AIM Vaccine Co., Ltd.
艾美疫苗股份有限公司

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

(Stock Code: 06660)

INTERIM RESULTS ANNOUNCEMENT
FOR THE SIX MONTHS ENDED JUNE 30, 2023

FINANCIAL HIGHLIGHTS

	Six months ended June 30,		
	2023	2022	Change
Key income statement items	***RMB'000***	*RMB'000*	*%*
Revenue	**540,470**	591,567	-8.6
Gross profit	**432,648**	481,625	-10.2
Loss attributable to owners of the parent	**250,369**	44,877	457.9

The Board is pleased to announce the unaudited interim condensed consolidated results of the Group for the six months ended June 30, 2023 together with the comparative figures for six months ended June 30, 2022 as follows:

INTERIM CONDENSED CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME
For the six months ended 30 June 2023

		Six months ended 30 June	
	Notes	**2023**	2022
		RMB'000	*RMB'000*
		(Unaudited)	(Unaudited)
REVENUE	*4*	**540,470**	591,567
Cost of sales		**(107,822)**	(109,942)
Gross profit		**432,648**	481,625
Other income and gains	*4*	**21,028**	20,839
Selling and distribution expenses		**(224,902)**	(233,003)
Administrative expenses		**(115,659)**	(185,572)
Research and development costs		**(398,529)**	(194,026)
Impairment losses on financial assets, net		**(3,670)**	(6,634)
Other expenses		**(1,639)**	(5,308)
Finance costs	*5*	**(19,156)**	(10,231)
LOSS BEFORE TAX	*6*	**(309,879)**	(132,310)
Income tax credit	*7*	**52,447**	183,256
(LOSS)/PROFIT FOR THE PERIOD		**(257,432)**	50,946
TOTAL COMPREHENSIVE (LOSS)/INCOME FOR THE PERIOD		**(257,432)**	50,946
(Loss)/Profit attributable to:			
Owners of the parent		**(250,369)**	(44,877)
Non-controlling interests		**(7,063)**	95,823
		(257,432)	50,946
Total comprehensive (loss)/income attributable to:			
Owners of the parent		**(250,369)**	(44,877)
Non-controlling interests		**(7,063)**	95,823
		(257,432)	50,946
LOSS PER SHARE ATTRIBUTABLE TO ORDINARY EQUITY HOLDERS OF THE PARENT:	*9*		
Basic			
– For loss for the period (RMB)		**(0.21)**	(0.04)
Diluted			
– For loss for the period (RMB)		**(0.21)**	(0.04)

INTERIM CONDENSED CONSOLIDATED STATEMENT OF FINANCIAL POSITION

30 June 2023

	Notes	**30 June 2023** ***RMB'000*** **(Unaudited)**	31 December 2022 *RMB'000* (Audited)
NON-CURRENT ASSETS			
Property, plant and equipment	*10*	**3,299,471**	3,290,829
Right-of-use assets		**202,572**	197,263
Goodwill		**482,897**	482,897
Other intangible assets		**2,236,874**	2,238,496
Prepayments for equipment		**110,020**	114,448
Other non-current assets		**2,746**	3,150
Total non-current assets		**6,334,580**	6,327,083
CURRENT ASSETS			
Inventories		**547,604**	504,738
Trade and bills receivables	*11*	**1,052,396**	1,052,594
Prepayments, other receivables and other assets		**148,019**	173,666
Prepaid income tax		**2,618**	8,714
Due from related parties		**32,112**	–
Restricted cash		**10,632**	11,173
Time deposits		**165,000**	162,643
Cash and cash equivalents		**589,892**	635,175
Total current assets		**2,548,273**	2,548,703

	Notes	30 June 2023 RMB'000 (Unaudited)	31 December 2022 RMB'000 (Audited)
CURRENT LIABILITIES			
Trade payables	12	**56,270**	73,583
Other payables and accruals		**1,130,162**	1,072,982
Contract liabilities		**50,819**	57,197
Interest-bearing bank borrowings		**1,000,234**	1,010,693
Lease liabilities		**21,059**	19,342
Tax payable		**–**	7,872
Deferred government grants		**5,220**	4,818
Provisions		**5,961**	3,310
Total current liabilities		**2,269,725**	2,249,797
NET CURRENT ASSETS		**278,548**	298,906
TOTAL ASSETS LESS CURRENT LIABILITIES		**6,613,128**	6,625,989
NON-CURRENT LIABILITIES			
Interest-bearing bank borrowings		**644,755**	339,442
Lease liabilities		**21,425**	29,190
Deferred tax liabilities		**216,229**	269,011
Deferred government grants		**154,373**	127,439
Total non-current liabilities		**1,036,782**	765,082
Net assets		**5,576,346**	5,860,907
EQUITY			
Equity attributable to owners of the parent			
Share capital		**1,211,063**	1,211,063
Reserves		**3,476,287**	3,749,178
		4,687,350	4,960,241
Non-controlling interests		**888,996**	900,666
Total equity		**5,576,346**	5,860,907

1. CORPORATE AND GROUP INFORMATION

AIM Vaccine Co., Ltd. (the "**Company**") was incorporated as a limited liability company in the People's Republic of China (the "**PRC**") on 9 November 2011. Upon approval by the shareholders' general meeting held on 18 September 2020, the Company was converted into a joint stock company with limited liability under the Company Law of the PRC and changed its registered name from "Beijing AIM Biological Vaccine Technology Group Co., Ltd.* (北京艾美生物疫苗技術集團有限公司) to "AIM Vaccine Co., Ltd.* (艾美疫苗股份有限公司) on 23 September 2020. The registered office of the Company is located at Room 218, 2/F, Xinghai Building, 16 Yingshun Road, Yinghai Town, Daxing District, Beijing, PRC.

The Group was involved in the research and development, manufacturing and commercialisation of vaccine products for human use in the PRC.

The Company was listed on the Main Board of The Stock Exchange of Hong Kong Limited (the "**Stock Exchange**") on 6 October 2022.

2.1 BASIS OF PREPARATION

The interim condensed consolidated financial information for the six months ended 30 June 2023 has been prepared in accordance with IAS 34 *Interim Financial Reporting*. 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 2022.

