of immune checkpoint and other targets antibodies.

Cytokine and Cytokine Receptor Humanized Mice Format Homologous Immune Checkpoint and Other Humanized Mice. The mechanisms of cytokine involvement in autoimmune diseases have been studied in depth. AbbVie has developed adalimumab, which targets TNF, and has been approved by the FDA for 11 indications, including rheumatoid arthritis and psoriatic arthritis. Other antibodies targeting cytokine also have good market prospects in autoimmune diseases and oncology.

Cytokines usually have complex signaling pathways. By studying the mechanism of action of cytokines, we have humanized the key cytokines or cytokine receptors in mice, allowing the *in vivo* evaluation of the efficacy and pharmacological effects of human cytokine or cytokine receptor antibody drugs in mice. We believe such coverage can meet a substantial majority of the pre-clinical drug evaluation needs of cytokine or cytokine receptor antibody drugs for pharmaceutical companies.

(ii) *Severe Immunodeficient (B-NDG) Mice*

B-NDG (NOD.CB17-Prkdcscid IL2rgtm1/Bcgen) mice, which we independently developed, are obtained from mice with NOD-scid genetic background by IL2rg gene knockout. B-NDG mice have a severe immunodeficient phenotype, lack mature T-cells, B-cells and NK cells, and are deficient in cytokine signaling, making them ideal drug development vehicles for human hematopoietic stem cells, human peripheral blood mononuclear cells, human tumor cells or tissue transplantation.

The intellectual properties of our animal models for sale generally belong to the Company. As our model animals would generally not be applied directly towards a product candidate of our clients, there were no intellectual properties allocation discussions with our clients of animal models during the Reporting Period. We typically enter into framework agreements with our clients for a term of one to five years and take clients' work orders under such framework agreements. We decide fee rates and payment terms together with our clients considering multiple factors, including the development cost of certain model animals, breeding expenses, and quantity requested. We generally require our clients to make full payment within a month after the invoice date. Generally neither our client nor us have the right of termination unless a force majeure event occurs.

Models for Human Immune System Reconstitution

In order to solve the problems of maintenance and differentiation functions of hematopoietic cells and restricted development of immune cells in severely immunodeficient mice, we have developed a series of second-generation products based on B-NDG mice to meet different research needs. For example, B-NDG B2m KO plus mice can delay the GVHD effect in PBMC reconstitution model, thus achieving a longer dosing window without affecting the half-life of antibody drugs. Additionally, B-NDG hIL15 mice can better promote the immune reconstitution of human NK cells and B-NDG hTHPO mice do not need irradiation to be reconstituted, thus can avoid radiation damage to mice.

Pre-Clinical Pharmacology and Efficacy Evaluation

Our pharmacology team, which is based in China and the USA, has built expertise in testing novel therapeutics such as mAbs, ADCs, BsAb and BsADC, CAR-Ts and CAR-NKs, mRNA-LNP and gene therapy and other therapeutic modalities for immuno-oncology, immune and autoimmune, CNS, Ocular diseases as well as metabolic diseases as well as kidney diseases to support drug discovery and development worldwide. Our services utilize a large collection of genetically humanized mouse models for checkpoint inhibitors and cytokine/cytokine receptors, highly immune-deficient B-NDG mice and their variants, including CDX models and engineered cell line models, among others. Our pharmacology services include *in vivo* efficacy, PK/PD, biomarker assessments, toxicology and safety evaluation, *in vitro* immune cell and cytokine profiling and cell functional assays. Our pre-clinical pharmacology studies have supported a number of IND applications and clinical trials. We have completed more than 3,000 drug evaluation projects for approximately 500 partners globally.

We determine our fee rates for pre-clinical pharmacology and efficacy evaluation services primarily based on types of animal used and types of service provided. Animal fees are set by types of animals utilized, and service fees are determined by allocation of staff resource, duration and materials required for the projects based on the type of services such as oncology PD, immune reconstitution and autoimmune disease. Duration of our agreements with customers on pre-clinical pharmacology and efficacy evaluation services is based on complexity of the project, which typically lasts for no longer than one year. Payment terms are set by project and we are generally entitled to upfront payments and project closing payments by our customers. As we are a service provider for our pre-clinical pharmacology and efficacy evaluation, the intellectual rights relating to the project belong to our customers.

In Vivo Pharmacology Capabilities

Our *in vivo* pharmacology team has successfully developed and validated hundreds of syngeneic and xenogeneic tumor models to meet the scientific objectives of our clients. The animal models include our internally generated humanized mice and humanized cell lines carrying functional human genes that express identified human therapeutic targets or customized targets per clients' interests. Employing the humanized cell lines and the humanized mice results in a tailored therapeutic strategy with a complete biology to evaluate the efficacy of different types of human therapeutic molecules (monoclonal antibodies, bi-specific antibodies, ADCs, vaccines, etc.) against the therapeutic targets of interest. Furthermore, tumor cell implantation through different routes including orthotopic injection delivers favorable translatable data to support clinical studies. All these models cover broad immune-therapeutic areas and greatly increase translation from pre-clinical research to clinical studies for drug development.

Besides the tumor models, *in vivo* pharmacology services have also developed several translatable immune and autoimmune inflammatory disease models and CNS diseases, Ocular diseases, metabolic disease models as well as kidney diseases models in both wild-type and humanized mice to extend our research and services to broader therapeutic areas and better support our clients in their research and drug development.

Our model-based *in vivo* efficacy services have high scale screening capabilities to support molecule selection, drug comparison, or drug evaluation by *in vivo* activity assessment. Complementary to our *in vivo* capabilities, our *in vitro* pharmacology services include immune cell profiling, cytokine profiling, primary T, NK, and macrophage cell-based functional assays, among others. Our integrated *in vivo* capabilities and *in vitro* pharmacology capabilities enable us to provide a complete PoC and MoA for drug development.

Pharmacokinetics (PK) & Pharmacodynamics (PD)

Antibody drug pharmacokinetics are deeply influenced by target expression (target-mediated clearance) and FcRn (neonatal Fc receptor) expression, which can extend antibody half-life. Because human antibodies have different affinities to the targets, and FcRn expressed in animal species differ from that expressed in human, the PK profile of human antibodies from animals may not be translatable to human. Our humanized mice could express human therapeutic targets, and FcRn humanized mice enable more translatable evaluation of human antibody PK in mice, which could help to address these issues. Due to the growing limited availability of non-human primates, humanized mice may have increased value in non-clinical PK and toxicity studies for biologic drug development.

Utilizing target humanized mice and FcRn humanized mice, we have established a comprehensive PK/PD service platform in which we perform a series PK/PD studies to characterize drug exposure, predict dosage requirements, understand concentration-effect relationships, establish safety margins and efficacy characteristics, and develop the drug's product profile to support drug development and clinical trials. The PK/PD evaluation is also supported by our *in vitro* capabilities. Also, cell-based assays including ADCC and CDC assist with *ex vivo* or *in vitro* PD evaluation and identification of the MoA.

Small Animal Toxicology and Safety Study

Humanized mice can provide favorite translatable results in the toxicology and safety evaluation of drug candidates and are recommended by the FDA. We have established toxicology and safety evaluation platforms using our humanized mice and highly immune deficient B-NDG mice. Our comprehensive toxicology and safety readouts include blood biochemistry liver and renal function evaluation, histopathology evaluation, CRS evaluation, ADA test and more, which are the common side effect tests for current immunotherapy. We believe our pre-clinical toxicology and safety evaluation provides very predictive data to support drug candidate evaluation and may guide the design of clinical studies.

