Jiangsu Recbio Technology Co., Ltd.
江蘇瑞科生物技術股份有限公司

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

(Stock Code: 2179)

UNAUDITED INTERIM RESULTS ANNOUNCEMENT FOR THE SIX MONTHS ENDED JUNE 30, 2024

The Board is pleased to announce the unaudited condensed consolidated results of the Group for the six months ended June 30, 2024, together with the unaudited comparative figures for the six months ended June 30, 2023.

BUSINESS HIGHLIGHTS

From the Reporting Period until the date of this announcement, we have made rapid progress in product development, achieving the following milestones and advancements in our R&D pipeline and business operations:

REC603 – Recombinant HPV 9-Valent Vaccine

The HPV 9-valent vaccine can prevent about 90% of cervical cancers and 90% of anal and genital warts, and is widely regarded as the most effective vaccine against HPV. At present, there is no domestically produced HPV 9-valent vaccine approved for sale in China.

Our phase III clinical trial of REC603 in China is in progress and regular follow-up is being conducted in accordance with the clinical protocol. We are conducting the visit and observation of the 36th month. We will carry out an interim analysis by adopting pathological endpoints and anticipate submitting a BLA application in 2025 when conditions are satisfied.

The "Technical Guidelines for the Clinical Trials of Human Papillomavirus Vaccines (for Trial Implementation)" (the "**Guidelines**") issued by the CDE of the NMPA in July 2023 clearly states that "randomized, double-blind, placebo-controlled design is currently the best strategy to confirm the protective efficacy of first-generation vaccines". Our phase III clinical protocol for the HPV 9-valent vaccine strictly follows the guidelines of the regulatory authorities; and we have the largest HPV 9-valent vaccine phase III clinical trial subjects in China and are conducting clinical trials in Henan, Shanxi and Yunnan provinces with high HPV infection rates. Currently, the Company is conducting follow-up visits according to the established protocol, maintaining ranking among the leading group in China in terms of clinical development progress.

REC610 – Novel Adjuvanted Recombinant Shingles Vaccine

Shingles is an acute infectious skin disease caused by reactivation of latent varicella zoster virus (VZV) in the body. There is no specific medicine for shingles, and vaccination is an effective means of preventing shingles. According to global research data on shingles vaccines that have been marketed, as compared to attenuated live vaccines, novel adjuvanted recombinant protein vaccines can provide stronger cellular immune and protective efficacy.

We have now completed the final vaccination of all subjects in phase I clinical trial in China and are conducting visits and observations according to the clinical protocol. This study adopted a randomized, double-blind, parallel controlled design in 180 healthy adult subjects aged 40 and above in Pu'er City, Yunnan Province to evaluate the safety, tolerability and immunogenicity of REC610. Data from phase I clinical trial in China indicated that the safety profile of subjects was favorable following the completion of the final vaccination. No SAE, AESI or TEAE leading to early discontinuation was reported. Based on the anticipated clinical trial results, we expect to initiate phase III clinical trial in China in 2024.

REC625 – Bivalent Recombinant Respiratory Syncytial Virus Vaccine

The REC625 is equipped with the novel adjuvant independently developed by us and intended to prevent the diseases caused by respiratory syncytial virus infection in the elderly population. Preclinical studies have shown that REC625 has favorable immunogenicity compared to overseas marketed products and can induce high levels of specific neutralizing antibodies, and significantly improve the neutralizing antibodies against subtype B. The project adopted our independently designed vaccine antigen structure and relevant invention patent application has been submitted. We plan to complete the preclinical study for this project in 2024.

ReCOV – Recombinant Bicomponent COVID-19 Vaccine

ReCOV is a recombinant COVID-19 vaccine developed by the Company comprehensively using its core technology platforms, including its novel adjuvant, protein engineering and immunological evaluation platforms, and the adjuvant used therein is its self-developed novel adjuvant BFA03. Since it obtained the first clinical trial approval in April 2021, the Company has conducted multiple clinical trials in countries including New Zealand, the Philippines, the UAE, China, Russia and Nepal, achieving several complete clinical research results. ReCOV was granted the emergency use authorization in Mongolia in 2023. Currently, there is no ongoing clinical trial for this project worldwide. Given the relatively low global demand for COVID-19 vaccines at present, continuing to advance the subsequent registration and commercialization of this project may not yield favorable economic and social benefits. The Company will no longer make new rounds of clinical development for COVID-19 vaccine projects developed against the existing strains, but will reasonably allocate resources based on the future development plans for respiratory combination vaccines, the market, policy environment and other factors. As there are adjustments in the business plans for COVID-19 vaccine projects, upon in-depth analysis and prudent consideration, the Company decides to deregister its subsidiary, Wuhan Recogen, which was established to conduct the R&D of mRNA COVID-19 vaccine. At the same time, the Company will continuously pay attention to and keep track of the mRNA vaccine technology.

During the Reporting Period, the Company established a comprehensive and systematic quality system for large-scale commercial production of vaccines based on the COVID-19 vaccine project at its vaccine production base in Taizhou City, Jiangsu Province. The factory meets both Chinese and European Union (EU) GMP standards and has obtained a Chinese vaccine production license. It has consistently received the EU Qualified Person Declaration issued by a Qualified Person (QP) for several years. The factory boasts a successful track record of large-scale batch production, which is of great value for promoting the subsequent development and industrialization of the Company's recombinant shingles vaccine REC610 and bivalent recombinant respiratory syncytial virus vaccine REC625.

We cannot guarantee that we will ultimately develop or market our Core Product or other pipeline products successfully. Shareholders and potential investors of our Company are advised to exercise due care when dealing in the Shares.

FINANCIAL HIGHLIGHTS

CONSOLIDATED STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

	For the six months ended June 30,	
	2024	2023
	RMB'000	*RMB'000*
	(Unaudited)	(Unaudited)
Other income and gains	**35,701**	59,929
Loss before tax	**(249,636)**	(276,941)
Loss for the period	**(249,636)**	(276,941)
Loss attributable to owners of the parent	**(249,135)**	(272,549)
Loss per share – Basic and diluted (RMB)	**(0.52)**	(0.57)

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

	June 30, 2024	December 31, 2023
	RMB'000	*RMB'000*
	(Unaudited)	(Audited)
Total non-current assets	**1,263,356**	1,056,904
Total current assets	**795,359**	1,129,373
Total current liabilities	**(681,643)**	(444,235)
Net current assets	**113,716**	685,138
Total assets less current liabilities	**1,377,072**	1,742,042
Total non-current liabilities	**(541,311)**	(671,098)
Total equity	**835,761**	1,070,944

INTERIM CONDENSED CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the six months ended 30 June 2024

		Six months ended 30 June	
		2024	2023
	Notes	***RMB'000***	*RMB'000*
		(Unaudited)	(Unaudited)
Other income and gains	*5*	**35,701**	59,929
Other expenses	*6*	**(14,794)**	(142)
Research and development costs		**(205,222)**	(247,822)
Administrative expenses		**(54,695)**	(78,087)
Selling and distribution expenses		**(1,528)**	(5,439)
Finance costs	*7*	**(9,098)**	(5,380)
LOSS BEFORE TAX	*8*	**(249,636)**	(276,941)
Income tax expense	*9*	**–**	–
LOSS FOR THE PERIOD		**(249,636)**	(276,941)
Attributable to:			
Owners of the parent		**(249,135)**	(272,549)
Non-controlling interests		**(501)**	(4,392)
		(249,636)	(276,941)
OTHER COMPREHENSIVE INCOME			
Other comprehensive income that will not be reclassified to profit or loss in subsequent periods:			
Exchange differences on translation of foreign operations		**1,409**	3,425
TOTAL COMPREHENSIVE LOSS FOR THE PERIOD		**(248,227)**	(273,516)
Attributable to:			
Owners of the parent		**(247,726)**	(269,124)
Non-controlling interests		**(501)**	(4,392)
		(248,227)	(273,516)
LOSS PER SHARE ATTRIBUTABLE TO ORDINARY EQUITY HOLDERS OF THE PARENT			
Basic and diluted (RMB)	*11*	**(0.52)**	(0.57)

INTERIM CONDENSED CONSOLIDATED STATEMENT OF FINANCIAL POSITION

30 June 2024

	Notes	**30 June 2024** ***RMB'000*** **(Unaudited)**	31 December 2023 *RMB'000* (Audited)
NON-CURRENT ASSETS			
Property, plant and equipment		**1,021,851**	840,843
Goodwill		**9,305**	9,305
Other intangible assets		**38,929**	41,126
Right-of-use assets		**38,973**	43,390
Other non-current assets		**154,298**	122,240
Total non-current assets		**1,263,356**	1,056,904
CURRENT ASSETS			
Inventories		**139,689**	93,750
Prepayments, other receivables and other assets		**57,023**	123,197
Pledged deposits		**66,835**	77,443
Cash and bank balances		**531,299**	834,983
		794,846	1,129,373
Assets classified as held for sale		**513**	–
Total current assets		**795,359**	1,129,373
CURRENT LIABILITIES			
Trade and bills payables	*12*	**68,344**	115,081
Other payables and accruals		**357,216**	268,116
Interest-bearing bank and other borrowings -current		**212,149**	46,307
Lease liabilities		**15,501**	14,731
Provision		**28,433**	–
Total current liabilities		**681,643**	444,235
NET CURRENT ASSETS		**113,716**	685,138
TOTAL ASSETS LESS CURRENT LIABILITIES		**1,377,072**	1,742,042

	Notes	**30 June 2024** ***RMB'000*** **(Unaudited)**	31 December 2023 *RMB'000* (Audited)
NON-CURRENT LIABILITIES			
Interest-bearing bank and other borrowings		**469,168**	585,333
Lease liabilities		**272**	4,424
Deferred income		**66,341**	75,811
Deferred tax liabilities		**5,530**	5,530
Total non-current liabilities		**541,311**	671,098
Net assets		**835,761**	1,070,944
EQUITY			
Equity attributable to owners of the parent			
Share capital		**482,963**	482,963
Treasury shares		**(58,729)**	(54,005)
Reserves		**412,520**	642,478
Non-controlling interests		**(993)**	(492)
Total equity		**835,761**	1,070,944

1. CORPORATE INFORMATION

Jiangsu Recbio Technology Co., Ltd. is a joint stock company with limited liability incorporated in the People's Republic of China ("PRC"). The registered office of the Company is located at No. 888 Yaocheng Avenue, Medical High-tech District, Taizhou City, Jiangsu Province, PRC.

During the Reporting Period, Jiangsu Recbio Technology Co., Ltd. and its subsidiaries (collectively referred to as the "Group") were principally engaged in the research and development of vaccines in the Chinese Mainland.

The Company was listed on the Main Board of the Stock Exchange of Hong Kong Limited (the "Stock Exchange") on 31 March 2022.