2.2 CHANGES IN ACCOUNTING POLICIES AND DISCLOSURES

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 2022, except for the adoption of the following new and revised International Financial Reporting Standards ("**IFRSs**") for the first time for the current period's financial information.

Amendments to IAS 1 and IFRS Practice Statement 2	*Disclosure of Accounting Policies*
Amendments to IAS 8	*Definition of Accounting Estimates*
Amendments to IAS 12	*Deferred Tax related to Assets and Liabilities arising from a Single Transaction*
Amendments to IAS 12	*International Tax Reform – Pillar Two Model Rules*

The nature and impact of the new and revised IFRSs that are applicable to the Group are described below:

(a) Amendments to IAS 1 require entities to disclose their material accounting policy information rather than their significant accounting policies. Accounting policy information is material if, when considered together with other information included in an entity's financial statements, it can reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements. Amendments to IFRS Practice Statement 2 provide non-mandatory guidance on how to apply the concept of materiality to accounting policy disclosures. The Group has applied the amendments since 1 January 2023. The amendments did not have any impact on the Group's interim condensed consolidated financial information but are expected to affect the accounting policy disclosures in the Group's annual consolidated financial statements.

(b) Amendments to IAS 8 clarify the distinction between changes in accounting estimates and changes in accounting policies. Accounting estimates are defined as monetary amounts in financial statements that are subject to measurement uncertainty. The amendments also clarify how entities use measurement techniques and inputs to develop accounting estimates. The Group has applied the amendments to changes in accounting policies and changes in accounting estimates that occur on or after 1 January 2023. Since the Group's policy of determining accounting estimates aligns with the amendments, the amendments did not have any impact on the financial position or performance of the Group.

(c) Amendments to IAS 12 narrow the scope of the initial recognition exception in IAS 12 so that it no longer applies to transactions that give rise to equal taxable and deductible temporary differences, such as leases and decommissioning obligations. Therefore, entities are required to recognise a deferred tax asset (provided that sufficient taxable profit is available) and a deferred tax liability for temporary differences arising from these transactions. The amendments are effective for annual reporting periods beginning on or after 1 January 2023 and shall be applied to transactions related to leases and decommissioning obligations at the beginning of the earliest comparative period presented, with any cumulative effect recognised as an adjustment to the opening balance of retained profits or other component of equity as appropriate at that date. In addition, the amendments shall be applied prospectively to transactions other than leases and decommissioning obligations. Earlier application is permitted. The amendments are not expected to have any significant impact on the Group's financial statements.

(d) Amendments to IAS 12 International Tax Reform – Pillar Two Model Rules introduce a mandatory temporary exception from the recognition and disclosure of deferred taxes arising from the implementation of the Pillar Two model rules published by the Organisation for Economic Co-operation and Development. The amendments also introduce disclosure requirements for the affected entities to help users of the financial statements better understand the entities' exposure to Pillar Two income taxes, including the disclosure of current tax related to Pillar Two income taxes separately in the periods when Pillar Two legislation is effective and the disclosure of known or reasonably estimable information of their exposure to Pillar Two income taxes in periods in which the legislation is enacted or substantively enacted but not yet in effect. Entities are required to disclose the information relating to their exposure to Pillar Two income taxes in annual periods beginning on or after 1 January 2023, but are not required to disclose such information for any interim periods ending on or before 31 December 2023. The Group has applied the amendments retrospectively. Since the Group did not fall within the scope of the Pillar Two model rules, the amendments did not have any impact to the Group.

3. OPERATING SEGMENT INFORMATION

The Group is engaged in the sale of vaccine and research and development services, which are regarded as a single reportable segment in a manner consistent with the way in which information is reported internally to the Group's senior management for purposes of resource allocation and performance assessment. Therefore, no analysis by operating segment is presented.

4. REVENUE, OTHER INCOME AND GAINS

An analysis of revenue is as follows:

	Six months ended 30 June	
	2023	2022
	RMB'000	*RMB'000*
	(Unaudited)	(Unaudited)
Revenue from contracts with customers	**540,470**	591,567

Disaggregated revenue information for revenue from contracts with customers

	Six months ended 30 June	
	2023	2022
	RMB'000	*RMB'000*
	(Unaudited)	(Unaudited)
Types of goods or services		
Sales of vaccine	**540,470**	591,531
Research and development services	**–**	36
	540,470	591,567
Timing of revenue recognition		
Goods or services transferred at a point in time	**540,470**	591,567

An analysis of other income and gains is as follows:

	Six months ended 30 June	
	2023	2022
	RMB'000	*RMB'000*
	(Unaudited)	(Unaudited)
Other income and gains		
Government grants related to		
– Assets	**2,580**	2,226
– Income	**12,903**	11,202
Bank interest income	**5,432**	3,897
Gain on disposal of wealth investment products at fair value	**–**	3,074
Others	**113**	440
	21,028	20,839

5. FINANCE COSTS

An analysis of finance costs is as follows:

	Six months ended 30 June	
	2023	2022
	RMB'000	*RMB'000*
	(Unaudited)	(Unaudited)
Interest on bank loans	**33,662**	18,786
Interest on lease liabilities	**956**	1,074
Less: Interest capitalised	**15,462**	9,629
	19,156	10,231

6. LOSS BEFORE TAX

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

	Six months ended 30 June	
	2023	2022
	RMB'000	*RMB'000*
	(Unaudited)	(Unaudited)
Cost of inventories sold	**107,822**	109,942
Equity-settled share-based compensation	**(21,855)**	61,610
Foreign exchange differences, net	**3,546**	4,558
Provision for impairment of trade and bills receivables	**3,670**	6,634
Write-down of inventories to net realizable value	**5,106**	16,659
Loss on disposal of property, plant and equipment	**80**	50
Interest income	**(5,432)**	(3,897)
Gain on disposal of wealth investment products	**–**	(3,074)

7. INCOME TAX EXPENSE

The Group is subject to income tax on an entity basis on profit arising in or derived from the jurisdictions in which members of the Group are domiciled and operate.

Under the Law of the PRC on Corporate Income Tax (the "**CIT Law**") and Implementation Regulation of the CIT Law, the CIT rate of the PRC subsidiaries is 25% unless they are subject to preferential tax as set out below.