Gene Editing

Our gene editing technology lays a solid foundation for our antibody discovery and development platforms. Leveraging our advanced gene editing technologies, we have launched Project Integrum, developed transgenic RenMice platforms and created a comprehensive set of antibody discovery and animal model platform. Gene editing is a technique for making specific modifications to segments of an organism's DNA, which is usually used to achieve modifications such as the addition and deletion of specific DNA segments, deletions and substitutions of specific bases. Gene editing can make permanent changes in the genome of an organism, and these changes can take place throughout the body or in specific tissues. Models such as animals or cell lines obtained by gene editing technology can simulate specific physiological, pathological and cellular characteristics of humans, and thus play an important role in studying the functions of genes, elucidating the genetic evolution of organisms, the molecular mechanisms of disease occurrence and providing relevant evaluation of drugs for disease treatment.

In the area of gene editing customized services, we have shifted the focus to overseas pharmaceutical company customers and emphasized to serve internal R&D and innovations so as to enhance the profit level and value contribution of the gene editing business line.

Our Gene Editing Technology

Our gene editing technology lays the solid foundation for our antibody discovery and development platforms. Leveraging our advanced gene editing technologies, we have launched Project Integrum, developed a series of transgenic RenMice platforms and created a comprehensive set of antibody discovery and animal model platform.

We have developed powerful gene editing platforms, SUPCE, CRISPR/EGE and ESC/HR, through more than a decade of dedicated research, which serves as our driving force for underlying technological innovations. Since our establishment, we have been providing customized gene editing services based on animals as well as cells to meet the needs of basic science research and drug development of our customers. Leveraging our advanced gene editing technologies, we have completed approximately 4,700 customized gene editing projects for our clients and self-developed approximately 3,100 gene edited animal and gene edited cell model products.

Customized Services

We mainly provide customized gene editing services based on rat/mouse and cell lines, and the final products are animal or cell line models with specific genotypes, genotype detection reports and project closure reports. In addition, we also provide a series of gene editing experimental services such as sgRNA plasmid construction and sgRNA activity detection:

- **Animal-based Gene Editing Services.** We are mainly engaged in customized gene editing services for rat/mouse. Mice are easy to handle, have a short life cycle, high reproductive capacity, and have similar genomic and physiological characteristics to humans, thus are often used as animals of choice for studying human gene function and disease mechanisms. Mice are also the most intensively studied animal for genomics, transcriptomics, proteomics and genetic phenotyping. Rats have a higher similarity to humans in terms of nervous system compared to mice and are often used as pharmacodynamic models in related fields. We provide customized gene editing services for rat/mouse using mature and stable ESC/HR-based and CRISPR/EGE-based gene editing technologies. We perform gene editing modification based on several rat/mouse strains. The mouse strains for which gene editing services are provided mainly include C57BL/6, BALB/c, DBA2 and NOD-scid, and the rat strains mainly include Sprague Dawley and Wistar.
- **Cell Line Based Gene Editing Services.** Compared with gene editing animal models, cell line models have the advantages of convenience, short cycle time and low cost. Stable cell lines play an important role in gene function research, recombinant protein preparation, drug screening and target validation, tumor therapy and other research. We provide a variety of cell line gene editing services using ESC/HR-based and CRISPR/EGE-based gene editing technologies.
- **Gene Editing Experimental Services.** We provide customized gene editing services based on rats and mice as well as cell lines along with supporting experimental services.

We have mastered ESC/HR-based gene editing technology and CRISPR/EGE-based gene editing technology based on our years of dedicated research and technical accumulation.

RenMice platforms for generation of a diverse repertoire of fully human antibodies

Compared with other common gene editing technologies that can only edit gene fragments less than 30,000 bases at a time using plasmid, our proprietary in-house developed SUPCE technology allows for megabase-scale chromosomal editing, with high stability and reproducibility. Our SUPCE technology is well validated by our RenMice platform, which was successfully developed applying this technology. We achieved full length *in situ* gene replacement for diverse antibodies in RenMice and produced very healthy mice retaining a strong immune system.

We have developed RenMice platforms to generate a diverse repertoire of fully human monoclonal antibodies and bi-specific antibodies. Our RenMice platform consist of three different chromosome engineered mice with fully human immunoglobulin variable domains replacing mouse counterparts, namely RenMab, a fully human antibody mouse, RenLite, a fully human common light chain mouse and RenNano, a fully human heavy chain only mouse. Based on RenMab, we have developed a new RenT Cell Receptor-Mimic (RenTCRm) technology platform for drug development of antibodies against intracellular targets and developed a new GPCR antibody technology platform for the discovery of therapeutic antibodies against GPCR and other challenging targets.

Our RenMice platforms are competitive and validated through external licenses. As of December 31, 2023, we reached license and trial collaboration agreements with dozens of well-known multinational pharmaceutical companies and leading pharmaceutical companies such as Merck Healthcare KGaA, Johnson & Johnson, Xencor, BeiGene and Innovent, all of which are independent third parties of us. The licensing of the RenMice technology platform will allow us to receive upfront fees, milestone fees and royalty. In March 2023, the Company entered into the license agreement with Janssen Biotech, Inc., one of the Janssen Pharmaceutical Companies of Johnson & Johnson. For details, please refer to the announcement of the Company dated March 8, 2023.

RenMab

Our RenMab platform uses RenMab mice for the discovery and generation of fully human monoclonal antibodies. Our in-house developed RenMab mice are transgenic mice with full human heavy chain variable region and kappa light chain variable region replacement *in situ*. RenMab mice carry the full human immunoglobulin variable region repertoire, which have an intact immune system and are healthy even after gene editing.

This proprietary, megabase-scale gene editing technology enables the efficient replacement of the entire murine immunoglobulin heavy chain and kappa light chain variable domains (including distal Vk) with the corresponding human immunoglobulin variable domains *in situ*. Thus, our RenMab mice are as healthy as regular wild-type mice, and well suited to knock out drug target genes. The knockout mice are an essential building block of our Project Integrum.

With the full human heavy and light chain variable region, RenMab mice are able to produce a diverse repertoire of antibodies. This then allows us to optimize and select antibodies with the best specificity and affinity at subnanomolar ranges in the lead antibody screening process.

The independently self-developed key technology of RenMab platform has been granted a Chinese patent and an USA patent in 2023. For details, please refer to the announcements dated July 11, 2023 and December 5, 2023.

RenLite

Our RenLite platform uses RenLite mice to produce diverse bi-specific antibodies with high affinity and to generate bi-specific ADCs. In our RenLite mice, the mouse heavy chain antibody gene variable region is replaced with full human heavy chain variable region *in situ*, which results in diversified heavy chain repertoire similar to that of humans. In contrast, the kappa chain variable domain has been replaced by a single fixed human common kappa light chain. Presence of the single human common kappa chain ensures light chain complementarity to seamlessly resolve the light chain and heavy chain mismatch issues often seen in bi-specific antibody platforms, thereby greatly reducing the difficulty of CMC process development.

In addition to bi-specific antibodies, our RenLite mice are able to generate antibodies for bi-specific ADCs. Our bi-specific ADCs can be used to effectively target two tumor-associated antigens and deliver the payload specifically to tumor cells, overcoming the non-tumor cytotoxicity of traditional ADC drugs. YH012 and YH013 are bispecific antibody ADC molecules generated by Renlite platform.

RenNano

Our RenNano platform uses RenNano mice to produce heavy chain antibodies on the basis of RenMab mice with further modification on antibody heavy chain constant region. Compared to few other nano-antibody models in the world, our RenNano mice carry the complete human antibody heavy chain variable region gene in an *in situ* swap, producing a fully human single chain antibody fragment sequence that can be used for drug development without further *in vitro* humanization, saving significant time and expense, and reducing the risk of subsequent development. Based on the rapid reproductive capacity of mice and the proven technology for preparing mice monoclonal antibody, RenNano mice can be used for high-throughput development of fully human heavy chain antibodies at scale compared to other single chain antibody fragment animals such as alpacas. Immunization of RenNano mice with a variety of different antigens resulted in heavy chain antibodies with diverse complementarity determining region 3 sequences and abundant recognition epitopes. These antibodies bind antigen independent of the light chain and have a high affinity at the nM level. Experiments have shown that antibodies derived from RenNano have good biological functions *in vitro* and *in vivo*. Due to its simple structure and no pairing, it is suitable for modular assembly, and even more so, for the construction of more innovative drug-forming forms such as dual antibodies, multibodies and CAR-T.