2. BASIS OF PREPARATION

The interim condensed consolidated financial information for the six months ended 30 June 2024 has been prepared in accordance with International Accounting Standard 34 Interim Financial Reporting ("IAS 34"). The interim condensed consolidated financial information does not include all the information and disclosures required in the annual financial statements, and should be read in conjunction with the Group's annual consolidated financial statements for the year ended 31 December 2023. The Interim Financial Information is presented in Renminbi ("RMB"), and all values are rounded to the nearest thousand (RMB'000) except when otherwise indicated.

3. CHANGES IN ACCOUNTING POLICIES

The accounting policies adopted in the preparation of the interim condensed consolidated financial information are consistent with those applied in the preparation of the Group's annual consolidated financial statements for the year ended 31 December 2023, except for the adoption of the following revised International Financial Reporting Standards ("IFRSs") for the first time for the current period's financial information.

Amendments to IFRS 16	*Lease Liability in a Sale and Leaseback*
Amendments to IAS 1	*Classification of Liabilities as Current or Non-current (the "2020 Amendments")*
Amendments to IAS 1	*Non-current Liabilities with Covenants (the "2022 Amendments")*
Amendments to IAS 7 and IFRS 7	*Supplier Finance Arrangements*

The amendments did not have any impact on the interim condensed consolidated financial information.

4. OPERATING SEGMENT INFORMATION

Segment information

For the purposes of resource allocation and performance assessment, the Group's chief executive officer, being the chief operating decision maker, reviews the consolidated results when making decisions about allocating resources and assessing performance of the Group as a whole and hence, the Group has only one reportable segment and no further analysis of this single segment is presented.

Geographical information

The Group's non-current assets are all located in the PRC, and accordingly, no further related geographical information of non-current assets is presented.

Information about major customers

No revenue was generated by the Group during the Reporting Period, and accordingly, no analysis of customers is to be disclosed.

5. OTHER INCOME AND GAINS

An analysis of other income and gains is as follows:

	For the six months ended 30 June	
	2024	2023
	RMB'000	*RMB'000*
	(Unaudited)	(Unaudited)
Other income		
Government grants*	**17,620**	4,597
Bank interest income	**13,245**	24,785
Subtotal	**30,865**	29,382
Other gains		
Gain on fair value changes of financial assets	**94**	23
Gain on disposal of items of right-of-use assets and lease liabilities	**89**	265
Foreign exchange gains, net	**3,833**	30,242
Others	**820**	17
Subtotal	**4,836**	30,547
Total	**35,701**	59,929

* The government grants and subsidies related to income and assets have been received to compensate for the Group's research and development expenditures and business operations.

6. OTHER EXPENSES

	For the six months ended 30 June	
	2024	2023
	RMB'000	*RMB'000*
	(Unaudited)	(Unaudited)
Donation	**60**	100
Loss on disposal of items of property, plant and equipment	**31**	7
Provision of impairment for inventories	**9,050**	–
Provision of impairment for other current assets	**1,777**	–
Provision of impairment of property, plant and equipment	**3,855**	–
Others	**21**	35
Total	**14,794**	142

7. FINANCE COSTS

An analysis of finance costs is as follows:

	For the six months ended 30 June	
	2024	2023
	RMB'000	*RMB'000*
	(Unaudited)	(Unaudited)
Interest on bank borrowings	**13,016**	7,692
Less: Interest capitalized	**4,210**	3,428
Interest on lease liabilities	**292**	1,116
Total	**9,098**	5,380

8. LOSS BEFORE INCOME TAX

The Group's loss before tax is arrived at after charging/(crediting):

		For the six months ended 30 June	
		2024	2023
	Notes	***RMB'000***	*RMB'000*
		(Unaudited)	(Unaudited)
Depreciation of property, plant and equipment*		**32,556**	19,201
Depreciation of right-of-use assets*		**4,030**	8,824
Amortization of other intangible assets*		**2,418**	2,050
Amortization of other non-current assets*		**236**	225
Amortization of other current assets*		**–**	1,649
Provision of impairment for inventories		**9,050**	4,058
Provision of impairment for other current assets	*6*	**1,777**	–
Provision of impairment of property, plant and equipment	*6*	**3,855**	–
Interest on lease liabilities	*7*	**292**	1,116
Expense relating to short-term leases*		**1,289**	1,338
Research and development costs		**205,222**	247,822
Loss on disposal of items of property, plant and equipment	*6*	**31**	7
Gain on fair value changes of financial assets	*5*	**(94)**	(23)
Government grants related to income	*5*	**(17,620)**	(4,597)
Foreign exchange differences, net	*5*	**(3,833)**	(30,242)
Bank interest income	*5*	**(13,245)**	(24,785)
Auditor's remuneration		**600**	500
Employee benefit expense* (excluding directors', chief executive's and supervisors' remuneration):			
Wages and salaries		**50,668**	59,707
Share-based payments expense		**4,695**	6,347
Pension scheme contributions, social welfare and other welfare		**6,089**	6,268

* The depreciation of property, plant and equipment, depreciation of right-of-use assets, amortization of other non-current assets, amortization of other current assets, amortization of other intangible assets, expense relating to short-term leases, auditor's remuneration, and employee benefit expense for the reporting period and the six months ended 30 June 2024 and 30 June 2023 are set out in "Selling and distribution expenses", "Administrative expenses" and "Research and development costs" in the interim condensed consolidated statements of profit or loss and other comprehensive income.

9. INCOME TAX EXPENSE

Pursuant to the Enterprise Income Tax of the PRC and the respective regulations (the "EIT law"), the basic tax rate of the Group is at a rate of 25% on their respective taxable income.

The Group's PRC entities are in a loss position and have no estimated assessable profits.

Pursuant to the Corporate Income Tax Law of the PRC and the respective regulations (the "CIT Law"), the Company is subject to CIT at a rate of 25% on the taxable income. Beijing ABZYMO obtained its certificate of high-technology enterprise on December 30, 2022 and is entitled to enjoy a preferential tax rate of 15% for three years from 2022 to 2024.

Pursuant to the Inland Revenue Ordinance of Hong Kong, HK Recbio Limited is subject to profits tax at a rate of 8.25% on assessable profits up to HK$2,000,000; and 16.5% on any part of assessable profits over HK$2,000,000.

	For the six months ended 30 June	
	2024	2023
	RMB'000	*RMB'000*
	(Unaudited)	(Unaudited)
Current income tax		
Charge for the period	**–**	–
Deferred income tax	**–**	–
Total tax charge for the period	**–**	–

A reconciliation of the tax expense applicable to loss before tax using the statutory rate for the jurisdictions in which the Company and its subsidiaries is domiciled to the tax expense at the effective tax rate, and a reconciliation of the applicable rates (i.e., the statutory tax rates) to the effective tax rates, are as follows:

	For the six months ended 30 June	
	2024	2023
	RMB'000	*RMB'000*
	(Unaudited)	(Unaudited)
Loss before tax	**(249,636)**	(276,941)
Tax at the statutory tax rate (25%)	**(62,409)**	(69,235)
Effect of different tax rate of a subsidiary operating in other jurisdictions and tax concession	**3,965**	6,059
Tax effect of income that is exempt from taxation	**–**	(11)
Expenses not deductible for tax	**4,953**	4,966
Additional deductible allowance for qualified research and development costs	**(35,292)**	(53,285)
Tax losses and deductible temporary differences not recognized	**88,783**	111,506
Tax charge at the Group's effective rate	**–**	–

Deferred tax assets have not been recognized in respect of these losses and temporary differences as they have arisen in the Group that have been loss-making for some time and it is not considered probable that taxable profits will be available against which the tax losses can be utilized.

10. DIVIDEND

No dividends have been paid or declared by the Company during the six months ended 30 June 2024 and 2023.

11. LOSS PER SHARE ATTRIBUTABLE TO ORDINARY EQUITY HOLDERS OF THE PARENT

The calculation of the basic loss per share amounts for the six months ended 30 June 2024 and 2023, is based on the loss for the periods attributable to ordinary equity holders of the parent and the weighted average number of ordinary shares assumed to be in issue after taking into account the retrospective adjustments on the assumption that the Company conversion into a joint stock company (the Company's Capitalization Issue) and the share capital transfer from capital premium had been in effect on 1 January 2023.

The calculations of basic and diluted loss per share are based on:

	For the six months ended 30 June	
	2024	2023
	(Unaudited)	(Unaudited)
Loss		
Loss attributable to ordinary equity holders of the parent, used in the basic and diluted loss per share calculation (RMB'000)	**(249,135)**	(272,549)
Shares		
Weighted average number of ordinary shares in issue during the period used in the basic and diluted loss per share calculation	**478,906,610**	482,126,649
Loss per share (basic and diluted) (RMB per share)	**(0.52)**	(0.57)

12. TRADE AND BILLS PAYABLES

An ageing analysis of the trade and bills payable as at 30 June 2024 and 31 December 2023, based on the invoice date, is as follows:

	30 June	31 December
	2024	2023
	RMB'000	*RMB'000*
	(Unaudited)	(Audited)
Within 1 year	**63,336**	113,918
Over 1 year	**5,008**	1,163
Total	**68,344**	115,081

MANAGEMENT DISCUSSION AND ANALYSIS

BUSINESS REVIEW

Overview

Founded in 2012, we are a vaccine company dedicated to the research, development and commercialization of innovative vaccines, with a high-value innovative vaccine portfolio driven by in-house developed technologies. We primarily focus on the R&D of innovative vaccines such as HPV vaccine candidates. Our vaccine portfolio currently consists of more than 10 vaccines, including our three strategic products, namely REC603, a recombinant HPV 9-valent vaccine under phase III clinical trial; REC610, a novel adjuvanted recombinant shingles vaccine, which is currently under phase I clinical trial in China; and a bivalent recombinant respiratory syncytial virus vaccine, which is about to enter the clinical research stage.

Through years of dedication and focus on this area, we have developed a comprehensive vaccine innovation engine consisting of a novel adjuvant platform, protein engineering platform and immunological evaluation platform. These platforms empower us to continue to discover and develop innovative vaccines that apply advanced technologies in our vaccine candidates. We are one of the few companies that are capable of developing novel adjuvants, benchmarking all of the FDA-approved novel adjuvants to date. Our technology platforms form a "solid trifecta", creating synergies among the design and optimization of antigens, the development and production of adjuvants and the identification of the optimal combinations of antigens and adjuvants. We have also established an IPD system, enabling us to advance the R&D of multiple vaccine candidates simultaneously. Guided by our "**OPTI**" vaccine development philosophy, we have established a vaccine portfolio consisting of more than 10 candidates.