AIM Action BioPharm Co., Ltd. (previously known as AIM Kanghuai Biopharmaceutical (Jiangsu) Co., Ltd.) was accredited as a "High and New Technology Enterprise" on 12 October 2022, and therefore, AIM Action BioPharm Co., Ltd. was entitled to a preferential CIT rate of 15% for the six months ended 30 June 2023. This qualification is subject to review by the relevant tax authority in the PRC for every three years.

AIM Hanxin Vaccine (Dalian) Co., Ltd. was renewed as a "High and New Technology Enterprise" on 19 November 2021, and therefore, AIM Hanxin Vaccine (Dalian) Co., Ltd. was entitled to a preferential CIT rate of 15% for the six months ended 30 June 2023. This qualification is subject to review by the relevant tax authority in the PRC for every three years.

Ningbo Rong'an Biological Pharmaceutical Co., Ltd. was renewed as a "High and New Technology Enterprise" on 10 December 2021, and therefore, Ningbo Rong'an Biological Pharmaceutical Co., Ltd. was entitled to a preferential CIT rate of 15% for the six months ended 30 June 2023. This qualification is subject to review by the relevant tax authority in the PRC for every three years.

AIM Weixin Biopharmaceutical (Zhejiang) Co., Ltd. was renewed as a "High and New Technology Enterprise" on 10 December 2021, and therefore, AIM Weixin Biopharmaceutical (Zhejiang) Co., Ltd. was entitled to a preferential CIT rate of 15% for the six months ended 30 June 2023. This qualification is subject to review by the relevant tax authority in the PRC for every three years.

Liverna, was entitled to a preferential CIT rate of 15% in accordance with Caishui [2022] No. 19 ("**Circular 19**") issued on 25 May 2022. According to Circular 19, enterprises engaging in qualified industries in the Guangdong-Macao In-depth Cooperation Zone in Hengqin will be eligible for a reduced CIT rate of 15%.

	Six months ended 30 June	
	2023	2022
	RMB'000	*RMB'000*
	(Unaudited)	(Unaudited)
Current income tax	**609**	13,996
Deferred	**(53,056)**	(197,252)
Tax credit for the period	**(52,447)**	(183,256)

8. DIVIDENDS

The Board did not recommend the payment of any dividend during the six months ended 30 June 2023 (Six months ended 30 June 2022: nil).

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

The calculation of the basic earnings per share amount is based on the loss attributable to ordinary equity holders of the parent, and the weighted average number of ordinary shares of 1,211,062,599 (six months ended 30 June 2022: 1,199,999,999) in issue during the year, as adjusted to reflect the rights issue during the period.

The calculation of the diluted earnings per share amount is based on the profit for the period attributable to ordinary equity holders of the parent, The weighted average number of ordinary shares used in the calculation is the number of ordinary shares in issue during the period, as used in the basic earnings per share calculation, and the weighted average number of conversion of all dilutive potential ordinary shares into ordinary shares.

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

	Six months ended 30 June	
	2023	2022
	RMB'000	*RMB'000*
	(Unaudited)	(Unaudited)
Loss		
Loss attributable to ordinary equity holders of the parent, used in the basic and diluted loss per share calculation	**(250,369)**	(44,877)

	Six months ended 30 June	
	2023	2022
	(Unaudited)	(Unaudited)
Shares		
Weighted average number of ordinary shares in issue during the period used in the basic and diluted loss per share calculation	**1,211,062,599**	1,199,999,999

As the Group incurred losses for the six months ended 30 June 2023 and 2022, the potential ordinary shares were not included in the calculation of diluted loss per share as the potential ordinary shares had an anti-dilutive effect on the basic loss per share.

10. PROPERTY, PLANT AND EQUIPMENT

As at 30 June 2023 and 31 December 2022, certain of the Group's buildings with a net carrying amount of approximately RMB277,417,000 and RMB286,515,000, respectively, were pledged to secure certain interest-bearing bank borrowings of the Group.

As at 30 June 2023 and 31 December 2022, certain of the Group's buildings with aggregate net carrying amount of approximately RMB84,022,000 and RMB86,307,000, respectively, do not have building ownership certificates.

During the six months ended 30 June 2023, the Group acquired assets at a cost of RMB72,123,000 (30 June 2022: RMB424,999,000).

Assets with a net book value of RMB91,000 were disposed of by the Group during the six months ended 30 June 2023 (30 June 2022: RMB50,000), resulting in a net loss on disposal of RMB80,000 (30 June 2022: RMB50,000).

11. TRADE AND BILLS RECEIVABLES

	30 June	31 December
	2023	2022
	RMB'000	*RMB'000*
	(Unaudited)	(Audited)
Trade receivables	**1,107,274**	1,105,999
Bills receivables	**2,026**	–
Impairment	**(56,904)**	(53,405)
	1,052,396	1,052,594

The Group's trading terms with its customers are mainly on credit. The credit period is generally from two to six months. Each customer has a maximum credit limit. The Group seeks to maintain strict control over its outstanding receivables and has a credit control department to minimise credit risk. Overdue balances are reviewed regularly by senior management. In view of the aforementioned and the fact that the Group's trade receivables relate to a large number of customers, there is no significant concentration of credit risk. The Group does not hold any collateral or other credit enhancements over its trade receivable balances. Trade receivables are non-interest-bearing.

The Group's bills receivable was all aged within six months and was neither past due nor impaired.

An ageing analysis of the Group's trade receivables, based on the invoice date and net of loss allowance, as at the end of the reporting period is as follows:

	30 June 2023	31 December 2022
	RMB'000	*RMB'000*
	(Unaudited)	(Audited)
Within 1 year	**860,478**	834,945
1 to 2 years	**159,566**	189,514
2 to 3 years	**27,931**	24,998
3 to 4 years	**2,286**	2,796
4 to 5 years	**109**	341
	1,050,370	1,052,594

12. TRADE PAYABLES

An ageing analysis of the trade payables as at the end of the reporting period, based on the invoice date, is as follows:

	30 June 2023	31 December 2022
	RMB'000	*RMB'000*
	(Unaudited)	(Audited)
Within 1 year	**50,661**	72,499
1 to 2 years	**4,716**	91
2 to 3 years	**148**	450
Over 3 years	**745**	543
	56,270	73,583

The trade payables are non-interest-bearing and are normally settled on 30 to 90-day terms.