RenTCRm Platform

RenTCRm platform (the “**RenTCRm Platform**”) is heavily modified based on RenMice to become HLA/RenMab to produce fully human antibodies that accurately recognize intracellular MAP epitopes and produce antibodies against intracellular antigens. HLA/RenMab is designed to break through the limitations of traditional antibody therapy that mainly targets cell membrane surface antigens, such as PD-1 and PD-L1, or soluble antigens, as well as the immune escape of tumor cells caused by the usually low affinity of antibodies that recognize the TCR of tumor antigens for the corresponding antigens. The RenTCRm Platform focuses on screening antibodies with much higher affinity and specificity than TCR by replacing them with antibodies that can effectively target intracellular antigens. Based on the advantages of HLA/RenMab mice, we can obtain fully human antibodies that recognize MAP epitopes and produce antibodies against intracellular antigens in one step, while ensuring *in vivo* affinity maturation and screening of antibodies with better affinity and specificity than TCR.

The fully human antibody sequences obtained from the RenTCRm Platform provide more candidates for subsequent antibody-related drugs, CAR-T and other fields. It provides additional intracellular targeting options for targeted removal of specific abnormal cells such as tumor cells, infected cells, and senescent cells. In addition, TCR-like blocking antibodies can also be screened for specific cells that are attacked by self-exempt diseases to avoid damage to normal tissues.

GPCR Platform

GPCR platform (the “**GPCR Platform**”) is developed based on RenMice. GPCR (G protein-coupled receptor) is the most abundant membrane protein in the human genome. Its primary function is to transmit extracellular information into the cell, causing various cellular responses. Many GPCR and transmembrane proteins are potential drug targets. However, they have small extracellular domains and are not soluble, which makes it difficult to obtain antibodies by traditional methods. Our GPCR antibody discovery platform can address these difficulties. The platform immunizes antigens with native conformation and enhanced immunogenicity by DNA immunization and other methods. In addition, by utilizing target knock-out RenMice (RenMice KO), the platform generates fully human antibodies with great diversity to increase the screening success rate.

To cultivate a high-quality talent pool and ensure delivery of professional services, we have developed on-site training programs that provide training courses on a variety of cutting-edge scientific and technical topics, as well as also tracking, evaluating and reporting each employee’s training progress.

As of December 31, 2023, the Company had approximately 366 R&D personnel engaged in Project Integrum as well as preclinical research services. For the year ended December 31, 2022 and 2023, our R&D expenses were RMB699.2 million and RMB474.4 million, respectively. The R&D expenses on the Core Products was RMB65.5 million for the year ended December 31, 2023, accounting for approximately 13.8% of the R&D expenses during the same period.

MARKETING AND BUSINESS DEVELOPMENT

We procure business through the efforts of our marketing and business development teams and customer referrals. Our marketing and business development team is dedicated to increasing our brand awareness, expanding our global customer base and strengthening our relationships with existing customers to drive more business opportunities. The Company has established a sales system covering Asia-Pacific, North America and Europe. On the one hand, the Company continues to consolidate the leading edge of its domestic business and maintains steady and healthy growth; on the other hand, it continues to expand its overseas markets and maintains rapid growth in overseas sales revenue.

In terms of market strategy, we continue to actively develop overseas markets to drive the rapid growth of overseas revenue. By increasing publicity, we have shaped the image of our Company as a professional biotechnology company and expanded our recognition in the industry; we have expanded and adjusted our sales team according to different business lines and types of customers, added new coverage areas, and strengthened our quick response to customers' needs; we have expanded the Company's R&D and production facilities in Boston and expanded the R&D and production teams of our Boston subsidiaries, so that we can better provide localized services to our USA pharmaceutical customers. We achieved income from pre-clinical business related to CRO of the Company continues to maintain rapid growth and a relatively high gross profit level, and we keep long-term business cooperation with all top ten overseas pharmaceutical companies. The total revenue of overseas business and its proportion of our total revenue continue to increase.

Since 2022, the Company has optimized and upgraded its North American and European sales network. In the year of 2022, we set up a new subsidiary in Heidelberg, Germany, and started to have sales teams based all over Europe. In May 2023, the Company set up an office in San Francisco, USA and officially put it into operation, which is able to provide timely response service for customers on the west coast of the USA. In August 2023, the Company has relocated to the newly leased laboratory and animal house in Boston, USA, and the commissioning of the new facilities is able to bring the Company a greater business carrying capacity. In addition, we are recruiting more business developers with abroad bases to actively expand coverage of local customers and explore overseas markets. In the future, we will further complement overseas investment and improve the amount and proportion of our overseas sales revenue.

Based on the RenMice platform, our antibody discovery platforms continue to produce potential antibody molecules and have reached co-development/licensing agreement with domestic and foreign pharmaceutical companies at different stages. Our antibody development business has continued to grow at a high rate since 2020, while maintaining a very high gross profit margin. Our customer base has expanded from well-known domestic biotech companies to famous pharmaceutical companies around the world, and the upfront payment, milestone payment and royalties of a single contract keeps improving.

For the year ended December 31, 2023 and up to the date of this announcement, we had not commercialized any of our Core Products on the market. We have not formulated any definitive pricing policy for our Core Products yet. We are accelerating the development of our clinical and pre-clinical product assets by entering into collaborations with a number of domestic and international pharmaceutical companies. In the future, we will continue to pursue this product development strategy and enter into more collaborations with pharmaceutical companies to advance and commercialize our assets.

RESEARCH AND DEVELOPMENT

We are committed to providing innovative services to support our customers' ground-breaking and complex new drug R&D projects in China and around the world. Towards this goal, we have constantly invested in improving our technologies and advancing our service capabilities. Such investments have allowed us to remain at the forefront of the latest technology trend in our industry, develop novel solutions for our customers and maintain our competitive position. We strive to further enhance our technical capability through internal research and development as well as collaboration with our partners and customers.

Manufacturing

Animal Model Production

We have established animal model production centers, including three animal facilities encompassing a total of approximately 55,000 sq.m. animal facilities. Our large facilities allow us to have a broad set of genetically engineered mice, disease mouse models and aged small animal with a significant cost advantage.

Collaboration with CROs and CDMOs

CROs and CDMOs, as our supplier, conduct and support the research and development and clinical trials of our assets products, whether the drug assets are in the development phase of our own initiative or after we have reached cooperation with partners. The pre-clinical CROs mainly provide us with services related to pre-clinical toxicity and safety evaluations, such as animal studies, of our Core Products in accordance with our study design and under our supervision. We collaborate with our CDMO partners for the manufacturing of a portion of our drug candidates, in particular our Core Products, to supply for use in pre-clinical studies and clinical trials. For details, please refer to “Supplier” and “External Business Development” in this announcement.

PROPOSED ISSUE OF A SHARES

The Company held a Board meeting on March 6, 2023 to propose issue of A Shares and listing on the Sci-Tech Board of the Shanghai Stock Exchange and held the extraordinary general meeting on April 20, 2023 to approve the related resolutions. The Company has submitted the application materials in respect of the proposed issue of A Shares and has received a letter of acceptance issued by the Shanghai Stock Exchange in respect of the application for the proposed issue of A Shares. The issue of A Shares will be subject to approvals by the China Securities Regulatory Commission and the Shanghai Stock Exchange. On June 20, 2023, the Company received a letter of acceptance issued by the Shanghai Stock Exchange in respect of the Company’s application for the proposed issue of A Shares. On January 5, 2024, the Company submitted the response to the enquiries from the Shanghai Stock Exchange. For details, please refer to the announcements dated March 6, 2023, March 15, 2023, June 20, 2023 and January 5, 2024 and the circular dated March 31, 2023.