We have started to build our manufacturing capabilities at an early stage, aiming at ensuring our vaccine candidates to be smoothly transferred into successful commercial vaccine products. We have constructed an HPV vaccine manufacturing facility in Taizhou City, Jiangsu Province, which meets the WHO Prequalification (WHO PQ) Standards, with a designed capacity of 20 million doses of HPV 9-valent vaccines per year. Currently, the facility is under the stage of pilot production, synchronized with the progress of the clinical studies for the HPV 9-valent vaccine to support the BLA application in China. In addition, we have completed the construction of our innovative vaccines manufacturing facility based on the CHO cell expression systems in November 2021, and successfully acquired the vaccine production license issued by Jiangsu MPA. This manufacturing facility has received the European Union (EU) Qualified Person Declaration issued by a Qualified Person (QP) for several consecutive years. This manufacturing facility has a GFA of approximately 17,000 sq.m., and can be used for the manufacturing of a variety of innovative vaccines (CHO cell), including the novel adjuvanted recombinant shingles vaccines.

Our Vaccine Pipeline

Our vaccine portfolio strategically covered seven disease areas with significant burden globally, including HPV, varicella zoster virus, respiratory syncytial virus, cytomegalovirus and herpes simplex virus infection, etc. As of the date of this announcement, our vaccine portfolio consisted of more than 10 vaccine candidates including, in particular, REC603, a recombinant HPV 9-valent vaccine candidate under phase III clinical trial in China; a novel adjuvanted recombinant shingles vaccine under phase I clinical research stage in China; and a bivalent recombinant respiratory syncytial virus vaccine, which is about to enter the clinical research stage.

The following table summarizes our vaccine pipeline as of the date of this announcement.

Diseases	Candidates	Type of Vaccine	Adjuvant Systems	Product Rights	Commercial Rights	R&D Status: Pre-clinical / IND Filing / Phase I / Phase II / Phase III	Commercialization
Cervical Cancers & Genital Warts	★ **REC603**	Recombinant HPV 9-valent vaccine	Alum	Self-developed	Global	Phase II[2] / Phase III	
	REC604b	Novel adjuvanted recombinant HPV 9-valent vaccine	Undisclosed novel adjuvant[1]	Self-developed	Global	Pre-clinical	
	REC601	Recombinant HPV bivalent (Types 16/18) vaccine	Alum	Self-developed	Global	Pre-clinical / IND Filing / Phase I	
	REC602	Recombinant HPV bivalent (Types 6/11) vaccine	Alum	Self-developed	Global	Pre-clinical / IND Filing / Phase I	
	REC604a	Novel adjuvanted recombinant HPV quadrivalent vaccine[3]	BFA04	Self-developed	Global	Pre-clinical / IND Filing	
Shingles	REC610	Novel adjuvanted recombinant shingles vaccine[4]	BFA01	Self-developed	Global	Pre-clinical / IND Filing / Phase I	
Respiratory Diseases	REC625	Bivalent recombinant respiratory syncytial virus vaccine	Undisclosed novel adjuvant[1]	Self-developed	Global	Pre-clinical	
	REC617	Recombinant trivalent influenza virus vaccine	BFA03	Self-developed	Global	Pre-clinical	
Human Cytomegalovirus Infection	REC609	Recombinant human cytomegalovirus vaccine	BFA01	Self-developed	Global	Pre-clinical	
COVID-19 Infection	ReCOV	Recombinant Bicomponent COVID-19 Vaccine	BFA03	Co-developed[5]	Global	Pre-clinical / IND Filing / Phase I / Phase II / Phase III	
Hepatitis B	REC629	Recombinant Hepatitis B virus vaccine	Undisclosed novel adjuvant[1]	Self-developed	Global	Pre-clinical	
	REC630	Therapeutic Recombinant Hepatitis B virus vaccine	Undisclosed novel adjuvant[1]	Self-developed	Global	Pre-clinical	
Herpes Simplex	REC608	Recombinant herpes simplex virus vaccine	BFA01	Self-developed	Global	Pre-clinical	

★ Core Product

Notes:

1. "Undisclosed novel adjuvant" represents a self-developed novel adjuvant to be used in vaccine candidates.

2. Our Core Product REC603, an HPV 9-valent vaccine, obtained the umbrella IND approval from the NMPA in July 2018. Based on product registration classification and written communication with the CDE of the NMPA, we were approved to directly conduct phase III clinical trial in China upon obtaining phase I clinical data. REC603 is currently in the pivotal stage of phase III clinical trial in China and we are conducting visit and observation of the 36th month following the first dose of vaccination. We anticipate submitting a BLA application to the NMPA in 2025 upon the fulfillment of relevant conditions.

3. REC604a has obtained the clinical trial approval notice from Chinese medical products administrations.

4. REC610 received a drug clinical trial approval notice (notice number: 2023LP02151) issued by the NMPA in October 2023, which is approved for use as a preventive 3.3 biological product in its phase I and phase III clinical trials being carried out in China. For REC610, we have completed the FIH clinical trial in the Philippines, and are conducting visit and observation for the phase I trial in China. Based on the anticipated clinical study results, we expect to initiate phase III clinical study in China in 2024.

5. ReCOV was designed and developed by the Group jointly with Professor Wang Xiangxi's group at the Institute of Biophysics, Chinese Academy of Science. Since it obtained the first clinical trial approval in April 2021, the Company has conducted multiple clinical trials in countries including New Zealand, the Philippines, the UAE, China, Russia and Nepal, achieving several complete clinical research results. ReCOV was granted the emergency use authorization in Mongolia in 2023. Currently, there is no ongoing clinical trial for this project worldwide. Given the relatively low global demand for COVID-19 vaccines at present, continuing to advance the subsequent registration and commercialization of this project may not yield favorable economic and social benefits. The Company will no longer make new rounds of clinical development for COVID-19 vaccine projects developed against the existing strains, but will reasonably allocate resources based on the future development plans for respiratory combination vaccines, the market, policy environment and other factors.

HPV Vaccine Pipeline

HPV is the most common viral pathogen of the reproductive tract. Although HPV infections may clear up within a few months without any intervention, certain types of HPV infections can persist and develop into cervical cancer. These high-risk HPV infections are mainly caused by HPV types 16, 18, 31, 33, 45, 52 and 58, which account for approximately 90% of cervical cancer cases globally. It is widely accepted that HPV vaccine can play an important role in eliminating cervical cancer as it can prevent HPV infection on certain high-risk types. In addition, some cancers of the anus, vulva, vagina, and oropharynx and most genital warts can be prevented by HPV vaccines.

REC603 – Phase III Stage HPV 9-Valent Vaccine – Our Core Product

REC603, our Core Product, is designed to provide protection against HPV types 6, 11, 16, 18, 31, 33, 45, 52 and 58. Our phase III clinical trial of REC603 in China is in progress and regular follow-up is being conducted in accordance with the clinical protocol. We are conducting the visit and observation of the 36th month. We will carry out an interim analysis by adopting pathological endpoints and anticipate submitting a BLA application in 2025 when conditions are satisfied.

Summary of Clinical Trial: We jointly applied, and obtained the umbrella IND approval for REC603 in July 2018. Based on product registration classification and written communication with the CDE of the NMPA, we were approved to directly conduct phase III clinical trial in China upon obtaining phase I clinical data.

The Guidelines clearly points out that the randomized, double-blind and placebo-controlled design is still the best strategy to confirm the immunogenicity profile of the first-generation of vaccine for the time being. Compared to other domestic HPV 9-valent vaccines, our phase III clinical trial in China closely adheres to the Guidelines, which will help REC603 benefit Chinese women sooner. The phase III clinical trial in China consists of three parts, i.e., the primary efficacy trial, the immuno-bridging trial in younger-age groups, and the immunogenicity comparative trial with Gardasil®9, with a multi-center, randomized, blinded and parallel controlled design and with a total size of 16,050 subjects. At the same time, follow-up on the subjects of REC603's primary efficacy trial is being conducted in accordance with the clinical protocol. We are in the process of conducting the visit and observation of the 36th month. We will carry out an interim analysis by taking pathological endpoints and plan to submit a BLA application to the NMPA in 2025 when conditions are satisfied. Since obtaining the IND approval in China, no material unexpected accidents or adverse changes in relation to REC603 have occurred.

Advantages of REC603: We believe our REC603 has various advantages, including:

Positive immunogenicity profile. REC603 demonstrates a positive immunogenicity profile in its phase I clinical trial. In general, we observed a significant increase in terms of NAb GMT level against all of the target HPV types.

High-yield and stable production of HPV VLPs. REC603 adopts H. polymorpha expression system. In general, the VLPs from different expression systems are all highly similar to natural HPV capsid in structure and epitope in order to trigger immune response after vaccination, including those being produced by H. polymorpha expression system. H. polymorpha, a methylotrophic yeast species, is able to grow to very high cell density rapidly on simple media and has relatively high optimum growth temperature. Owing to its strong and tunable promoters derived from the methanol utilization pathway, high secretion capacity, and lower glycosylation activity compared to S. cerevisiae, H. polymorpha is suitable for production of recombinant proteins for medical use. With high copies of expression cassettes integrated stably in the genome of H. polymorpha, high-yield and stable expression of HPV VLPs is achieved, making our vaccine candidate more suitable for commercial production.

Favorable safety profile. REC603 was safe and well-tolerated as shown in the phase I clinical trial for REC603. There were no statistical differences in terms of incidences of AEs between the vaccine group and the placebo group. Although there is currently no available paper reporting a head-to-head clinical trial comparing domestic HPV vaccines and foreign HPV vaccines, in the clinical trial conducted by Merck Sharp & Dohme for Gardasil®9 in 2009, the rate of adverse event was 86.6% among subjects enrolled in the vaccine cohort, as compared to 53.75% as observed in the phase I clinical trial of REC603.[1] The main adverse reactions were expected fever and inject site pain, mostly were transient and mild.

Scalable manufacturing potential. Our patented technology in HPV VLPs in combination with optimized fermentation strategy and purification process enables us to achieve high and stable yield in bulk production. With well-defined critical process parameters, manufacturing of REC603 can be easily scaled up to meet the market demand domestically and globally.

Opportunities and potentials: We believe there are significant opportunities for our HPV vaccine candidates, considering the following factors:

Superiority of HPV 9-valent vaccines. In general, HPV 9-valent vaccines can prevent against approximately 90% of cervical cancer and 90% of the anal and genital warts and are widely considered as the most effective vaccines for HPV. Currently, there is no domestic HPV 9-valent vaccine approved for sale in China.