Business Overview and Outlook

Overview

As a large whole industry chain vaccine company in China, we cover the full value chain from research and development to manufacturing and to commercialization. We have five proven human vaccine platform technologies, including bacterial vaccine technologies, viral vaccine technologies, genetically engineered vaccine technologies, combination vaccine technologies and mRNA vaccine technologies. We are one of the first two human vaccine companies in the PRC that have been granted permission under the "14th Five Year Plan" of the PRC to build a bio-safety level 3 laboratory. We operate four individual Licensed Manufacturing Facilities in Rong'an Bio, AIM Honesty, AIM Action and AIM Weixin. The product categories of the Company are comprised of vaccines under the immunization program and vaccines not covered by the immunization program, which cover 31 provinces, autonomous regions and direct-controlled municipalities. On-sale products mainly include recombinant HBV vaccine (Hansenula Polymorpha), freeze-dried human rabies vaccine (Vero cell), inactivated HAV vaccine (HDC), mumps vaccine, bivalent inactivated HFRS vaccine (Vero cell) and Group A, C, Y and W135 MPSV (MPSV4).

Our sales and marketing function is centralized, specialized, and market-oriented, which enables us to accelerate strategy formulation and execution, achieve high cost-efficiency and gain cross-selling opportunities. We set up a centralized marketing model through a two-pronged "in-house sales and marketing" development model to optimize sale efficiency. For the six months ended June 30, 2023, the Company achieved operating revenue of RMB540.5 million, representing a decrease of 8.6% as compared to the same period in 2022. The sales of each product are as follows:

	Six months ended June 30,			
	2023		2022	
	RMB'000	***%***	*RMB'000*	*%*
Freeze-dried human rabies vaccine (Vero cell)	**324,134**	**60.0**	374,448	63.3
HBV vaccine (Hansenula Polymorpha)	**180,129**	**33.3**	181,061	30.6
Inactivated HAV vaccine (HDC)	**21,477**	**4.0**	23,925	4.0
Group A, C, Y and W135 MPSV (MPSV4)	**14,730**	**2.7**	12,098	2.1
Research and development service revenue	**–**	**–**	35	0.0
Total revenue	**540,470**	**100.0**	591,567	100.0

Our Products and Pipelines

We strive to access the best industry resources. Through more than one decade of organic growth and external resource integration, we have become a major player in the Chinese vaccine industry. We have currently commercialized eight vaccine products against six disease areas, of which the HBV vaccines and human rabies vaccines are our key commercialized market-leading vaccine products. We also have 23 vaccine candidates against 14 disease areas in our pipelines, and at present, the Company has obtained 14 clinical approvals for 9 varieties of vaccines. Among them, the overseas Phase III clinical trials of the bivalent Delta-Omicron BA.5 mRNA COVID-19 vaccine are in the final stage, the EV71-CA16 bivalent HFMD vaccine (HDC) has entered into clinical stage, the 13-valent pneumococcal conjugate vaccine (PCV13) has completed Phase III clinical full course of vaccination and blood collection, the 23-valent pneumococcal polysaccharide vaccine (PPSV23) has commenced Phase III clinical trials, the freeze-dried human rabies vaccine (Vero Cell, Serum-free) obtained clinical approval in October 2022 and commenced Phase III clinical trials in July 2023, and the Group A, C, Y and W135 MCV (also known as tetravalent meningococcal conjugate vaccine) (MCV4) commenced Phase I clinical trials in February 2023 and is expected to commence Phase III clinical stage in 2024.

Our Vaccine Products

Recombinant HBV Vaccines (Hansenula Polymorpha)

Recombinant HBV vaccine products have been and are expected to continue to be one major type of our commercialized products. Currently, we were the first and only company in China with steady production and approved lot release volume of HBV vaccines using Hansenula Polymorpha for antigen expression, which is widely recognized as the best manufacturing technology route for HBV vaccines among all three available manufacturing technologies (Hansenula Polymorpha, Saccharomyces cerevisiae and Chinese hamster ovary (CHO) cells), featuring with better genetic stability, higher purity and stronger antigen expression capabilities. In addition, we manufacture HBV vaccines with adjuvants under a patented process, which prolongs the action time of antigens in the human body and strengthens the stimulation of immune response, and contains no addition of preservatives to enhance product safety. We have been granted patents for this process in the PRC valid until May 2032, distinguishing our recombinant HBV vaccine products from others and creating a high technological entry barrier for later entrants.

We have developed two recombinant HBV vaccine products, differentiated in terms of HBsAg concentration: 10μg HBsAg per dose and 20μg HBsAg per dose. The 10μg HBsAg dosage is allowed to be administered in all age groups, including newborns. The 20μg HBsAg dosage is approved for people with high infection risks in age groups of 16 years old or above. 33.3% of our revenue was derived from sales of the HBV vaccine products for the six months ended June 30, 2023. Our recombinant HBV vaccine products have maintained a 100% pass rate in lot release quality audits of NIFDC since their approvals.

Human Rabies Vaccine (Vero Cell)

The human rabies vaccine (Vero cell), one of our major products, is an injectable vaccine administered under the intramuscular route to persons of all ages to prevent rabies after exposure or at a high risk of exposure to rabies. We manufacture this vaccine product in Rong'an Bio, which obtained the NDA approval in September 2007 and the GMP certificate in June 2008.

60.0% of our revenue was derived from sales of this vaccine product for the six months ended June 30, 2023. High and stable product quality has been and will continue to be critically significant to compete in this market. Since its commercialization in 2007, our human rabies vaccine (Vero cell) has maintained a 100% pass rate in lot release quality audits by the NIFDC for 16 years.