QUALITY MANAGEMENT

We have a quality management department that devotes resources to the quality management of our products. Based on our novel idea to develop antibody drugs, we have established our own quality control system with reference to the ISO9001, GMP and GLP systems. Our quality control system devotes significant attention to quality control for the designing, R&D, manufacturing, testing and transportation of our products and product candidates. Our management team is actively involved in setting quality policies and managing our internal and external quality performance.

As of December 31, 2023, our quality management department consists of approximately 38 employees. Our quality management team members have rich experience in quality management and successful drug filings to the USA FDA and the NMPA.

SUPPLIERS

Suppliers are important business partners of the Group, and the selection and management of suppliers are directly related to the quality of the Group's products. Therefore, relying on an excellent supply chain management to ensure the quality of our suppliers and products is a top priority. In order to effectively standardize and manage our supplier selection process, we have formulated a series of policies to provide a system guarantee for supplier access, selection, approval, monitoring, and evaluation and clarified the responsibilities of internal procurement personnel.

Before selecting a supplier and signing a contract with it, we will conduct due diligence to evaluate the price, quality, reputation, ability, and technology of the potential supplier to deliver products and services, and may request it to send samples, product trial inspection or on-the-spot investigation by personnel. The due diligence results will be included in our qualified supplier database after being reviewed by the purchasing department. We also require suppliers to provide corporate certifications, including but not limited to quality and/or environmental management system certifications, to ensure compliance with national and international standards. At the same time, in accordance with the policies related to supplier selection, we regularly conduct assessments of all suppliers to verify the effectiveness of their quality systems and service performance, and the assessment results serve as the basis for supplier evaluation. For suppliers who cannot meet the basic procurement requirements and whose assessment results are eliminated, all departments must immediately terminate cooperation with them and replace them with suppliers with better performance.

As at December 31, 2023, the Group had approximately 1,900 suppliers, of which more than 1,850 were from China. As of December 31, 2023, we conducted assessments for major suppliers to examine whether their supply performance meets our requirements for quality, service and price. Our main suppliers include suppliers of materials, assets and services.

EXTERNAL BUSINESS DEVELOPMENT

In line with industry practice, we collaborate with CROs and CDMOs to conduct and support our R&D and clinical trials of our assets products, whether the drug assets are in the development phase of our own initiative or after we have reached cooperation with partners. Our CRO partners are usually reputable or multinational companies that primarily engage in biopharmaceutical development, biologic assay development, clinical development, clinical trials management, pharmacovigilance and outcomes research. CROs generally provide a comprehensive suite of services to assist us in the implementation and management of clinical trials, including trial preparation, source data verification, clinical safety management, data management and report preparation. Our CDMO partners are usually multinational companies that primarily engage in the development and manufacture of drugs. We collaborate with our CDMO partners for the manufacturing of a portion of our drug candidates, in particular our Core Products, to supply for use in pre-clinical studies and clinical trials.

For the year ended December 31, 2023, the expenses for CROs and CDMOs attributable to the R&D of our Core Products were RMB51.40 million. We select CROs and CDMOs based on various factors, such as academic qualifications, industry reputation, compliance with relevant regulatory agencies and cost competitiveness. In addition, we consider their ability to facilitate site selection, timely recruit patients and conduct complex clinical trials efficiently with high quality. We typically enter into a general service agreement with a CRO or CDMO for clinical trial management services under which we execute separate work orders for each clinical development project. We closely supervise these CROs and CDMOs to ensure their performance in a manner that complies with our protocols and applicable laws, which in turn protects the integrity and authenticity of the data from our trials and studies.

INTELLECTUAL PROPERTY

Intellectual property rights are important to our business. We develop and use a number of proprietary methodologies, analytics, systems, technologies, trade secrets, know-how and other intellectual property during the conduct of our business. As of December 31, 2023, we had 276 registered trademarks, 144 registered patents and 4 software copyrights, and filed 383 patent applications in 21 countries or regions. We also have 10 issued patents and 28 filed patent applications in relation to our Core Products.

FUTURE AND PROSPECTS

In 2023, in light of the changes in the macroeconomic environment and the severe challenges in the biopharmaceutical industry, we focused on adjusting our Company's development and continued to optimize our operational efficiency. We are pleased to see that the Company's sales revenue, sales returns, and contracted orders all achieved faster growth, especially overseas sales revenue and orders maintained more significant growth. After the Company's various restructuring initiatives came into effect, we realized a significant narrowing of losses. In 2024, the Company will continue to adhere to the strategic goal of "open source and cut costs", rapid growth in sales revenue of all business lines, while ensuring sufficient investment in research and development in order to consolidate the competitive advantage of the core business, and at the same time, continue to improve operational efficiency and control expenses, it is expected that the Company's losses will continue to narrow rapidly in 2024, and is expected to achieve close to break-even in 2024.

The Company plans to continuously develop various innovative target animal models covering more disease areas through gene editing technology platforms, maintaining a competitive advantage in the global high-end animal model field. Simultaneously, the Company intends to expand disease areas based on independently developed animal models, enrich the types of services provided externally, and enhance and strengthen its advantages in preclinical CRO services.

Additionally, the Company will keep pace with drug development trends by continuously researching and expanding the RenMice series antibody discovery technology platform. It will continue to enrich the highly diverse and high-quality antibody molecular library discovered through the Project Integrum. By licensing or transferring, the Company will cooperate with numerous pharmaceutical or biotechnology companies both domestically and internationally to maintain the rapid growth of its antibody development business. Simultaneously, the Company plans to allocate a certain amount of research and development expenses annually to advance a few promising antibody molecules through various stages before IND filing. During the process of independent research and development, the aim is to achieve external transfer to maintain commercial flexibility in external transfers and ensure a reasonable return on investment.

While continuing to deepen its presence in the domestic market, the Company will continue to expand its commercial development in overseas business. Through continuous R&D, the Company will introduce competitive products and research services to enhance its attractiveness to overseas customers and maintain global competitiveness. The Company plans to further expand its overseas sales and business development teams to cover broader regions and potential customers. Meanwhile, the Company has expanded the scale of its research service facilities in its subsidiary in Boston, USA, to better provide localized services to customers and respond promptly to the needs of target customers.

The Company will also devote to enhancing operational efficiency.

The Company's vision is to "become a global headstream of new drugs", and we firmly believe that the Company is moving forward towards this goal. In the face of the increasingly complex and challenging external environment, the Company can only work harder and more diligently to deliver excellent performance.

II. Financial Review

OVERVIEW

The following discussion is based on, and should be read in conjunction with, the financial information and the notes included elsewhere in this announcement.

REVENUE

For the year ended December 31, 2023, all our revenue was generated from services related to our pre-clinical research services (which include gene editing, pre-clinical pharmacology and efficacy evaluation and animal models selling) and antibody development business. The following table sets forth a breakdown of our revenue for the periods indicated:

Revenue	Year ended December 31, 2023		Year ended December 31, 2022	
	RMB'000	%	RMB'000	%
Gene editing	74,325	10.4	61,075	11.4
Pre-clinical pharmacology and efficacy evaluation	193,396	26.9	176,069	33.0
Animal models selling	272,805	38.1	169,328	31.7
Antibody development	175,870	24.5	126,887	23.8
Others	516	0.1	522	0.1
Total revenue	716,912	100.0	533,881	100.0

Revenue increased by 34.3% from approximately RMB533.9 million for the year ended December 31, 2022 to approximately RMB716.9 million for the year ended December 31, 2023. The increase was mainly driven by the increase of revenue from animal models selling and antibody development.

COST OF SALES

Our cost of sales consists of staff costs, cost of suppliers and overhead costs.

Cost of sales increased by 48.4% from approximately RMB142.1 million for the year ended December 31, 2022 to approximately RMB210.9 million for the year ended December 31, 2023, which was generally in line with the increase in our revenue in the Reporting Period.