Domestic substitute. To the best knowledge and information of the Company with reference to independent market research, the first domestic HPV bivalent vaccine accounted for 66.7% of China's HPV bivalent vaccine market in terms of production value in the first year of its launch by virtue of its cost effectiveness, even if it was only approved in 2019 whereas the first imported HPV bivalent vaccine was approved in China in 2016. We believe that considering domestic vaccine products tend to adopt more favorable prices as compared to their global peers, HPV 9-valent vaccines will follow a similar trend in China after being approved. In recent years, the Chinese government has also promulgated policies in favor of domestic HPV vaccine developers. For example, in 2019, the National Health Commission of the People's Republic of China released the Healthy China Action – Cancer Prevention and Control Implementation Plan (2019-2022), stating to accelerate the review and approval process of domestic HPV vaccines and improve the accessibility of HPV vaccines. As one of the few domestic vaccine companies to have phase III stage HPV 9-valent vaccine candidate, we believe we will benefit from such favorable government policies in the future.

Same age coverage as imported vaccines. On August 30, 2022, HPV 9-valent vaccine available in the market in China has been expanded for females aged 9 to 45. Our Core Product, REC603, has also initiated phase III clinical trial for females aged 9 to 45 in 2021, indicating a same coverage in terms of age as compared to the current approved vaccines.

[1] The above information was derived from multiple clinical trials conducted for different vaccines without the support of controlled, head-to-head clinical studies, and a number of factors (including the different subject enrollment standards adopted in different trials, different population characteristics of subjects, physicians' inoculation skills and experiences, and lifestyle of the subjects) could affect the relevant clinical results and could render cross-trial comparison results less meaningful.

Next-generation HPV vaccines under development. We are also developing next-generation HPV 9-valent vaccine candidates with novel adjuvants, which are designed to adopt a two-shot regimen without compromising the efficacy/safety profile of vaccine candidates, and are potentially superior as compared to the commercialized products as they are all adopting three-shot regimen.

The Guidelines clearly points out that "randomized, double-blind, placebo-controlled design is currently the best strategy to confirm the protective efficacy of first-generation vaccines". Our phase III clinical protocol for the HPV 9-valent vaccine strictly follows the guidelines of the regulatory authorities; and we have the largest HPV 9-valent vaccine phase III clinical trial subjects in China and are conducting clinical trials in Henan, Shanxi and Yunnan provinces with high HPV infection rates. Currently, the Company is conducting follow-up visits according to the established protocol, maintaining ranking among the leading group in China in terms of clinical development progress.

Cautionary Statement required under Rule 18A.08(3) of the Listing Rules: We cannot guarantee that we will ultimately develop or market our Core Product successfully. Shareholders and potential investors of our Company are advised to exercise due care when dealing in the Shares.

REC601 – Phase I Stage HPV Bivalent (Type 16/18) Vaccine

The bivalent vaccine candidates are designed as HPV protection solutions for people with different affordability and have the potential to be included in the national vaccination regime in China and other jurisdictions. Due to the cost advantage of the HPV bivalent vaccine, it may become the mainstream vaccine in developing countries.

We are developing an HPV bivalent vaccine candidate, namely REC601, targeting HPV types 16 and 18, which are the main cause for a majority of cervical cancer cases. Currently, we have completed data evaluation and analysis on the phase I trial in China. The phase I trial data showed that REC601 has a favorable safety profile and an immunogenicity profile in healthy females aged 9 to 45. There was no vaccination-related grade 4 or higher AEs or SAEs. 30 days after the whole immunization: the positive rates of HPV types 16 and 18 antibodies reached 100.00%, and the negative population before immunization also reached positive conversion after the whole immunization (positive conversion rate was 100.00%).

The HPV types 16 and 18 antibody levels also increased significantly: GMT of HPV type 16 antibody increased by 632.99 times and GMT of HPV type 18 antibody increased by 1,194.02 times compared with that before immunization. REC601 adopts a similar technical process line with the recombinant HPV 9-valent vaccine.

We will adopt a more reasonable follow-up development strategy by taking into account market demand and relevant regulatory guidance.

REC602 – Phase I Stage HPV Bivalent (Type 6/11) Vaccine

We are also developing REC602, an HPV bivalent vaccine candidate targeting HPV type 6/11. We have completed the phase I trial in late 2022. REC602 adopts a similar technical process line with the recombinant HPV 9-valent vaccine. We will adopt a more reasonable follow-up development strategy by taking into account market demand and relevant regulatory guidance.

REC604a and REC604b – Early-Stage HPV Vaccines Formulated with Novel Adjuvant

Supported by our strong technology platforms, we are exploring opportunities to develop HPV vaccines formulated with novel adjuvant, namely REC604a and REC604b. Unlike the traditional aluminum adjuvant we are currently using, we are conducting early-stage development of next-generation HPV 9-valent and quadrivalent vaccines formulated with a novel self-developed adjuvant. Based on existing studies, compared to Merck's Gardasil, GSK's AS04-adjuvanted Cervarix has demonstrated strong cross-protection effectiveness with higher titers of neutralizing antibodies in clinical trials, suggesting that novel adjuvants can enhance the immunogenicity of HPV vaccines. As the introduction of novel adjuvant enhances immunogenicity profile of REC604a and REC604b, they are designed to adopt a two-shot regimen. We have obtained the clinical trial approval notice for REC604a in China, and will adopt a more reasonable follow-up development strategy by taking into account market demand and relevant regulatory guidance. We plan to use a novel self-developed adjuvant to improve the immunogenicity of REC604b.

Shingles Vaccine

REC610 – Novel Adjuvanted Recombinant Shingles Vaccine Candidate under Phase I Clinical Stage

REC610 received a drug clinical trial approval notice (notice number: 2023LP02151) issued by the NMPA in October 2023, which is approved for use as a preventive 3.3 biological product in its phase I and phase III clinical trials being carried out in China. We have now completed the final vaccination of all subjects in phase I clinical trial in China and are conducting visit and observation according to the clinical protocol. This study adopted a randomized, double-blind, parallel controlled design in 180 healthy adult subjects aged 40 and above in Pu'er City, Yunnan Province to evaluate the safety, tolerability and immunogenicity of REC610. Data from phase I clinical trial in China indicated that the safety profile of subjects was favorable following the completion of the final vaccination. No SAE, AESI or TEAE leading to early discontinuation was reported. Based on the anticipated clinical trial results, we expect to initiate phase III clinical study in China in 2024.

Previously, the Company conducted a FIH clinical trial of REC610 in the Philippines, using GSK Shingrix® as a positive control. During the Reporting Period, we obtained the full study report of this clinical trial. The study data showed that REC610 demonstrated overall favorable safety and tolerability profile in healthy participants aged 40 and above after two doses of the vaccination. REC610 induced strong gE-specific humoral and cellular immune responses, which were evident after the first vaccination and reached the peak at 30 days after the second vaccination. The humoral and cellular immune responses were comparable between REC610 and Shingrix® group, and the immune response level in REC610 group was numerically higher than that in Shingrix® group.

1) Safety: REC610 had good safety profile with the two-dose vaccination regimen. No SAE, AESI or TEAE leading to early discontinuation was reported. The incidences of vaccination related TEAEs, solicited local and systemic TEAEs, unsolicited TEAEs were comparable between REC610 group and Shingrix® group. Majority of vaccination related TEAEs were grade 1 or grade 2, and all recovered in 1-3 days post vaccination. The common (≥5%) solicited TEAEs in REC610 group included injection site pain, injection site swelling, pyrexia, headache, and myalgia.

2) Immunogenicity: REC610 induced strong gE-specific humoral and cellular immune responses, which were evident after the first vaccination and reached the peak at 30 days after the second vaccination. The humoral and cellular immune responses were comparable between REC610 and Shingrix® group, and the immune response level in REC610 group was numerically higher than that in Shingrix® group. REC610 induced favorable humoral and cellular immune responses in both elderly and adult groups. Both REC610 and Shingrix® groups induced high levels of anti-gE antibodies at 60 days after the first dose vaccination, and 30 days after the second dose vaccination. The GMT, GMI and SCR of anti-gE antibodies were comparable in REC610 group and Shingrix® group, especially, the GMT and GMI of anti-gE antibodies were numerically slightly higher in REC610 group than those in Shingrix® group. Both REC610 and Shingrix® groups induced strong cellular immune response at 60 days after the first dose vaccination, and 30 days after the second vaccination. Tested by the internationally recognized ICS method, the frequencies and CMI response rates of CD4+T cells secreting at least one or two of gE-specific cytokines were comparable in REC610 group and Shingrix® group, and the cellular immune response level was numerically slightly higher in REC610 group than that in Shingrix® group.

Shingles is an acute infectious skin disease caused by reactivation of latent varicella zoster virus (VZV) in the body. There is no specific medicine for shingles, and vaccination is an effective means of preventing shingles. According to global research data on shingles vaccines that have been marketed, as compared to attenuated live vaccines, novel adjuvanted recombinant protein vaccines can provide stronger cellular immune and protective efficacy. REC610 is equipped with a novel adjuvant BFA01 independently developed by the Company, which can promote the production of high levels of VZV glycoprotein E (gE)-specific CD4+T cells and antibody. REC610 is intended to prevent shingles in adults aged 40 and above. According to statistics, China's population aged 40 and above is approximately 700 million. Only GSK Shingrix®, the novel adjuvant recombinant vaccine, is on the market in China, and there is a strong demand for import substitution.

Respiratory Syncytial Virus Vaccine Pipeline

REC625 – Bivalent Recombinant Respiratory Syncytial Virus Vaccine

The REC625 is equipped with the novel adjuvant independently developed by us and intended to prevent the diseases caused by respiratory syncytial virus infection in the elderly population. Preclinical studies have shown that REC625 has favorable immunogenicity compared to overseas marketed products and can induce high levels of specific neutralizing antibodies, and significantly improve the neutralizing antibodies against subtype B. The project adopted our independently designed vaccine antigen structure and relevant invention patent application has been submitted. We plan to complete the preclinical study for this product in 2024.

COVID-19 Vaccine

ReCOV – Recombinant Bicomponent COVID-19 Vaccine

ReCOV is a recombinant COVID-19 vaccine developed by the Company comprehensively using its core technology platforms, including its novel adjuvant, protein engineering and immunological evaluation platforms, and the adjuvant used therein is its self-developed novel adjuvant BFA03. Since it obtained the first clinical trial approval in April 2021, the Company has conducted multiple clinical trials in countries including New Zealand, the Philippines, the UAE, China, Russia and Nepal, achieving several complete clinical research results. ReCOV was granted the emergency use authorization in Mongolia in 2023. Currently, there is no ongoing clinical trial for this project worldwide. Given the relatively low global demand for COVID-19 vaccines at present, continuing to advance the subsequent registration and commercialization of this project may not yield favorable economic and social benefits. The Company will no longer make new rounds of clinical development for COVID-19 vaccine projects developed against the existing strains, but will reasonably allocate resources based on the future development plans for respiratory combination vaccines, the market, policy environment and other factors. As there are adjustments in the business plans for COVID-19 vaccine projects, upon in-depth analysis and prudent consideration, the Company decides to deregister its subsidiary, Wuhan Recogen, which was established to conduct the R&D of mRNA COVID-19 vaccine. At the same time, the Company will continuously pay attention to and keep track of the mRNA vaccine technology.