Inactivated HAV Vaccines (HDC)

Hepatitis A is caused by the hepatitis A virus (HAV). We have developed two inactivated HAV vaccine products, differentiated in terms of isolated HAV antigen concentration: the 320Eu/0.5ml per dose indicated for the age group of 1 to 15 years old, and the 640Eu/1.0ml per dose indicated for people older than 15. We ceased production of our HAV vaccines between May and September 2021 to perform maintenance and upgrades to our production facilities and we resumed vaccine stoste production in September 2021. Production of the pre-filled dosage form of the vaccine formulation resumed in June 2022 and passed the GMP compliance inspection in the second half of 2022. At present, all HAV vaccines sent for inspection in the first half of 2023 have obtained the lot release certificate. The HAV vaccine has resumed its launch and sales.

Group A, C, Y and W135 MPSV (MPSV4)

We launched MPSV4 in March 2020. Our MPSV4 covers A, C, Y, and W135 serogroups, and can be administered to individuals over the age of two. We obtained the NDA approval for the MPSV4 in October 2018 and the GMP certificate in December 2018. We have adopted advanced production equipment and production processes to ensure that our MPSV4 has good safety and efficacy. At the same time, several key quality indicators of our MPSV4 surpass the relevant PRC national standards. We do not add any antibiotics or preservatives to our MPSV4. The sales revenue from the product was RMB14.7 million for the six months ended June 30, 2023.

HFRS Vaccine

At present, our HFRS vaccine is one of the only five approved HFRS vaccines in the PRC. AIM Weixin obtained the NDA approval for this vaccine in September 2007 and GMP certificate for its production in February 2008. At the end of 2018, we ceased production of HFRS vaccine products to relocate the relevant production line to new production lines with more advanced equipment and higher production capacity. Our new production lines of HFRS vaccine have passed GMP inspections in June 2022. We have completed the lot release quality audits of NIFDC for the new production lines of HFRS vaccine in the fourth quarter of 2022, and resumed the production of HFRS vaccine.

Mumps Vaccine

Our mumps vaccine is a live attenuated single-dose vaccine product indicated for vaccinees aged eight months and above with infection risks. AIM Weixin obtained the NDA approval for the mumps vaccine in October 2004, and obtained the GMP certificate for its production in January 2005. Since February 2020, we ceased production of our mumps vaccine products for the GMP inspection and upgrade of our production line. While we passed the on-site GMP inspection in June 2020, we have not yet restarted commercial production for the time being as we are in the process of optimizing our product process and related experimental work is ongoing.

Our Vaccine Candidates

The following table summarizes our vaccine candidate portfolio:

Indication	Vaccine Candidate	In-house R&D/ Joint Development	Preclinical	CTA	Phase I	Phase II/III	NDA Approval	Expected Timing to Approval
COVID-19	Bivalent Delta-Omicron BA.5 mRNA COVID-19 Vaccine	In-house R&D	Overseas Phase III clinical trial ongoing and currently in the final stage					2023[1]
	Monovalent Omicron BA.5 mRNA COVID-19 Vaccine	In-house R&D	Plan to file for marketing in 2023					2023[1]
HFMD	EV71-CA16 Bivalent HFMD Vaccine (HDC)	In-house R&D	Plan to start Phase I in Q4 2023					2026
Pneumococcal disease	13-Valent Pneumococcal Conjugate Vaccine (PCV13)	In-house R&D	Plan to file NDA in Q1 2024					2024
	23-Valent Pneumococcal Polysaccharide Vaccine (PPSV23)	In-house R&D	Started Phase III clinical trial					2024
	20-Valent Pneumococcal Conjugate Vaccine (PCV20)	In-house R&D	Plan to file CTA in 2024					2026
	24-Valent Pneumococcal Conjugate Vaccine (PCV24)	In-house R&D	Plan to file CTA in 2024					After 2026
Group B strep disease	Hexavalent Group B Streptococcus Polysaccharide Conjugate Vaccine	In-house R&D	Plan to file CTA in 2024					After 2028
DTP[10]	Diphtheria, Tetanus and Pertussis and Haemophilus Influenzae Type B (DTP-Hib) Combination Vaccine	In-house R&D	Plan to file CTA in 2024					After 2026
	Diphtheria, Tetanus and Acellular Pertussis Combined Vaccine (DTaP)	In-house R&D	Plan to file CTA in 2024					After 2026
	Diphtheria, Tetanus and Acellular Pertussis (Components) Combined Vaccine (DTcP)	In-house R&D	Plan to file CTA in 2025					After 2026
	Absorbed Tetanus Vaccine	In-house R&D	Plan to file pre-CTA application in 2023					2026
Hib	Haemophilus Influenzae Type B (Hib) Vaccine	In-house R&D	Plan to file pre-CTA application in 2023					After 2026
Rabies	mRNA Human Rabies Vaccine	In-house R&D	CTA accepted by the NMPA					After 2026
	Freeze-dried Human Rabies Vaccine (Vero Cell, Serum-free)	In-house R&D	Phase III started in July 2023					2025
	Freeze-dried Human Rabies Vaccine (HDC)	In-house R&D	Plan to file CTA in 2024					2026
HPV	Human Papillomavirus 2-valent Vaccine (HPV2)	In-house R&D	Plan to file CTA in 2024					After 2026
	Human Papillomavirus 9-valent Vaccine (HPV9)	In-house R&D	Plan to file CTA in 2024					After 2026
Meningococcal disease	Groups A, C, Y and W135 MCV (MCV4)	In-house R&D	Plan to start Phase III in 2024					2026
	Hexavalent Meningococcal Vaccine	In-house R&D	Plan to file CTA in 2024					After 2026
Influenza	Tetravalent Influenza Vaccine (MDCK Cells)	In-house R&D	Plan to file CTA in 2024					After 2026
Herpes	mRNA Shingles/Herpes Zoster Vaccine	In-house R&D	Plan to file CTA in Q2 2025					After 2026
RSV	mRNA Respiratory Syncytial Virus Vaccine (RSV)	In-house R&D	Plan to file CTA in Q2 2024					After 2026

Viral Vaccine Platform **Bacterial Vaccine Platform** **mRNA Vaccine Platform**

Genetically Engineered Vaccine Platform **Combination Vaccine Platform**

Note:

(1) We have obtained approval to commence Phase III clinical trials in Pakistan, and the clinical trials are currently in their closing stages. In the future, we will use the Phase I and II clinical data of the vaccine in China and consolidate it with the Phase III clinical data in Pakistan, to apply for the registration and marketing of the vaccine in China.