GROSS PROFIT AND GROSS PROFIT MARGIN

The gross profit, representing revenue less cost of sales, increased by 29.2% from approximately RMB391.8 million for the year ended December 31, 2022 to approximately RMB506.0 million for the year ended December 31, 2023. The increase in the gross profit was mainly attributable to the increase in revenue from our animal models selling and antibody development. Gross profit margin is calculated as gross profit divided by revenue. The gross profit margin decreased from 73.4% for the year ended December 31, 2022 to 70.6% for the year ended December 31, 2023. The decrease was primarily attributable to the decreased gross profit margin in pre-clinical pharmacology and efficacy evaluation and antibody development as the result of we moved to newly leased laboratory in Boston, USA.

OTHER GAINS AND LOSSES, NET

For the year ended December 31, 2023, the total other gains and losses, net were approximately RMB42.3 million, representing a decrease of 51.3% as compared with approximately RMB86.7 million in the corresponding period last year.

Other gains and losses, net, consist of net gain/(loss) on disposal of property, plant and equipment, change in fair value of financial assets at FVTPL, interest income, government grants (including amortization of deferred income), gain on repayment in advance of long-term payables, net realised losses on derivative financial instruments, net foreign exchange gain and others. The decrease in total other gains and losses, net was mainly due to the decrease in change in fair value of financial assets at FVTPL, net foreign exchange gain and gains on disposal of interests in a subsidiary and associate.

NET CHANGE IN FAIR VALUE OF BIOLOGICAL ASSETS

Our biological assets mainly represent mice for breeding and selling. For mice that remained as the Company's biological assets at the end of the Reporting Period, the Company recognized the change in the fair value of these biological assets, less costs of disposal at the period-end. The net change in fair value of biological assets is recognized as profit or loss. Net change in fair value of biological assets represents the difference in fair value from the beginning to the end of the period and does not generate actual cash inflow or outflow. The fair values of biological assets are determined using the market approach and cost approach. Recent unit trading price and adjustment factors, which are based on the characteristics of the biological assets, were used in the calculations of fair values. A significant increase or decrease in the quantity in stock as well as the estimated unit market price would result in a significant increase or decrease in the fair value of the biological assets.

Our net change in fair value of biological assets increased by 24.4% from approximately RMB3.9 million for the year ended December 31, 2022 to approximately RMB4.9 million for the year ended December 31, 2023, primarily due to the higher increase in the number of humanized mice in stock during 2023 as compared to 2022, and the decrease in unit price of partial product lines during the corresponding period which combine contribute the slight increase of net change in fair value of biological assets.

SELLING AND MARKETING EXPENSES

For the year ended December 31, 2023, our selling and marketing expenses were approximately RMB62.8 million, representing an increase of 25.0% as compared with approximately RMB50.2 million for the year ended December 31, 2022. The increase was mainly due to increased salaries which was generally in line with the increase in our revenue in the Reporting Period.

GENERAL AND ADMINISTRATIVE EXPENSES

Our general and administrative expenses increased by 8.7% from approximately RMB263.4 million for the year ended December 31, 2022 to approximately RMB286.3 million for the year ended December 31, 2023, primarily due to our increased depreciation and amortization expenses, and rental and property management fees which due to the newly leased facilities in Boston, USA since the second half of 2022.

RESEARCH AND DEVELOPMENT EXPENSES

Our research and development expenses decreased by 32.2% from approximately RMB699.2 million for the year ended December 31, 2022 to approximately RMB474.4 million for the year ended December 31, 2023, because of (i) our decrease staff costs as a result of our decreasing number of research and development employees; (ii) our decreased in commission and technology service fee; and (iii) our decreased in direct material costs.

The following table sets forth a breakdown of our R&D expenses:

R&D expenses

	Year ended 31 December 2023		Year ended 31 December 2022	
	<i>RMB'000</i>	%	<i>RMB'000</i>	%
Staff costs (excluding share-based payment)	160,743	33.9	223,155	31.9
Commission and technology service fee	95,206	20.1	140,203	20.1
Direct material costs	78,940	16.6	161,166	23.1
Share-based payment	17,942	3.8	9,751	1.4
Testing and laboratory processing fee	9,929	2.1	25,308	3.6
Depreciation and amortization expenses	84,415	17.8	92,230	13.2
Others	27,196	5.7	47,354	6.7
	<u>474,371</u>	<u>100.0</u>	<u>699,167</u>	<u>100.0</u>

LIQUIDITY AND CAPITAL RESOURCES

The Group monitored and maintained a level of cash and cash equivalents deemed adequate to finance our operations and mitigate the effects of fluctuations in cash flows. During the Reporting Period, we relied on liability finance as the major sources of liquidity. We also generated cash from our revenue from our service offerings, including gene editing, pre-clinical pharmacology and efficacy evaluation services, animal models selling and antibody development.

As at December 31, 2023, our cash at bank and on hand totalling approximately RMB417.7 million, as compared to approximately RM626.6 million as at December 31, 2022. The decrease was mainly as a result of our net loss from business operation.

The following table sets forth a condensed summary of the Group's annual consolidated statement of cash flows for the periods indicated and analysis of balances of cash and cash equivalents for the periods indicated:

	Year ended December 31, 2023 RMB'000	Year ended December 31, 2022 RMB'000
Net cash used in operating activities	(76,646)	(303,266)
Net cash used in investing activities	(100,278)	(153,738)
Net cash (used in)/generated from financing activities	(37,819)	587,200
Net (decrease)/increase in cash and cash equivalents	(214,743)	130,196
Effects of foreign exchange rate changes	3,468	14,241
Cash and cash equivalents at January 1	<u>610,882</u>	<u>466,445</u>
Cash and cash equivalents at the end of the year	<u><u>399,607</u></u>	<u><u>610,882</u></u>

FINANCE COSTS

For the year ended December 31, 2023, finance costs were approximately RMB99.8 million, representing an increase by 77.9% from approximately RMB56.1 million for the year ended December 31, 2022, primarily due to increase in interest on long-term payables and interest on bank and other loans.

INCOME TAX

Our income tax was approximately RMB2.8 million for the year ended December 31, 2023, and RMB0.8 million for the year ended December 31, 2022.

LOSS FOR THE YEAR

As a result of the foregoing, we incurred losses of approximately RMB383.0 million and approximately RMB602.2 million for the year ended December 31, 2023 and the year ended December 31, 2022, respectively.

BANK AND OTHER LOANS AND GEARING RATIO

As at December 31, 2023, the Group's outstanding loans were approximately RMB350.7 million (December 31, 2022: RMB178.8 million). Short-term bank loans are with terms of no more than one year and with annual interest rates ranging from 2.5% to 3.7%. In 2023, the Group entered into a five-year bank loan agreement with an annual interest rate of 6%, which was secured by mortgages of the property of Biocytogen Daxing and also guaranteed by the Company. Others loans were from Beijing Daxing Development Finance Leasing Co., Ltd. under the sale and leaseback agreements which was considered as a mortgage loan in substance, and the loans will be paid in the next five years with an effective annual interest rate of 5.94%.

The Group monitored its capital sufficiency using gearing ratio. As at December 31, 2023, the Group's gearing ratio (total debt (including bank and other loans and lease liabilities) as a percentage of total equity as of the end of the Reporting Period) was 2.10 (December 31, 2022: 1.43).

NET CURRENT ASSETS

The Group's net current assets, as at December 31, 2023 were approximately RMB145.4 million, while net current assets of approximately RMB313.3 million as at December 31, 2022.

FOREIGN EXCHANGE RISK

Foreign currency risk is the risk of loss resulting from changes in foreign currency exchange rates. Fluctuations in exchange rates between USD and other currencies in which the Group conducts business may affect the Group's financial condition and results of operations. We currently do not have a foreign currency hedging policy. However, the management monitors foreign exchange exposure and will consider hedging significant foreign currency exposure should the need arise.