During the Reporting Period, the Company established a complete and systematic quality system for large-scale commercial production of vaccines at its vaccine manufacturing facility in Taizhou City, Jiangsu Province based on the COVID-19 vaccine project. The factory meets both Chinese and European Union (EU) GMP standards and has obtained a Chinese vaccine production license. It has consistently received the EU Qualified Person Declaration issued by a Qualified Person (QP) for several years. The factory has a track record of successful large-scale batch production, which is of great value in advancing the subsequent development and industrialization of the Company's recombinant shingles vaccine REC610 and bivalent recombinant respiratory syncytial virus vaccine REC625.

Other Disease Areas

REC617 – Early-stage Recombinant Trivalent Influenza Virus Vaccine

Influenza virus is the leading causative pathogen of respiratory disease. We are developing a recombinant trivalent influenza virus vaccine (i.e., REC617) that is designed with rapid and efficient expression of protective antigens and takes full advantage of the immune-enhancing effects of adjuvants.

REC609 – Early-stage Recombinant Human Cytomegalovirus Vaccine

We are developing a recombinant human cytomegalovirus vaccine (i.e., REC609) with our technology platform, with a higher cellular immune response and enhanced protection.

REC629 – Early-stage Recombinant HBV Vaccine

We plan to develop a recombinant HBV vaccine (i.e., REC629) based on the same yeast expression system as the HPV vaccine, combined with the immune-enhancing effects of the novel adjuvant, with a higher humoral immune response and enhanced protection.

REC630 – Early-stage Therapeutic Recombinant HBV Vaccine

We plan to develop a therapeutic recombinant HBV vaccine (i.e., REC630) based on the same yeast expression system as the HPV vaccine, combined with the immune-enhancing effects of the novel adjuvant, with a higher immune response and enhanced protection.

REC608 – Early-stage Recombinant HSV Vaccine

HSV is a key cause of genital herpes. We are developing a recombinant HSV vaccine (i.e., REC608) with our technology platform, taking into account a multi-antigen combination scheme in the antigen design to fully utilize the immune-enhancing effects of the adjuvant, as well as the influence of mucosal immunity, resulting in a higher cellular immune response and stronger protection.

Our Technology Platforms

We have developed three advanced technology platforms for novel adjuvant development, protein engineering and immunological evaluation. These platforms empower us to continue to discover and develop subunit vaccines and to apply advanced technologies in our vaccine candidates.

Novel adjuvant platform

Adjuvants are substances that are used in conjunction with antigens to assist in antigen presentation and enhance immune responses. Conventionally, only the alum adjuvant was widely used in vaccines for human use. Since the early 21st century, novel adjuvants have been widely applied in the vaccine industry gradually, and created vaccine products that can stimulate higher and broader immune response. At present, five novel adjuvants are applied in FDA-approved vaccines for human use, namely AS01, AS03, AS04, CpG1018, and MF59, the components of which have been in the public domain for over 20 years. Through this platform, we are one of the few companies that have been able to develop adjuvant, benchmarking all of the above-mentioned FDA-approved adjuvants. This capability has enabled us to not rely on any particular adjuvant supplier. In addition, our platform also empowers us to discover and apply new adjuvants in the next-generation vaccine candidates. The two independently developed novel adjuvants, BFA01 and BFA03, have been successfully included in the adjuvant supply pool managed by CEPI due to their significant advantages in efficacy and safety, as well as their commercial-scale industrialization capabilities, to meet the demand for innovative adjuvants from vaccine developers around the world.

Protein engineering platform

Our protein engineering platform utilizes a structure-based immunogen design approach to provide antigen optimization solutions for the development of subunit vaccines based on multidisciplinary studies. This platform enables us to rapidly target and prepare pathogen-derived antigens, to define the structural basis of antigenicity, to understand mechanisms of immune protection and to guide rational immunogen design, which are critical steps in our vaccine development. In addition, our protein engineering platform can express the antigens in different expression systems, including E.coli, H. polymorpha, insect baculovirus and CHO cell expression systems, among others. With this diversified expression system toolbox, we are able to select and apply the most suitable expression systems in vaccine development. Through this platform, we are capable of rapidly advancing the development of our recombinant shingles and HPV vaccine candidates.

Immunological evaluation platform

Immunological evaluation is a critical step in subunit vaccine discovery and development. With this platform, we are able to select the optimal antigen and adjuvant combination and in turn improve the immunogenicity profile of our candidates. The immunological evaluation process involves multiple disciplines, including immunology, biology, molecular biology and clinical chemistry. Our core scientific team began to build our immunological evaluation platform as early as 2004 and we became one of the first teams in China to have such a platform. With this platform, we are one of the first companies that can conduct pseudoviral neutralization, ELISPOT, and ICS tests in China, which have been used in the development of our vaccine candidates.

Research and Development

R&D is crucial to our sustainable success. We are led by a core scientific team with over 20 years of experience in the research, development and commercialization of vaccine products, including working experience at the CDC in China. As of the date of this announcement, our in-house R&D team consisted of over 100 talented personnel, most of them held master's or doctoral degrees in immunology, pathogen biology, clinical medicine or other related areas. Benefiting from our IPD system, our R&D team comprises four different product development teams, namely the vaccine innovation core, process research core, comprehensive R&D core and R&D quality core. Our R&D team is primarily located in our Beijing R&D center and our Taizhou R&D base, and is responsible for the full-cycle vaccine R&D.

Our IPD system lays a solid foundation for our R&D activities. The IPD system governs the entire life cycle of vaccine candidates. We conduct market demand analysis for our vaccine candidates at the early stage of vaccine development. Such analysis will serve as the basis of our vaccine development program to ensure our vaccine products can meet the market demand. In addition, under the IPD system, our R&D resources are allocated for the goals of each R&D project. As vaccine development involves a complex and multi-disciplinary process, for each vaccine development project, we will assign a designated project manager and establish a product development team, consisting of employees from technology platforms and related departments including clinical and regulatory affairs, manufacturing, quality control and quality assurance. In addition, our management team is responsible for crucial decision-making and technical review at key points during the R&D process to ensure the R&D can satisfy our R&D protocol and the applicable legal and quality requirements. Empowered by the IPD system, we have been able to advance multiple vaccine development programs simultaneously.

We have developed three advanced technology platforms for novel adjuvant development, protein engineering and immunological evaluation. These platforms empower us to continue to discover and develop subunit vaccines and to apply advanced technologies in our vaccine candidates. Our technology platforms form a "solid trifecta", creating synergies among the design and optimization of antigens, the development and production of adjuvants and the identification of the optimal combinations of antigens and adjuvants. Supported by these platforms, we have developed several vaccine candidates. We are constantly upgrading our technology platforms to further enrich our R&D toolbox and we believe that our technology platforms will continue to drive our vaccine candidate development going forward.

The Company has further enhanced the high-efficiency matrix organizational structure based on the IPD concept. In terms of the products, we divided the entire process from R&D to marketing into six seamlessly connected processes, namely planning, pre-research, development, clinical, industrialization and sales, which are managed in stages according to the characteristics of different stages, and are uniformly made decisions and coordinated by IPMT. The Company has also integrated resource capability modules based on its strategy and pipeline goals, strengthened its three core technology platforms, including novel adjuvant, protein engineering and immunological evaluation platforms, and reorganized its clinical development, process development and quality analysis departments. Upon in-depth analysis and prudent consideration, the Board decides to deregister the wholly-owned subsidiary, Hangzhou Ruibaio, which is established for the purpose of the R&D of certain products, so as to improve the management efficiency and operation profitability, and optimize and integrate R&D resources. Upon the above organizational optimization, the number of research and development staff in the Company has experienced a decrease while efficiency has been improved.

For the six months ended June 30, 2024, our total research and development costs amounted to RMB205.2 million and we had not capitalized any research and development costs for the same period.

Manufacturing and Commercialization

Our R&D activities have primarily been conducted at our Beijing R&D center and Taizhou headquarters. Our Beijing R&D center is equipped with a pilot plant mainly for the pre-IND process development and has laboratories for vaccine R&D with a GFA of approximately 4,000 sq.m. Our Taizhou headquarters R&D facility has a GFA of approximately 3,800 sq.m. with a pilot plant of stock solution, equipped with two production lines for stock solution; and a pilot plant of preparation, equipped with a pre-filled preparation line. Our R&D facilities can also support the manufacturing and development of novel adjuvants. Most of our vaccine candidates used in our clinical trials have been manufactured by our in-house manufacturing team, including our HPV vaccine pipeline, shingles vaccines pipeline, etc.

In anticipation of the huge market demand for our clinical-stage vaccine candidates, we have started to prepare for the commercial manufacturing of our vaccine candidates. During the Reporting Period, we completed the construction of our HPV vaccine manufacturing facility in Taizhou City, Jiangsu Province, which is currently under the stage of pilot production and has a designed peak annual capacity of 20 million doses of HPV 9-valent vaccines. During the Reporting Period, the Company established a complete and systematic quality system for large-scale commercial production of vaccines at its vaccine manufacturing facility in Taizhou City, Jiangsu Province based on the COVID-19 vaccine project. The factory meets both Chinese and EU GMP standards and has obtained a Chinese vaccine production license. It has consistently received the European Union (EU) Qualified Person Declaration issued by a Qualified Person (QP) for several years. The factory has a track record of successful large-scale batch production, which is of great value in advancing the subsequent development of REC610 (recombinant shingles vaccine) and REC625 (recombinant respiratory syncytial virus vaccine) of the Company.

We have formulated clear commercialization strategy for our clinical-stage vaccine candidates, namely HPV vaccines and recombinant shingles vaccines. In building sales channels and terminals for the commercialization of our vaccine candidates in international markets, we are currently building our international business development team. Our international business development team plans to enter into collaborations with foreign governments, MNCs, CSOs and international organizations to commercialize the Company's products overseas. In January 2024, we have signed the framework agreement with SPIMACO, a pharmaceutical company in Saudi Arabia, for the recombinant HPV 9-valent vaccine REC603 and entered into a strategic cooperation. According to the agreement, we exclusively license SPIMACO to develop, register and commercialize recombinant HPV 9-valent vaccine REC603, in 15 Middle East and North Africa countries, including Saudi Arabia. In addition, we have also signed the framework agreement with seven Commonwealth of Independent States countries including Argentina and Russia for the development, registration and commercialization of the recombinant HPV 9-valent vaccine REC603, in which the parties will separately agree on specific commercial arrangements related to REC603 under the above-mentioned framework agreement, which will be disclosed by the Company in a timely manner in accordance with the requirements of the Listing Rules.