Key Products in the Clinical Stage

Bivalent Delta-Omicron BA.5 mRNA COVID-19 Vaccine

Our bivalent Delta-Omicron BA.5 mRNA COVID-19 vaccine is developed by the Group's own mRNA technology platform for the two kinds of variants of Novel Coronavirus, namely Delta and Omicron BA.5. Given that the Group has already developed several univalent mRNA COVID-19 vaccines, on the basis of previous R&D results, we were able to start the R&D of bivalent Delta-Omicron BA.5 mRNA COVID-19 vaccine quickly in response to the spread of the COVID-19 pandemic.

To date, we have applied for clinical approvals in China, and commenced Phase III clinical trials in Pakistan on March 25, 2023. The clinical trials are currently in their closing stages. Upon completion of the relevant clinical trials, a new drug application will be filed for the vaccine to be launched in Pakistan. Given that restrictive measures against COVID-19 have been lifted in China, we expect that the demand for multivalent COVID-19 vaccines for the latest variant strain will increase in China. In the future, we will use the Phase I and II clinical data of this vaccine in China and consolidate it with the Phase III clinical data in Pakistan, to apply for the registration and marketing of this vaccine in China.

13-Valent Pneumococcal Conjugate Vaccine (PCV13)

Our PCV13 vaccine is a pneumococcal conjugate vaccine to be indicated for children aged from six weeks to five years old. We obtained the CTA approval for our PCV13 vaccine candidate in October 2020 and commenced the Phase I clinical trial in February 2021. As of the end of 2022, we were undergoing a Phase III clinical trial for our PCV13 vaccine and had completed administration of the full course of PCV13 vaccine and blood collection for test subjects in the Phase III clinical trial. We expect to file the NDA with the NMPA in the first quarter of 2024 and obtain the approval in the second half of 2024.

We have tested and proven our manufacturing techniques of the PCV13 vaccine using our bacterial platform technologies. As of the end of 2022, we have conducted scaled-up production of our PCV13 vaccine, and have produced samples for our Phase I and Phase III clinical trials. We are commencing the production process validation of PCV13 vaccine. The Phase III clinical trial currently in progress is a non-inferiority clinical trial that is single-centered, randomized, blinded and parallel-controlled between similar vaccines. The number of design samples was 3,780, with the main aim of assessing the immunogenicity (efficacy) and safety of the vaccine for those in the six weeks to 71 months age group.

EV71-CA16 Bivalent HFMD Vaccine

We are developing a global innovative EV71-CA16 Bivalent HFMD Vaccine. Enterovirus type 71 (EV71) and coxsackievirus A16 (CA16) are the major pathogens of HFMD. Our EV71-CA16 Bivalent HFMD Vaccine Candidate is the first vaccine candidate in the world designed to provide immunization against both the EV71 and CA16 viral strains. We filed a CTA to the NMPA in July 2022 and received clinical approval in October 2022. We expect to commence clinical trials in the fourth quarter of 2023.

Meningococcal Conjugate Group A, C, Y and W135 Vaccine (MCV4)

Our MCV4 vaccine is a meningococcal polysaccharide conjugate vaccine with the ability to prevent epidemic cerebrospinal meningitis caused by group A, C, Y and W135 neisseria meningitidis, and other invasive diseases, and is indicated for those in the 3 months to 15 years age group. We initiated the Phase I clinical trial in February 2023, formally launched the Phase I single-center, open clinical trial in March 2023, commenced subject enrolment with 120 subjects planned for the trial, and expect to initiate the Phase III clinical stage in 2024.

Progress and Results of Other Clinical Trials

- Freeze-dried human rabies vaccine (Vero Cell, Serum-free): we received clinical approval for this product in October 2022. In July 2023, we commenced the Phase III clinical trial of this product.

- 23-valent pneumococcal polysaccharide vaccine (PPSV23): as of August 2023, we have commenced Phase III clinical trials.

Business Highlights

Vaccine development platform technologies and in-house R&D teams

We have five proven human vaccine platform technologies covering innovative technologies, such as mRNA vaccine, genetically engineered vaccine, and combination vaccine technologies, as well as traditional technologies, such as bacterial vaccine and viral vaccine technologies. Leveraging these platforms, we are well positioned to develop a steady and fit-for-purpose stream of vaccines that are efficient to manufacture. We have at least one approved product or one vaccine candidate at CTA or clinical stages under each platform.

Our in-house R&D teams are responsible for all stages of vaccine candidate development, including preclinical studies, clinical trials, and registration and filings. Our in-house R&D teams primarily consist of (i) three vaccine research institutes, namely AIM Explorer, Liverna and AIM Innovator; and (ii) the R&D team in each of our four vaccine manufacturing subsidiaries, namely AIM Honesty, AIM Action, Rong'an Bio and AIM Weixin. Each R&D team has its own research foci. AIM Explorer mainly develops vaccine candidates using bacterial vaccine platform technologies. Liverna develops mRNA vaccines, including our mRNA COVID-19 vaccine candidate, leveraging its expertise in mRNA technologies. AIM Innovator focuses on the research and development and commercialization of genetically engineered recombinant vaccines. AIM Action focuses on viral vaccine platform technologies. Rong'an Bio focuses on mRNA vaccines and viral vaccine platform technologies. AIM Honesty concentrates on genetically engineered vaccine platform technologies. In addition, AIM Weixin is developing several vaccine candidates using combination and bacterial vaccine platform technologies.

Our R&D activities are led by a team of world-class scientists. Our chief scientist, Dr. Yucai PENG, is in charge of the R&D activities of Liverna, and he has extensive top-class knowledge in mRNA drugs. We have also established our R&D management center at the Group level to coordinate and supervise all R&D activities across the research institutes and operating subsidiaries. Mr. Fan ZHANG, who leads our global R&D management center, has over 10 years of experience in vaccine development, including research on PCV13, PCV20, PPSV23, MCV4 and DTP combination vaccines.