CAPITAL EXPENDITURE

For the year ended December 31, 2023, our total capital expenditure amounted to approximately RMB79.8 million, primarily including investment in facility and office building, and purchase of scientific equipment.

CONTINGENT LIABILITIES

As of December 31, 2023, the Group did not have any significant contingent liabilities.

CHARGE ON ASSETS

In October 2023, the Group mortgaged the plant and buildings of Biocytogen Daxing for the long-term bank loan, and the aggregated carrying net book value of the plants and buildings was RMB239,542,000 as at 31 December 2023.

Save as disclosed above, as at December 31, 2023, the Group did not pledge any group assets.

SIGNIFICANT INVESTMENTS

As of December 31, 2023, we did not hold any significant investments.

MATERIAL ACQUISITIONS AND DISPOSALS

For the year ended December 31, 2023, we did not conduct any other material acquisitions or disposals of subsidiaries, associates and joint ventures.

EMPLOYEES AND REMUNERATION POLICIES

As of December 31, 2023, we had 1,066 employees in total, including 673 employees in Beijing, 296 employees in Jiangsu Province, and 97 employees in other regions of China and overseas.

In compliance with the relevant PRC labor laws, we enter into standard confidentiality and employment agreements with our employees covering matters such as terms, wages, bonuses, employee benefits, workplace safety, confidentiality obligations and grounds for termination.

To remain competitive in the labor market, we provided various incentives and benefits to our employees. We invest in continuing education and training programs, including internal and external training, for our management staff and other employees to upgrade their skills and knowledge. We also provide competitive salaries and stock incentive plans to our employees especially key employees. We believe our benefits, working environment and development opportunities for our employees have contributed to good employee relations and employee retention.

FUTURE PLANS FOR MATERIAL INVESTMENTS AND CAPITAL ASSET

Save as disclosed in this announcement, we had not authorized any plan for the material investments or acquisition of capital asset as of the date of this announcement.

EVENT AFTER THE REPORTING PERIOD

Save as disclosed above, the Company is not aware of any material subsequent events after December 31, 2023 and up to the date of this announcement.

CORPORATE GOVERNANCE AND OTHER INFORMATION

Compliance with the CG Code

The Company is committed to achieving high standards of corporate governance with a view to safeguarding the interests of the Shareholders and to enhance corporate value and accountability.

The Company has adopted the principles and code provisions as set out in the CG Code to the Listing Rules.

The Board is of the view that the Company has complied with all applicable code provisions of the CG Code during the Reporting Period and up to the date of this announcement, except for a deviation from the code provision C.2.1 of the CG Code, the roles of the chairman of the Board and the chief executive officer of the Company are not separate and are both performed by Dr. Shen Yuelel. In view of Dr. Shen's experience, personal profile and his roles in our Company, Dr. Shen is the Director best suited to identify strategic opportunities and focus of the Board due to his extensive understanding of the Company's business as the chief executive officer. The Board believes that vesting the roles of both the chairman and the chief executive officer in the same person has the benefit of ensuring consistent leadership within the Group and enables more effective and efficient overall strategic planning for the Group. The balance of power and authority for the present arrangement will not be impaired and this structure will enable the Company to make and implement decisions promptly and effectively. The Board will continue to review the effectiveness of the corporate governance structure of the Group in order to assess whether the separation of the roles of the chairman and the chief executive officer is necessary.

The Company will continue to review and enhance its corporate governance practice to ensure compliance with the CG Code.

Compliance with the Model Code

The Company has adopted a code of conduct regarding Directors' and Supervisors' securities transactions on terms no less exacting than the required standard set out in the Model Code.

Specific enquiries have been made to all Directors and Supervisors, and they have confirmed that they have complied with our Company's code of conduct regarding Directors' and Supervisors' securities transactions during the Reporting Period and up to the date of this announcement.

The Company's employees, who are likely to be in possession of unpublished inside information of the Company, are also subject to the Model Code. No incidents of non-compliance with the Model Code by the relevant employees of the Company were noted by the Company during the Reporting Period and up to the date of this announcement.

Purchase, Sale or Redemption of Listed Securities of the Company

Save as disclosed above, the Company and its subsidiaries had not purchased, sold or redeemed any of the Company's listed securities during the year ended December 31, 2023.

Use of Proceeds

The net proceeds received by the Company from the Global Offering (including the partial exercise of the Over-allotment Option) amounted to approximately HK\$537.0 million (equivalent to approximately RMB436.3 million) after the deduction of underwriting fees, and related expenses in connection with the exercise of the Global Offering.

As of December 31, 2023, the Group had used the net proceeds from the Global Offering for the following purposes:

	Approximately % of total net proceeds (%)	Net proceeds from Global Offering HK\$' million	Utilized net proceeds up to December 31, 2023 HK\$' million	Proceeds unused as of December 31, 2023 HK\$' million
(A) Fund further clinical research and development of our Core Products	70	376.0	329.5	56.5
(i) Fund the research and development of YH003	35	188.0	161.0	27.0
(ii) Fund the clinical research and development of YH001	35	188.0	158.5	29.5
(B) Fund antibody drug discovery and development in connection with Project Integrum	15	80.6	80.6	0
(i) Investment in the facilities construction and purchase of equipment used for antibody drug discovery under Project Integrum	5	26.9	26.9	0
(ii) Cover staff costs in Project Integrum	5	26.9	26.9	0
(iii) Trial consumables and other costs in antibody discovery and development for Project Integrum	5	26.9	26.9	0
(C) Pre-clinical and clinical development of other pipeline products	10	53.7	53.7	0
(i) Fund upcoming clinical trials of YH002	3	16.1	16.1	0
(ii) Fund clinical trials of YH004	2	10.7	10.7	0
(iii) Fund pre-clinical trials of several drug candidates	5	26.9	26.9	0
(D) Working capital and other general corporate purposes	5	26.9	26.9	0
Total	100	537.0	480.5	56.5

* The amounts have been rounded to one decimal place.

The Company has used the proceeds and intends to use proceeds that had not been utilized as of December 31, 2023 in the same manners and proportions as stated under the section headed “Future Plans and Use of Proceeds” in the Prospectus. It is expected that all remaining unutilized net proceeds will be fully utilized by December 31, 2024. The expected timing of the utilization of the remaining proceeds is based on the Group’s view that such timing will vary depending on current and future developments in market conditions.

Audit Committee

The Audit Committee has four members comprising one non-executive Director and three independent non-executive Directors, being Ms. Liang Xiaoyan (chairman), Mr. Hua Fengmao, Dr. Yu Changyuan and Mr. Wei Yiliang.

The Audit Committee has considered and reviewed the accounting principles and practices adopted by the Group and has discussed matters in relation to internal controls, risk management and financial reporting with the management of the Company. The Audit Committee has reviewed and considers that the annual financial results for the year ended December 31, 2023 are in compliance with the relevant accounting standards, rules and regulations, and appropriate disclosures have been duly made.

Scope of Work of the Auditor

The financial figures in respect of the Group’s consolidated statement of financial position, consolidated statement of profit or loss, consolidated statement of profit or loss and other comprehensive income and the related notes thereto for the year ended December 31, 2023 as set out herein have been agreed by the Group’s auditor, KPMG, Certified Public Accountants, to the amounts set out in the Group’s audited consolidated financial statements for the year. The work performed by KPMG in this respect did not constitute an assurance engagement and consequently no assurance conclusion has been expressed by the auditor on this announcement.

FINAL DIVIDEND

The Board had resolved not to recommend the payment of a final dividend for the year ended December 31, 2023 (2022: Nil).

CLOSURE OF REGISTER OF MEMBERS

The register of members of the Company will be closed from Thursday, May 23, 2024 to Tuesday, May 28, 2024, both days inclusive, in order to determine the eligibility of the Shareholders to attend and vote at the AGM to be held on Tuesday, May 28, 2024. In order to be eligible to attend and vote at the AGM, all transfer accompanied by the relevant share certificates and transfer forms must be lodged with the Company’s H share registrar in Hong Kong, Tricor Investor Services Limited, at 17/F, Far East Finance Centre, 16 Harcourt Road, Hong Kong (for H Shareholders), or to the Company’s registered office at 12 Baoshen South Street, Daxing Bio-Medicine Industry Park, Daxing District, Beijing, PRC (for the Unlisted Shareholders), for registration before 4:30 p.m. on Wednesday, May 22, 2024.