Intellectual Property

As a company focusing on the research, development and commercialization of recombinant vaccine products, we believe intellectual property is crucial to our business. We actively seek patent protection for our vaccine candidates in China and major jurisdictions and file the relevant patent applications of each project, when appropriate, to cover certain antigens, strains, proteins, formulations and production processes. We have developed a significant portfolio of intellectual property rights to protect our technologies and products. We hold 25 authorized patents in China and 76 patent applications (including 99 invention patents and patent applications, and 2 design patents), among which, the authorized patents are mainly concentrated in the Core Products related to HPV project, adjuvant platform and syncytial virus vaccine projects, etc. In particular, we constantly strengthen the deployment of proprietary intellectual property rights for innovative vaccines. Among them, based on the protein engineering platform, we have applied for nearly 40 invention patents in relation to antigens for recombinant human herpes simplex virus vaccine (HSV), SARS-COV-2 and its variants vaccine, and respiratory syncytial virus vaccine (RSV) projects. Based on the new adjuvant platform, we have applied for nearly 30 invention patents in relation to key raw materials for adjuvants, of which 4 new adjuvant patents have been granted. For the six months ended June 30, 2024, we were not involved in any proceedings in respect of, and we had not received notice of any claims of infringement of, any intellectual property rights that might be threatened or pending as claimant or respondent.

Employees and Remuneration

As of June 30, 2024, the Group had 507 employees, all of whom were based in China. The total staff costs incurred by the Group (which are recorded as part of our administrative expenses, research and development costs and selling and distribution expenses) for the six months ended June 30, 2024 were RMB96.4 million, as compared to RMB115.9 million for the six months ended June 30, 2023. The remuneration package of our employees includes wages and other incentives, which are generally determined by their qualifications, industry experience, positions and performance. We conduct new employee training, as well as professional and safety training programs for all employees in accordance with our internal procedures. We make contributions to social insurance and housing provident funds in compliance with applicable PRC laws and regulations in all material respects. We also enter into standard confidentiality, intellectual property assignment and non-competition agreements with our key management and research and development staff, which typically include a standard non-compete agreement that prohibits the employee from competing with us, directly or indirectly, during his or her employment and for two years after the termination of his or her employment. Employees also sign acknowledgments regarding service inventions and discoveries made during the course of his or her employment.

Business Outlook

Going forward, leveraging our strengths, we plan to implement the following strategies:

- accelerate the R&D, clinical trial and commercialization of our vaccine candidates;
- continue to strengthen our R&D capabilities;
- refine our organization structure and human resource management to enhance our competitiveness; and
- advance our international strategy through "going-out" and "bringing-in" strategies.

We believe that we will further strengthen our core competitive strengths and enable us to capture rising business opportunities through the following practices:

- concentrate resources and prioritize the marketing of HPV 9-valent vaccines and recombinant shingles vaccines as soon as possible;
- actively carry out the planning and pre-research of subsequent pipelines, and conduct preclinical studies in due time within the scope of resource capabilities;
- develop intelligent manufacturing processes and equipment, enhance the construction of quality management system, strengthen brand construction and communication, and enhance the construction of marketing team and marketing network;
- strengthen international BD capabilities to achieve greater breakthroughs in the international market and foreign commercial authorization; and
- cooperate with industrial partners to build a strong domestic marketing network.

FINANCIAL REVIEW

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

Analysis of Our Key Items of Our Results of Operations

Other Income and Gains

Our other income and gains decreased by 40.4% from RMB59.9 million for the six months ended June 30, 2023 to RMB35.7 million for the six months ended June 30, 2024. Such decrease was primarily attributable to the year-on-year decrease in foreign exchange gains of RMB26.4 million, the year-on-year decrease in interest income of RMB11.5 million and the year-on-year increase in government grant of RMB13 million.

Selling and Distribution Expenses

Our selling and distribution expenses decreased from RMB5.4 million for the six months ended June 30, 2023 to RMB1.5 million for the six months ended June 30, 2024, primarily attributable to the reduction of employees, resulting in a decrease in the headcount of our marketing department, and the corresponding decrease in labor costs.

Research and Development Costs

Our research and development costs decreased by 17.2% from RMB247.8 million for the six months ended June 30, 2023 to RMB205.2 million for the six months ended June 30, 2024. Such decrease in research and development costs resulted from the following:

- RMB33.4 million decrease in clinical trial expenses from RMB105.0 million for the six months ended June 30, 2023 to RMB71.6 million for the six months ended June 30, 2024, mainly due to the decrease in clinical expenditure compared with the previous period as our Core Product, REC603, had been in the 36-month follow-up stage of phase III clinical trials;

- RMB7.2 million decrease in pre-IND expenses from RMB13.0 million for the six months ended June 30, 2023 to RMB5.8 million for the six months ended June 30, 2024, mainly because the Company's major pipeline products had substantially completed their preliminary research and development and are currently in the clinical stage, while most of the other pipeline products are in the pre-research stage.

Administrative Expenses

Our administrative expenses decreased by 30.0% from RMB78.1 million for the six months ended June 30, 2023 to RMB54.7 million for the six months ended June 30, 2024, mainly attributable to a decrease in labor expenses resulting from optimization of staff.

Other Expenses

Our other expenses increased from RMB142.0 thousand for the six months ended June 30, 2023 to RMB14.8 million for the six months ended June 30, 2024, mainly due to the increase of RMB9.1 million in provision of impairment for inventories, the increase of RMB3.9 million in provision of impairment of property, plant and equipment and RMB1.8 million in provision of impairment for other current assets.

Finance Costs

Our finance costs increased from RMB5.4 million for the six months ended June 30, 2023 to RMB9.1 million for the six months ended June 30, 2024, mainly because we obtained additional debt financing.

Analysis of Key Items of Financial Position

Property, Plant and Equipment

Our property, plant and equipment primarily consisted of (i) leasehold improvements; (ii) plant and machinery; (iii) furniture and fixtures; (iv) computer and office equipment; (v) motor vehicles; and (vi) construction in progress. Our property, plant and equipment increased by 21.5% from RMB840.8 million as of December 31, 2023 to RMB1,021.9 million as of June 30, 2024, mainly due to the construction of the purification and decoration project for the vaccine building and quality inspection building of HPV industrialization base.

Right-of-use Assets

Our right-of-use assets represent (i) leasehold land, representing the land use right of our manufacturing facility for our HPV vaccines with an original use right of 50 years; and (ii) leased properties, representing our leased manufacturing facility and our leased office building and laboratories. Our right-of-use assets decreased by 10.2% from RMB43.4 million as of December 31, 2023 to RMB39.0 million as of June 30, 2024, mainly due to normal amortization of right-of-use assets.

Other Non-current Assets

Our other non-current assets mainly represent our deductible input tax and prepayment for purchase of property, plant and equipment. Our other non-current assets increased by 26.2% from RMB122.2 million as of December 31, 2023 to RMB154.3 million as of June 30, 2024, mainly due to the increase in deductible input tax amount that cannot be received or deducted within one year.

Prepayments, Other Receivables and Other Assets

Our prepayments, other receivables and other assets decreased from RMB123.2 million as of December 31, 2023 to RMB57 million as of June 30, 2024, mainly because of expected decrease in deductible input tax amount that can be received or deducted within one year.

Cash and Bank Balances

Our cash and bank balance decreased by 34.4% from RMB912.4 million as of December 31, 2023 to RMB598.1 million as of June 30, 2024, mainly due to the purchase of research and development services, raw materials, equipment, the industrialization construction, and administrative expenses.

Trade and Bills Payables

Our trade payables decreased by 40.6% from RMB115.1 million as of December 31, 2023 to RMB68.3 million as of June 30, 2024, mainly because of the payment for research and development expenses and inventory procurement expenses.

Other Payables and Accruals

Our other payables and accruals increased by 33.2% from RMB268.1 million as of December 31, 2023 to RMB357.2 million as of June 30, 2024, mainly resulting from the following: (i) an increase of RMB101.6 million for the purchase of industrialization-based equipment of HPV 9-valent vaccine, which is mainly in line with the progress of our commercialization layout; and (ii) a decrease of RMB15.1 million in staff payroll, welfare and bonus payables, which is mainly due to the settlement of the bonus for 2023.

Lease Liabilities

Our lease liabilities decreased by 17.7% from RMB19.2 million as of December 31, 2023 to RMB15.8 million as of June 30, 2024, mainly due to the payment of rent related to right-of-use assets during the period.

Liquidity and Capital Resources

Our primary uses of cash relate to the research and development of our vaccine candidates and the purchase of fixed assets. We monitor and maintain a level of cash and cash equivalents deemed adequate to finance our operations and mitigate the effects of fluctuations in cash flows. As our business develops and expands, we expect to generate more cash from our operating activities through commercialization of new vaccines. Going forward, we believe our liquidity requirements will be satisfied by using funds from a combination of cash from operations, bank balances and cash, unutilized banking facilities and financing. As of June 30, 2024, our cash and bank balances amounted to RMB598.1 million. Out of the RMB598.1 million cash and bank balances as of June 30, 2024, RMB107.8 million (approximately 18.0%) was denominated in RMB, RMB464.5 million (approximately 77.7%) was denominated in U.S. dollars and RMB25.8 million (approximately 4.3%) was denominated in Hong Kong dollars.

Net Current Assets

Our net current assets decreased by 83.4% from RMB685.1 million as of December 31, 2023 to RMB113.7 million as of June 30, 2024, primarily due to the decrease in cash and bank balances resulting from our purchase of research and development services, raw materials and equipment, the industrialization construction, and administrative expenses, as well as the increase in current liabilities due to bank loans and other borrowings maturing within one year.

Charge on Asset

As of June 30, 2024, the Group had RMB152.0 million in assets pledged as collateral (December 31, 2023: RMB83.5 million), mainly due to an increase in collateral as a result of bank borrowings.

Indebtedness and Financial Ratios

The total interest-bearing bank loans and other borrowings of the Group as of June 30, 2024 were RMB681.3 million. RMB212.1 million of the bank loans and other borrowings were current borrowings with maturity dates in June 30, 2025 and effective interest rates ranging from 3.3% to 6.7%. RMB469.2 million of the bank borrowings and other borrowings were non-current bank borrowings with maturity days from 2026 to 2028 and effective interest rates ranging from 3.3% to 6.7%.

Our current ratio (calculated as current assets divided by current liabilities as of the same date) decreased from 2.5 as of December 31, 2023 to 1.2 as of June 30, 2024, mainly due to the increase in bank loans and other borrowings maturing within one year.

Our gearing ratio (calculated as total liabilities divided by total assets as of the same date) was 59.4% as of June 30, 2024 (as of December 31, 2023: 51.0%), due to the large amount of loans borrowed for production and operations.