Manufacturing

All of our vaccine products are produced in house by our four individual Licensed Manufacturing Facilities in our manufacturing subsidiaries. For the six months ended June 30, 2023, we passed all GMP inspections conducted by the NMPA or its local counterparts on the four individual Licensed Manufacturing Facilities. The following table sets forth key information of our four individual Licensed Manufacturing Facilities as of June 30, 2023:

Name	Location	GFA (sq.m.)	Annual bulk production capacity *(million doses)*	Responsible products	Production Line(s)
Rong'an Bio Licensed Manufacturing Facility	Ningbo, Zhejiang Province	25,318	25.0	Human rabies vaccine (Vero cell)	Two
AIM Honesty Licensed Manufacturing Facility	Dalian, Liaoning Province	11,877	45.0	Recombinant HBV vaccine (Hansenula Polymorpha)	One
AIM Action Licensed Manufacturing Facility	Taizhou, Jiangsu Province	18,711	5.3	Inactivated HAV vaccine	One
AIM Weixin Licensed Manufacturing Facility	Ningbo, Zhejiang Province	72,313	16.0	HFRS vaccine, mumps vaccine and Group A, C, Y and W135 MPSV (MPSV4)	Three

We have equipped all our Licensed Manufacturing Facilities with advanced equipment and machinery procured from leading international and domestic brands, such as bioreactors, centrifuges, ultra-filtration system and large-scale purification system and product filling and packaging lines. We regularly inspect and maintain our equipment and machinery to ensure that they remain in good condition for operation. In each Licensed Manufacturing Facility, we have been actively taking measures to ensure a stable and quality supply, including designating dedicated personnel to optimize production planning and coordination among different divisions, preventing contamination, improving automation in our production procedures, and strengthening the maintenance of our equipment and facilities to reduce the occurrence of failures.

As a major vaccine company in China, we expect a continuously strong market demand for our existing vaccine products. In order to have sufficient capacity to address these needs, we plan to establish new production facilities in the next few years. As of June 30, 2023, the Rong'an Bio mRNA COVID-19 vaccine production workshop has completed workshop construction, equipment debugging and verification, and completed the production of Phase III clinical samples. The construction of Rong'an Bio serum-free rabies vaccine workshop has been completed, and the debugging and verification of the main production equipment has been completed at the end of 2022. The construction of workshop for Rong'an Bio freeze-dried human rabies vaccine (HDC) has been completed, and the equipment is currently being debugged and verified.

At the same time, located in the new bacterial vaccine industrialization project of AIM Weixin, the construction of the pneumonia series vaccines stoste workshop was completed in early 2021, the construction of the tetravalent meningococcal conjugate vaccines stoste workshop was completed in September 2022, and the construction of the DTP-Hib combination vaccine stoste workshop was completed in November 2022 and the equipment is currently being debugged and verified.

Industry Overview

The Vaccine Administration Law of the People's Republic of China (《中華人民共和國疫苗管理法》), which came into effect on December 1, 2019, contains specific provisions on the development, production, circulation and vaccination of vaccines as well as supervision and administration, and further defines vaccines as vaccines under the immunization program and vaccines not covered by the immunization program. The promulgation of the Vaccine Administration Law of the People's Republic of China began a new stage of vaccine development in China.

The "14th Five-Year Plan" period is the first five years for China to embark on a new journey to fully build a modern socialist country and march towards the Second Centenary Goal. It is also a period of significant opportunity for China for the acceleration of the evolution of biotechnology, the rapid growth of life and health needs, and the rapid development of bio-industry. On January 30, 2022, nine departments, namely the Ministry of Industry and Information Technology, the National Development and Reform Commission, the Ministry of Science and Technology, the Ministry of Commerce, the National Health Commission, the Ministry of Emergency Management, the National Healthcare Security Administration, the NMPA and the National Administration of Traditional Chinese Medicine, jointly issued the "14th Five-Year Plan" for Pharmaceutical Industry Development (《「十四五」醫藥工業發展規劃》). On May 10, 2022, the National Development and Reform Commission issued the "14th Five-Year Plan" for Bio-Economic Development (《「十四五」生物經濟發展規劃》) (hereinafter collectively referred to as the "**Development Plan**"). The Development Plan clearly stated that bio-pharmaceutical enterprises should adapt to the new trend of moving from "treatment-centered" to "health-centered", develop bio-pharmaceuticals oriented to people's life and health, meet the new expectations of the people for more secure life and health, and aim to improve people's health protection ability. Focusing on areas including drugs, vaccines, advanced diagnosis and treatment technologies and equipment, biomedical materials, precision medicine, inspection and testing, and biological health care, bio-pharmaceutical enterprises should improve original innovation capacity, strengthen drug regulatory scientific research, enhance the supply chain guarantee level of high-end bio-pharmaceutical products and equipment, effectively support disease prevention and treatment and cope with the aging population, to build a strong public health system and fully implement the Healthy China strategy and better protect people's lives and health.

The PRC vaccine market grew from RMB25.1 billion in 2015 to RMB76.1 billion in 2021, and is expected to further grow to RMB215.7 billion in 2030 (excluding COVID-19 vaccines), which is significantly more rapid than the global market. Including the COVID-19 vaccine market, the overall PRC vaccine market is expected to increase from RMB303.6 billion in 2021 to RMB431.4 billion in 2030. By vaccine category, the market size of vaccines under the immunization program declined slightly, while vaccines not covered by the immunization programs became the driving factor for the continued expansion of the market size in China. The vaccine industry in China is expected to continue to grow rapidly as pharmaceutical companies continue to conduct research and development, innovative vaccines covering more diseases and more serotypes/subtypes become increasingly popular, average life expectancy and ageing population ratio increase, and health awareness, vaccination awareness and average disposable income of the PRC residents increase. At the same time, the COVID-19 pandemic has had a profound impact on the vaccine industry. The research and development of the COVID-19 vaccine has accelerated the development of pharmaceutical companies in technological innovation, and vaccines with new technological routes such as mRNA and recombinant vaccines have sprung up, and vaccine companies have ushered in opportunities to upgrade technological innovation. The COVID-19 vaccine has become a well-known anti-epidemic product, and with the increasing vaccination awareness among PRC residents, is expected to boost the demand for vaccination in the long run. Against this background, the vaccine industry in China is expected to enter a new stage of development in terms of iterative upgrading of vaccine technology platforms, research and development of new products and adult market expansion and other areas.