PUBLICATION OF ANNUAL RESULTS AND ANNUAL REPORT

This announcement is published on the websites of the Stock Exchange (www.hkexnews.hk) and the Company (<https://www.biocytogen.com.cn/>).

The annual report for the year ended December 31, 2023 of the Company containing all the information required by the Listing Rules will be despatched to the Shareholders and published on the websites of the Stock Exchange and the Company in due course.

DEFINITION

In this announcement, unless the context otherwise requires, the following expressions shall have the following meanings.

“ADA”	anti-drug antibody
“ADC”	antibody-drug-conjugates, a new class of highly potent biological drugs built by attaching a small molecule anticancer drug or another therapeutic agent to an antibody, with either a permanent or a labile linker
“ADCC”	antibody-dependent cell-mediated cytotoxicity, a mechanism of cell-mediated immune defense whereby an effector cell of the immune system actively lyses a target cell, whose membrane-surface antigens have been bound by specific antibodies
“AGM”	annual general meeting of the Company to be held on May 28, 2024
“animal model”	a non-human species used in medical research to mimic aspects of a disease found in humans, so as to obtain information about a disease and its prevention, diagnosis, and treatment
“A Share(s)”	the ordinary Share(s) with a nominal value of RMB1.00 each in the share capital of the Company proposed to be allotted, issued and listed on the Sci-Tech Board
“Audit Committee”	the audit committee of the Board
“B-cell” or “B cell”	a type of white blood cell that differs from other types of lymphocytes by expressing B cell receptors on its surface, and responsible for producing antibodies
“B-NDG”	a single knockout mouse with an ultra-immunodeficient phenotype, generated by Biocytogen by deleting the IL2rg gene from NOD-scid mice
“Biocytogen Daxing”	Biocytogen (Beijing) Biological Engineering Co., Ltd.* (百奧賽圖(北京)生物工程有限公司), a limited liability company established in the PRC on June 25, 2014 and wholly owned by the Company

“Board” or “Board of Directors”	the board of directors of the Company
“CAR-T” or “CAR T”	chimeric antigen receptor T-cell, T cells that have been genetically engineered to produce an artificial T-cell receptor for use in immunotherapy
“CD40”	Cluster of Differentiation 40, a costimulatory protein found on antigen-presenting cells, essential in mediating immune and inflammatory responses
“CDC”	Complement-dependent cytotoxicity, an effector function of IgG and IgM antibodies
“CDMO(s)”	contract development manufacturing organization(s), a company that serves other companies in the pharmaceutical industry on a contract basis to provide comprehensive services from drug development through drug manufacturing
“CDX”	cell derived xenograft
“CG Code”	the Corporate Governance Code set out in Appendix C1 to the Listing Rules
“China” or “the PRC”	the People’s Republic of China, but for the purpose of this announcement and for geographical reference only and except where the context requires, excluding Hong Kong, Macau Special Administrative Region and Taiwan
“CMC”	Chemistry, Manufacturing, and Controls
“Company”, “our Company”, “the Company” or “Biocytogen”	Biocytogen Pharmaceuticals (Beijing) Co., Ltd.* (百奧賽圖(北京)醫藥科技股份有限公司), a limited liability company incorporated in the PRC on November 13, 2009 and converted into a joint stock limited liability company incorporated in the PRC on December 29, 2020 whose predecessor was Beijing Biocytogen Gene Biotechnology Co., Ltd.* (北京百奧賽圖基因生物技術有限公司)
“Concerted Parties”	refers to members of the single largest group of Shareholders immediately prior to the completion of the Global Offering, namely, the Controlling Parties and the Employee Incentive Platforms, each a “Concert Party”
“Core Products”	YH001 and YH003, the designated “core products” as defined under Chapter 18A of the Listing Rules
“CR”	complete response
“CRISPR/Cas9”	a gene-editing technology which edits genes by precisely cutting DNA and letting natural DNA repair processes to take over

“CRO(s)”	contract research organization(s), a company which provides support to the pharmaceutical, biotechnology, and medical device industries in the form of research and development services outsourced on a contract basis
“CRS”	cytokine release syndrome
“CSRC”	the China Securities Regulatory Commission (中國證券監督管理委員會)
“CTLA-4”	a protein receptor expressed constitutively on T cells that functions as an immune checkpoint and downregulates immune responses
“C57BL/6”	a common inbred strain of laboratory mouse
“Director(s)”	the director(s) of the Company
“DLT”	dose-limiting toxicity
“DNA”	deoxyribonucleic acid, a molecule that codes genetic information for the transmission of inherited traits
“ELISA”	enzyme-linked immunosorbent assay, a plate-based assay technique for detecting and quantifying soluble substances such as peptides, proteins, antibodies, and hormones
“FDA”	Food and Drug Administration
“FIH”	first-in-human
“FVTPL”	fair value through profit or loss
“GCP”	Good Clinical Practice
“Global Offering”	the global offering of the Company’s H Shares on the Stock Exchange
“GMP”	Good Manufacture Practices
“Group,” “our Group,” “we” or “us”	our Company and our subsidiaries
“GVHD”	Graft versus Host Disease, a condition that might occur after an allogeneic transplant
“HCC”	hepatocellular carcinoma
“HK\$” or “HKD”	Hong Kong dollars, the lawful currency of Hong Kong
“Hong Kong” or “HK”	the Hong Kong Special Administrative Region of the PRC

“H Share(s)”	overseas listed foreign share(s) in the share capital of our Company with a nominal value of RMB1.0 each, which is/are subscribed for and traded in HK dollars and listed on the Hong Kong Stock Exchange
“H Shareholder(s)”	holder(s) of H Share(s)
“IgG”	Immunoglobulin G, the most common type of antibody found in blood circulation, created and released by plasma B cells
“IgG1”	Immunoglobulin G1, the most abundant IgG subclass in human sera and is important for mediating antibody responses against viral pathogens
“IgG2”	Immunoglobulin G2, predominantly responsible for anticarbohydrate IgG responses against bacterial capsular polysaccharides
“ <i>in situ</i> ”	in the normal location (site of origin) and has not invaded neighboring tissue or gone elsewhere in the body
“ <i>in vitro</i> ”	a category of study conditions which are performed with microorganisms, cells, or biological molecules outside their normal biological context
“ <i>in vivo</i> ”	a category of study conditions in which the effects of various biological entities are tested on whole, living organisms or cells, usually animals, including humans, and plants, as opposed to a tissue extract or dead organism
“IND”	investigational new drug or investigational new drug application, also known as clinical trial application in China
“independent third party(ies)”	any entity(ies) or person(s) who is not a connected person of our Company within the meaning of the Hong Kong Listing Rules
“Listing”	listing of the H Shares on the Main Board of the Hong Kong Stock Exchange
“Listing Date”	September 1, 2022, being the date on which our H Shares are listed and from which dealings therein are permitted to take place on the Hong Kong Stock Exchange
“Listing Rules” or “Hong Kong Listing Rules”	the Rules Governing the Listing of Securities on the Hong Kong Stock Exchange, as amended, supplemented or otherwise modified from time to time
“mAb” or “monoclonal antibody”	antibodies that are made by identical immune cells which are all clones belonging to a unique parent cell