Provision for Estimated Liabilities

As of June 30, 2024, the provision of RMB28.4 million was recognized due to the lawsuit over a technical service contract. We made the provision based on the latest development of the relevant litigation together with the judgement information currently obtained. On November 23, 2023, the court froze bank deposits of RMB63.9 million in connection with this litigation.

Contingent Liabilities

Save as disclosed in the section headed "Provision for Estimated Liabilities" in this announcement, we had no material contingent liabilities as of June 30, 2024.

Capital Expenditure and Contractual Commitments

Our capital expenditure is mainly for the purchase of our long-term assets including (i) construction in progress; (ii) plant and machinery; (iii) leasehold improvements; (iv) motor vehicles; (v) computers and office equipment; and (vi) furniture and fixtures. Our capital expenditure decreased from RMB101.8 million for the six months ended June 30, 2023 to RMB78.1 million for the six months ended June 30, 2024, mainly related to the increase in the amount payable for procurement of production equipment as of June 30, 2024.

Our capital expenditure commitments increased from RMB76.2 million as of December 31, 2023 to RMB360.7 million as of June 30, 2024, primarily attributable to further progress in research and development projects, resulting in the continued increase in investment in construction and procurement of equipment, as well as a significant increase in construction in progress during the period.

Save as disclosed above, the Group had no other material capital expenditure or investment plan as at the date of this announcement.

Significant Investments and Material Acquisitions and Disposals

Our Company had no significant investments, material acquisitions and/or disposals of subsidiaries, associates and joint ventures for the six months ended June 30, 2024.

Events after the Reporting Period

Save as disclosed in this announcement, we are not aware of any material subsequent events from the end of the Reporting Period to the date of this announcement.

FINANCIAL RISKS

We are exposed to a variety of financial risks, including interest risk, foreign currency risk, credit risk and liquidity risk as set out below. Our overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on our financial performance.

Interest Risk

The Group has no significant interest-bearing assets other than time deposits and cash and cash equivalents. The Group's interest rate risk arises from its borrowings, which are at variable rates and expose the Group to the risk of changes in market interest rates. The Group has not used any interest rate swaps to hedge its exposure to interest rate risk. The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's debt obligations with a floating interest rate.

As at June 30, 2024, if interest rates on loans had been 50 basis points higher/lower with all other variables held constant, the loss before tax for the six months ended June 30, 2024 would have been RMB3,118,000 (2023: RMB867,000) higher/lower, mainly as a result of the higher/lower interest expense on loans.

Foreign Currency Risk

We mainly operate in China and a majority of our transactions are settled in RMB, the functional currency of our Company's principal subsidiaries. The Group however has certain transactional currency exposure as a portion of our transactions are settled in U.S. dollars. The Group trades only with recognized and creditworthy third parties. In addition, receivable balances are monitored on an ongoing basis and the Group's exposure to bad debts is not significant. We currently do not have a foreign currency hedging policy. However, our management monitors foreign exchange exposure and will consider hedging significant foreign exchange exposure should the need arise. The Group did not have significant foreign currency exposure from its operations as of June 30, 2024.

Credit Risk

We generally trade only with recognized and creditworthy third parties. In addition, receivable balances are monitored on an ongoing basis and our exposure to bad debts is not significant. The credit quality of the financial assets included in prepayments, other receivables and other assets is considered to be "normal" when they are not past due and there is no information indicating that the financial assets had a significant increase in credit risk since initial recognition. Otherwise, the credit quality of the financial assets is considered to be "doubtful".

As of June 30, 2024, cash and cash equivalents were deposited in banks of high quality without significant credit risk. The Directors are of the view that our exposure to credit risk arising from other receivables is not significant since counterparties to these financial assets have no history of default.

Liquidity Risk

In the management of the liquidity risk, we monitor and maintain a level of cash and cash equivalents deemed adequate by the management of our Group to allocate the working capital and mitigate the effects of fluctuations in cash flows. Our objective is to maintain a balance between continuity of funding and flexibility through the use of bank loans and other borrowings and lease liabilities. We aim to maintain sufficient cash and cash equivalents to meet our liquidity requirements.

Future Plans for Material Investments and Capital Assets

Save as disclosed in this announcement, we did not have other plans for material investments and capital assets as of the date of this announcement.

OTHER INFORMATION

PURCHASE, SALE OR REDEMPTION OF OUR COMPANY'S SHARES

During the Reporting Period, neither our Company nor any of its subsidiaries purchased, sold or redeemed any listed securities of the Company (including sale of treasury shares). As of the end of the Reporting Period, no treasury shares were held by the Company.

MODEL CODE FOR SECURITIES TRANSACTIONS

Our Company has adopted the Model Code since the Listing Date.

We have made specific inquiries to all Directors and Supervisors, and all Directors and Supervisors have confirmed that they have complied with the Model Code for transactions in our Company's securities during the Reporting Period.

CORPORATE GOVERNANCE PRACTICES

We strive to maintain high standards of corporate governance to safeguard the interests of the Shareholders and to enhance corporate value and accountability. Our Company has adopted the Code Provisions of the CG Code as the basis of our Company's corporate governance practices since the Listing Date.

Save as disclosed below, our Company has complied with all applicable Code Provisions as set out in the CG Code during the Reporting Period.

Under Code Provision C.2.1 of the CG Code, the roles of chairman and chief executive officer should be separate and should not be performed by the same individual. In view of Dr. Liu's experience, personal profile and his roles in our Company and that Dr. Liu has assumed the role of general manager of our Company since our commencement of business, the Board considers it beneficial to the business prospect and operational efficiency of our Company that Dr. Liu acts as the chairman of the Board and continues to act as the general manager of our Company.

While this will constitute a deviation from the Code Provision, the Board believes that this structure will not impair the balance of power and authority between the Board and the management of our Company, given that: (i) any decision to be made by our Board requires approval by at least a majority of our Directors; (ii) Dr. Liu and the other Directors are aware of and undertake to fulfil their fiduciary duties as Directors, which require, among other things, that they act for the benefits and in the best interests of our Company and will make decisions for our Company accordingly; and (iii) the balance of power and authority is ensured by the operations of the Board which comprises experienced and high caliber individuals who meet regularly to discuss issues affecting the operations of our Company. Moreover, the overall strategic and other key business, financial, and operational policies of our Company are made collectively after thorough discussions by both the Board and senior management. The Board will continue to review the effectiveness of the corporate governance structure of our Company in order to assess whether separation of the roles of chairman of the Board and chief executive officer is necessary.

RISK MANAGEMENT AND INTERNAL CONTROL

The Board acknowledges its responsibility for the risk management and internal control systems and reviewing their effectiveness. Our Company has established a comprehensive risk management and internal control system and relevant policies and procedures which we consider suitable for our business operations. For details, please refer to the section headed "Risk Management and Internal Control" from the 2023 annual report of the Company.

As our priority concern, during the Reporting Period, each department of the Company had regularly undergone internal control assessment to identify risks that may impact the Company's operations and other aspects, including key operational and financial processes, regulatory and compliance and data security. The internal audit department also inspected and reported to the Board on the sufficiency and effectiveness of risk management and internal control systems, and confirmed that no whistleblowing report on misconduct in respect of financial reporting, internal control or other aspects between the Group's employees and those who deal with the Group (e.g. customers and suppliers) was received during the first half of the year. We will continuously optimize and further improve each of the above systems and procedures to facilitate the benign and wholesome development of the Company.

INTERIM DIVIDEND

The Board did not recommend the distribution of an interim dividend for the six months ended June 30, 2024 (for the six months ended June 30, 2023: nil).

AUDIT COMMITTEE AND REVIEW OF FINANCIAL STATEMENTS

Our Company established the Audit Committee with written terms of reference in compliance with Rule 3.21 of the Listing Rules and the CG Code as set out in Appendix C1 to the Listing Rules. The Audit Committee consists of three members, including two independent non-executive Directors, namely Dr. XIA Lijun and Professor YUEN Ming Fai and one non-executive Director, namely Dr. ZHOU Hongbin. Dr. XIA Lijun has been appointed as the chairman of the Audit Committee, and is our independent non-executive Director holding the appropriate professional qualifications. The Audit Committee has reviewed the unaudited interim results of the Group for the six months ended June 30, 2024 and considered that the results complied with relevant accounting standards, rules and regulations and appropriate disclosure have been duly made.

The interim financial report for the six months ended June 30, 2024 is unaudited, but has been reviewed by Ernst & Young in accordance with Hong Kong Standard on Review Engagements 2410 "Review of Interim Financial Information Performed by the Independent Auditor of the Entity" issued by the Hong Kong Institute of Certified Public Accountants.

PUBLICATION OF INTERIM REPORT

The interim report of the Group for the six months ended June 30, 2024 containing all the relevant information required by the Listing Rules will be published on the websites of the Stock Exchange (www.hkexnews.hk) and the Company (www.recbio.cn), in accordance with the Listing Rules in due course.

Definitions

"Audit Committee"	the audit committee of our Company;
"BD"	business development;
"Beijing ABZYMO"	Beijing ABZYMO Biosciences Co., Ltd. (北京安百勝生物科技有限公司), a limited liability company established in the PRC on March 7, 2011 and our wholly-owned subsidiary;
"Board"	the board of Directors of our Company;
"CDE"	the Center for Drug Evaluation of NMPA (國家藥品監督管理局藥品審評中心), a division of the NMPA mainly responsible for review and approval of IND and BLA;
"CG Code"	the Corporate Governance Code contained in Appendix C1 to the Listing Rules, as amended, supplemented or otherwise modified from time to time;
"China" or "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, references in this announcement to "China" and the "PRC" do not include Hong Kong, the Macau Special Administrative Region of the PRC and Taiwan;
"Code Provision(s)"	the principles and code provisions set out in Part 2 of the CG Code;
"Companies Ordinance"	the Companies Ordinance (Chapter 622 of the Laws of Hong Kong), as amended, supplemented or otherwise modified from time to time;
"Company" or "our Company"	Jiangsu Recbio Technology Co., Ltd. (江蘇瑞科生物技術股份有限公司), a joint stock company incorporated in the PRC with limited liability, the H Shares of which are listed on the Stock Exchange (stock code: 2179);
"Core Product"	has the meaning ascribed to it in Chapter 18A of the Listing Rules; for the purpose of this announcement, our Core Product refers to REC603, a recombinant HPV 9-valent vaccine candidate;

"Director(s)"	the director(s) of our Company;
"Domestic Share(s)"	ordinary shares in the share capital of our Company, with a nominal value of RMB1.00 each, which are subscribed for and paid up in Renminbi by domestic investors;
"Dr. Liu"	Dr. LIU Yong, the executive Director and general manager of our Group;
"FDA"	the United States Food and Drug Administration;
"Global Offering"	the global offering of 30,854,500 H Shares (subject to over-allotment option) as described in the Prospectus;
"Group", "our Group", "we" or "us"	our Company and all of our subsidiaries or, where the context so requires, in respect of the period before our Company became the holding company of its present subsidiaries, the businesses operated by such subsidiaries or their predecessors (as the case may be);
"Hangzhou Ruibaio"	Hangzhou Ruibaio Technology Company Limited (杭州瑞佰奥科技有限公司), a limited liability company established in the PRC on February 3, 2023;
"H Share(s)"	overseas listed foreign share(s) in the share capital of our Company, with a nominal value of RMB1.00 each, which are listed on the Stock Exchange and traded in Hong Kong dollars;
"HK$" or "Hong Kong dollars"	Hong Kong dollars, the lawful currency of Hong Kong;
"Hong Kong"	the Hong Kong Special Administrative Region of the PRC;
"IASB"	International Accounting Standards Board;
"IFRS"	the International Financial Reporting Standards, which as collective term includes all applicable individual International Financial Reporting Standards, International Accounting Standards and Interpretations issued by the IASB;
"IPMT"	the product investment decision and review body within the IPD system, which is responsible for formulating the Company's overall mission, vision, and strategic direction, guiding and monitoring the operation of each product line, and facilitating the full-process collaboration among departments, as well as formulating a balanced business plan of the Company and making decisions on the generation of new product lines;

"Jiangsu MPA"	Jiangsu Medical Products Administration;
"Listing"	the listing of our H Shares on the Stock Exchange;
"Listing Date"	March 31, 2022, on which dealings in our H Shares first commenced on the Main Board of the Stock Exchange;
"Listing Rules"	the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, as amended, supplemented or otherwise modified from time to time;
"Main Board"	the stock exchange (excluding the option market) operated by the Stock Exchange, which is independent from and operated in parallel with the Growth Enterprise Market of the Stock Exchange;
"Model Code"	the Model Code for Securities Transactions by Directors of Listed Issuers set out in Appendix C3 to the Listing Rules, as amended, supplemented or otherwise modified from time to time;
"NMPA"	the National Medical Products Administration of the PRC (國家藥品監督管理局) and its predecessor, the China Food and Drug Administration (國家食品藥品監督管理總局);
"Prospectus"	the prospectus issued by our Company on March 21, 2022 in relation to our Global Offering and Listing;
"Reporting Period"	the six months ended June 30, 2024;
"RMB" or "Renminbi"	Renminbi, the lawful currency of the PRC;
"Share(s)"	share(s) in the share capital of our Company, with a nominal value of RMB1.00 each, comprising our Domestic Shares, Unlisted Foreign Shares and H Shares;
"Shareholders"	holders of our Shares;
"Stock Exchange"	The Stock Exchange of Hong Kong Limited;
"subsidiary(ies)"	has the meaning ascribed thereto in section 15 of the Companies Ordinance;
"Supervisor(s)"	supervisor(s) of our Company;

"treasury shares"	has the meaning ascribed to it under the Listing Rules;
"United States" or "U.S."	the United States of America, its territories, its possessions and all areas subject to its jurisdiction;
"Unlisted Foreign Share(s)"	ordinary share(s) issued by our Company with a nominal value of RMB1.00 each and are held by foreign investors and are not listed on any stock exchange;
"U.S. dollars", "US$" or "USD"	United States dollars, the lawful currency of the United States;
"Wuhan Recogen"	Wuhan Recogen Biotechnology Co., Ltd. (武漢瑞科吉生物科技有限公司), a limited liability company established in the PRC on September 28, 2021;

Glossary of Technical Terms

"adjuvant"	a substance that may be added to a vaccine to enhance the body's immune response to an antigen;
"adjuvant system"	formulations of classical adjuvants mixed with immunomodulators, specifically adapted to the antigen and the target population;
"AE"	adverse events, any untoward medical occurrences in a patient or clinical investigation subject administered with a drug or other pharmaceutical product during clinical trials and which do not necessarily have a causal relationship with the treatment;
"AESI"	adverse event of special interest;
"antigen"	the substance that is capable of stimulating an immune response, specifically activating lymphocytes, which are the body's infection-fighting white blood cells;
"AS01"	a liposome-based vaccine adjuvant system, which contains 3-O-desacyl-4'-monophosphoryl lipid A (MPL), as well as the saponin QS-21;
"AS03"	an adjuvant system composed of α-tocopherol, squalene and polysorbate 80 in an oil-in-water emulsion;
"AS04"	an adjuvant system composed of aluminum salt and monophosphoryl lipid A (MPL), a clinically utilized TLR4 agonist;
"B cell(s)"	a type of white blood cell that differ(s) from other lymphocytes like T-cells by the presence of the BCR on the B-cell's outer surface, also known as B-lymphocytes;
"BLA"	biologics license application;
"CD4"	a transmembrane glycoprotein that is expressed as a single polypeptide chain on the MHC class II-restricted T-cells;
"CD4+T cells"	a type of important T lymphocyte that helps coordinate the immune response by stimulating other immune cells to fight infections;
"CD8+T cells"	a type of important T lymphocytes for immune defense against intracellular pathogens, including viruses and bacteria, and for tumour surveillance;
"CDC"	Centre for Disease Control and Prevention;

"CEPI"	the Coalition for Epidemic Preparedness Innovations, a foundation that receives donations from the public, private, philanthropic and civil social organizations to fund independent research projects, thus to develop vaccines against emerging infectious diseases;
"cervical cancer"	cancer that occurs in the cervix – the lower part of the uterus that connects to the vagina;
"CHO cell"	Chinese Hamsters Ovary Cell, which is widely used in biopharmaceutical industry to produce recombinant proteins;
"CMO(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;
"COVID-19"	Coronavirus Disease 2019, an infectious disease caused by the most recently discovered coronavirus, first reported in December 2019;
"ELISPOT and ICS"	enzyme linked immunospot assay, or ELISPOT, and intracellular cytokine staining, or ICS based on flow cytometry, the two most commonly used detection methods to evaluate vaccine-induced immune responses;
"E.coli"	Escherichia coli expression system, an expression system used in vaccine R&D and manufacturing;
"emulsion"	a mixture of two or more liquids that are normally immiscible (unmixable or unblendable) owing to liquid-liquid phase separation;
"epitope"	part of an antigen that is recognized by the immune system, specifically by antibodies, B cells, or T cells;
"GFA"	gross floor area;
"GMP"	good manufacturing practices;
"GMT"	geometric mean titers;
"H. polymorpha"	Hansenula polymorpha, a well-known model organism, which can utilize methanol as the carbon source and energy source, used widely for studying cellular, metabolic, and genetic issues, and used in vaccine industry for expression of recombinant proteins;

"HPV"	human papillomavirus, persistent infection of high-risk types can cause cervical cancer;
"HPV 9-valent vaccine"	a vaccine that can help protect individuals against the infections and diseases caused by nine types of HPV;
"HPV bivalent vaccine"	vaccines that can prevent infections of two HPV types;
"HPV quadrivalent vaccine"	vaccines that can prevent infections of four HPV types;
"immune response"	the process by which the body is stimulated by antigens;
"immunogenicity"	the ability of an antigen to provoke immune response;
"IND"	investigational new drug or investigational new drug application;
"influenza" or "flu"	highly infectious respiratory diseases caused by influenza viruses. It is characterised by sudden onset of high fever, aching muscles, headache, fatigue and a hacking cough. Serious outcome of influenza can result in hospitalization or death;
"IPD"	Integrated Product Development, a structure of work and best practices that causes people to work together more effectively with better communications and metrics that connect the entire value chain which is the standard of the matrix management mode;
"MF59"	an adjuvant system that uses a derivative of shark liver oil called squalene;
"mRNA"	messenger ribonucleic acid, a single-stranded molecule of RNA that corresponds to the genetic sequence of a gene, and is read by a ribosome in the process of synthesizing a protein;
"neutralizing antibodies" or "NAb"	an antibody that is responsible for defending cells from pathogens, which are organisms that cause disease;
"OPTI"	the management philosophy adopted by our Company, which referred to Opportunity, Prudence, Technology and Intellectual Property;

"pathogens"	a bacteria, virus, or other microorganism that can cause disease;
"QS-21"	a purified plant extract used as a vaccine adjuvant;
"R&D"	research and development;
"SAE"	serious adverse events, any untoward medical occurrence in human drug trials that at any dose: results in death; is life threatening; requires inpatient hospitalization or causes prolongation of existing hospitalization; results in persistent or significant disability and/or incapacity; may have caused a congenital anomaly/birth defect, or requires intervention to prevent permanent impairment or damage;
"SARS-CoV-2"	severe acute respiratory syndrome coronavirus 2, the strain of coronavirus that causes COVID-19;
"shingles"	a viral infection that causes a painful rash;
"T cell(s)"	cell(s) that originate in the thymus, mature in the periphery, become activated in the spleen/nodes if their T-cell receptors bind to an antigen presented by an MHC molecule and they receive additional costimulation signals driving them to acquire killing (mainly CD8+T cells) or supporting (mainly CD4+T cells) functions;
"TB"	tuberculosis, an infection caused by Mycobacterium tuberculosis that primarily affects the lungs;
"TEAE"	treatment emergent adverse event;
"TLR4"	a receptor for lipopolysaccharide (LPS), which has a pivotal role in the regulation of immune responses to infection;
"tolerability"	the degree to which overt AEs of a drug can be tolerated by a patient. Tolerability of a particular drug can be discussed in a general sense, or it can be a quantifiable measurement as part of a clinical study;

"varicella"	an acute infectious disease caused by the first infection of varicella zoster virus;
"VLPs"	virus-like particles, are molecules that closely resemble viruses;
"WHO"	World Health Organization.

Certain amounts and percentage figures included in this announcement have been subject to rounding adjustments.

For ease of reference, the names of the PRC laws and regulations, governmental authorities, institutions, natural persons or other entities (including certain of our subsidiaries) have been included in this announcement in both the Chinese and English languages and in the event of any inconsistency, the Chinese version shall prevail. English translations of official Chinese names are for identification purpose only.

By order of the Board
Jiangsu Recbio Technology Co., Ltd.
Dr. Liu Yong
Chairman

Jiangsu Province, the PRC, August 20, 2024

As at the date of this announcement, the Board comprises Dr. Liu Yong as the chairman of the Board and an executive Director, Mr. Li Bu, Ms. Chen Qingqing and Dr. Hong Kunxue as executive Directors, Dr. Wang Ruwei, Dr. Zhang Jiaxin, Dr. Zhou Hongbin and Mr. Hu Houwei as non-executive Directors, and Dr. Xia Lijun, Mr. Liang Guodong, Professor Gao Feng and Professor Yuen Ming Fai as independent non-executive Directors.