“Main Board”	the stock exchange (excluding the option market) operated by the Hong Kong Stock Exchange which is independent from and operated in parallel with GEM of the Hong Kong Stock Exchange
“MAP”	MHC-antigen-pep-tide
“MoA”	Mechanism of Action, the specific biochemical interaction through which a drug substance produces its pharmacological effect
“Model Code”	the Model Code for Securities Transactions by Directors of Listed Issuers set out in C3 to the Listing Rules
“MRCT(s)”	multi-regional clinical trial(s)
“MTD”	maximum tolerated dose, the highest dose of a drug or treatment that does not cause unacceptable side effects
“NK”	natural killer cell, the human body’s first line of defense due to their innate ability to rapidly seek and destroy abnormal cells
“NMPA”	National Medical Products Administration
“NRDL”	National Reimbursement Drug List
“NSCLC”	non-small-cell lung carcinoma
“Over-allotment Option”	the over-allotment option granted by the Company to the international underwriters in connection with the Global Offering
“OX40”	a receptor expressed on activated T cells which gives costimulatory signals to promote T cell division and survival
“PBMC”	Peripheral Blood Mononuclear Cell, any peripheral blood cell having a round nucleus
“PD” or “pharmacodynamics”	the branch of pharmacology concerned with the effects of drugs and the mechanism of their action
“PD-1”	programmed cell death protein 1 or programmed death receptor 1, an immune checkpoint receptor expressed on T cells, B cells and macrophages. The normal function of PD-1 is to turn off the T cell mediated immune response as part of the process that stops a healthy immune system from attacking other pathogenic cells in the body. When PD-1 on the surface of a T cell attaches to certain proteins on the surface of a normal cell or a cancer cell, the T cell turns off its ability to kill the cell
“PD-L1”	PD-1 ligand 1, which is a protein on the surface of a normal cell or a cancer cell that attaches to PD-1 on the surface of the T cell that causes the T cell to turn off its ability to kill the cancer cell

“PDAC”	pancreatic ductal adenocarcinoma
“Phase I clinical trial”	a study in which the researchers test an experimental drug or treatment in a small group of people for the first time. The researchers evaluate the treatment’s safety, determine a safe dosage range, and identify side effects
“Phase II clinical trial”	a study in which the experimental drug or treatment is given to a larger group of people to see if it is effective and to further evaluate its safety
“PIs”	principal investigators
“PR”	partial response
“Project Integrum”	Project Integrum (千鼠萬抗) launched in March 2020, a large-scale <i>in vivo</i> antibody discovery program
“Prospectus”	the prospectus published by the Company on August 19, 2022 in relation to the Global Offering
“R&D”	research and development
“RC118”	YH005 ADC
“RemeGen”	RemeGen Co., Ltd.* (榮昌生物製藥(煙台)股份有限公司), a listed company in the Stock Exchange (stock code: 9995) and the Shanghai Stock Exchange (stock code: 688331), a commercial-stage biopharmaceutical company committed to the discovery, development and commercialization of innovative and differentiated biologics for the treatment of autoimmune, oncology and ophthalmic diseases with unmet medical needs in China and globally
“RenLite”	a platform of the Company, using RenLite mice to produce diverse bi-specific antibodies with high affinity and to generate bi-specific ADCs
“RenMab”	a platform of the Company, using transgenic RenMab mice with full human variable region, which allows for the natural <i>in vivo</i> pairing of human heavy and light chains for the development of fully human antibodies with high affinity, low immunogenicity, and favorable developability
“RenNano”	a platform uses RenNano mice to produce heavy chain antibodies on the basis of RenMab mice with further modification on antibody heavy chain constant region
“Reporting Period”	the one-year period from January 1, 2023 to December 31, 2023
“RMB” or “Renminbi”	Renminbi Yuan, the lawful currency of China

“RNA”	Ribonucleic Acid, a polymeric molecule essential in coding, decoding, regulation and expression of genes
“RP2D”	recommended Phase II dose
“RSV”	respiratory syncytial virus
“Sci-Tech Board” or “SSE STAR MARKET”	the Sci-Tech Innovation Board of the Shanghai Stock Exchange
“SD”	stable disease
“sgRNA”	Single Guide RNA, artificially programmed combination of two RNA molecules
“Share(s)”	ordinary share(s) in the capital of our Company with a nominal value of RMB1.0 each, comprising our Unlisted Shares and H Shares
“Shareholder(s)”	holder(s) of the Share(s)
“SIRPa”	Signal Regulatory Protein α , a regulatory membrane glycoprotein from SIRP family expressed mainly by myeloid cells and also by stem cells or neurons
“Stock Exchange” or “Hong Kong Stock Exchange”	The Stock Exchange of Hong Kong Limited
“SUPCE”	Size-unlimited and Precise Chromosome Engineering System, a genetic manipulation technique
“Supervisor(s)”	member(s) of the supervisory committee of the Company
“T-cell” or “T cell”	a lymphocyte of a type produced or processed by the thymus gland and actively participating in the immune response, which plays a central role in cell-mediated immunity. T-cells can be distinguished from other lymphocytes, such as B cells and NK cells, by the presence of a T-cell receptor on the cell surface
“TCR”	T-cell receptor, a protein complex found on the surface of T cells that is responsible for recognizing fragments of antigen as peptides bound to major histocompatibility complex molecules
“TEAE”	treatment emergent adverse event
“TGA”	The Therapeutic Goods Administration, the medicine and therapeutic regulatory agency of the Australian Government

“TNFR”	Tumor Necrosis Factor Receptor, membrane proteins that act as communication pathways that activate cell death pathways or induce the expression of genes involved in cellular differentiation and survival
“TNF α ”	Tumor Necrosis Factor- α , an inflammatory cytokine produced by macrophages during acute inflammation, leading to necrosis or apoptosis
“Tol2”	an autonomously active transposon, containing a gene encoding a complete and functional transposase that is capable of identifying, excising, and reinserting the DNA element defined by its inverted terminal repeats (ITR) or other elements with the same ITRs
“toxicity”	the degree to which a substance or a mixture of substances can harm humans or animal
“Unlisted Share(s)”	ordinary share(s) issued by our Company, with a nominal value of RMB1.0 each, which is/are subscribed for or credited as paid in a currency other than Renminbi, held by foreign investors and not listed on any stock exchange
“Unlisted Shareholder(s)”	holder(s) of the Unlisted Share(s)
“USA”	the United States of America
“USD”	United States dollars, the lawful currency of the United States of America
“YH001”	YH001 is a recombinant humanized anti-CTLA-4 IgG1 monoclonal antibody
“YH002”	YH002 is a recombinant humanized IgG1 antibody that targets the human OX40 receptor
“YH003”	YH003 is a recombinant, humanized agonistic anti – Cluster of Differentiation 40 IgG2 monoclonal antibody
“YH004”	YH004 is a humanized IgG1 anti-4-1BB Agonists
“YH008”	YH008 is an anti-PD-1/CD 40 bi-specific antibody for the treatment of solid tumors
“YH012” and “YH013”	YH012 and YH013 are two bi-specific ADCs developed using our RenLite platform, which are intended for the treatment of solid tumor
“YH015”	YH015 is a fully human IgG1 antagonistic monoclonal antibody targeting CD40

“YH016” and “YH017” YH016 and YH017 are two novel molecules developed using our RenMice platform, which are intended for the treatment of solid tumor and immune diseases respectively

“4-1BB” a receptor expressed on activated T cells and NK cells which gives costimulatory signals to promote T cell division and survival, activate cytotoxic effects and help form memory T cells

By order of the Board
Biocytogen Pharmaceuticals (Beijing) Co., Ltd.
Shen Yuele
*Chairman of the Board, Chief Executive Officer
and Executive Director*

Hong Kong, March 27, 2024

As at the date of this announcement, the board of directors of the Company comprises Dr. Shen Yuele as chairman, chief executive officer and executive Director, Dr. Ni Jian and Dr. Zhang Haichao as executive Directors; Mr. Wei Yiliang, Dr. Zhou Kexiang and Ms. Zhang Leidi as non-executive Directors; Mr. Hua Fengmao, Dr. Yu Changyuan and Ms. Liang Xiaoyan as independent non-executive Directors.