Prospects and Outlook

Under the COVID-19 pandemic, China's vaccine industry has entered a new stage of development. In the process of racing against the pandemic, the experience gained in the development and production of COVID-19 vaccines has also brought new development opportunities to China's vaccine industry. Such experience has strengthened the monopoly advantage of vaccines in preventive medicine and elevated the status of vaccines in the overall biomedical industry. The experience has also facilitated the industrialization of new technologies for biotechnology and the implementation of related policies, establishing a long-term foundation for the future development of the vaccine industry. The significant increase in exports of vaccines has greatly boosted the confidence of Chinese pharmaceutical companies in their international expansion.

With the increasing strength of the Chinese economy, the bio-industry, including the vaccine industry, has been positioned as a national strategic emerging industry that is being encouraged and supported. Industrial policies such as Made in China 2025 (《中國製造2025》), the "13th Five-Year Plan" for the Development of Bio-industry (《「十三五」生物產業發展規劃》), and the Guidelines for the Development Planning of the Pharmaceutical Industry (《醫藥工業發展規劃指南》) encourage the development of new vaccines in the vaccine industry, such as multidisease and multivalent vaccines, genetically engineered vaccines, viral vector vaccines and nucleic acid vaccines, thereby realizing the upgrading of certain vaccines under the immunization program. The favorable national industrial policies will benefit the development of China's vaccine industry.

It is worth mentioning that our research and development pipelines align with national policies. Our five technology platforms cover all the vaccine technologies that are encouraged and supported by the government as mentioned above, with the research and development of related vaccine products rapidly progressing. At the same time, our bivalent Delta-Omicron BA.5 mRNA COVID-19 vaccine has obtained clinical trial approvals from the NMPA and its overseas Phase III clinical trials are currently in their final stages. The clinical trial application for our human rabies mRNA vaccine against the rabies virus has been accepted by the NMPA, making it the first mRNA vaccine for rabies that has submitted application for clinical trial in the PRC. The EV71-CA16 bivalent HFMD vaccine (HDC) has entered into clinical stage, the 13-valent pneumococcal conjugate vaccine (PCV13) has completed Phase III clinical full course of vaccination and blood collection, the 23-valent pneumococcal polysaccharide vaccine (PPSV23) has currently commenced Phase III clinical trials, the freeze-dried human rabies vaccine (Vero Cell, Serum-free) obtained clinical approval in October 2022 and commenced Phase III clinical trials in August 2023, and the Group A, C, Y and W135 MCV (also known as tetravalent meningococcal conjugate vaccine) (MCV4) commenced Phase I clinical trials in February 2023 and is expected to commence Phase III clinical stage in 2024. In conclusion, we expect to achieve significant progress in the research and development of vaccines in 2023, accelerating the launch of new products. We are committed to the mission of developing and manufacturing top quality vaccines to safeguard the health of the world.

Financial Review

Overview

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

Revenue

	Six months ended June 30,	
	2023	2022
	RMB'000	*RMB'000*
Revenue from sales of vaccine products		
Freeze-dried human rabies vaccine (Vero cell)	**324,134**	374,448
HBV vaccine (Hansenula Polymorpha)	**180,129**	181,061
Revenue from sales of other vaccine products	**36,207**	36,023
Revenue from research and development services	**–**	35
Total	**540,470**	591,567

The Company's revenue from its primary business was RMB540.5 million in the first half of 2023, representing a decrease of RMB51.1 million or 8.6%, as compared to the revenue from its primary business of RMB591.6 million in the first half of 2022. The decrease is mainly due to the decrease in revenue from rabies vaccines caused by market factors.

Cost of Sales

The Company's cost of sales primarily consisted of manufacturing cost, raw materials cost, direct labor cost and transportation cost.

The Company's cost of sales amounted to RMB107.8 million in the first half of 2023, representing a decrease of RMB2.1 million or 1.9%, as compared to the cost of sales of RMB109.9 million in the first half of 2022, primarily due to changes in revenue in the first half of 2023.

Gross Profit and Gross Margin

The Company's gross profit amounted to RMB432.6 million in the first half of 2023, representing a decrease of RMB49.0 million or 10.2%, as compared to the gross profit of RMB481.6 million in the first half of 2022, primarily due to the decrease in sales revenue.

The Company's gross margin amounted to 80.1% in the first half of 2023, representing a decrease of 1.3%, as compared to the gross margin of 81.4% in the first half of 2022, primarily due to the slight increase in raw materials cost and manufacturing cost.

Other Income and Gains

The Company's other income and gains was primarily derived from income from government grants, bank interest income and gains from wealth management products.

The Company's other income and gains was RMB21.0 million in the first half of 2023, representing an increase of RMB0.2 million or 0.9%, as compared to the other income and gains of RMB20.8 million in the first half of 2022, primarily due to an increase in government grants received in the first half of 2023.

Our operating expenses mainly include selling and distribution expenses, administrative expenses, and research and development costs. The following table sets forth a breakdown of our operating expenses:

	Six months ended June 30,	
	2023	2022
	RMB'000	*RMB'000*
Research and development costs	**398,529**	194,026
Selling and distribution expenses	**224,902**	233,003
Administrative expenses	**115,659**	185,572
Total	**739,090**	612,601

Research and Development Costs

Nature	Six months ended June 30,	
	2023	2022
	RMB'000	*RMB'000*
Staff cost	**50,308**	49,617
Research materials costs	**41,797**	39,870
Professional service fees	**249,211**	72,237
Depreciation and amortization	**23,542**	20,578
Cost of energy consumption	**26,087**	8,383
Others	**7,584**	3,341
Total	**398,529**	194,026

The Company's research and development costs amounted to RMB398.5 million in the first half of 2023, representing an increase of RMB204.5 million or 105.4%, as compared to the research and development costs of RMB194.0 million in the first half of 2022. Such increase was because relevant professional service fees (including clinical trial fees) and costs of raw material and energy consumption increased with the continuous advancement of research and development, which, in turn, was primarily due to the significant increase in overseas clinical trial fees for mRNA vaccines as well as the increase in research and development costs as the research and development of tetravalent influenza vaccine and freeze-dried human rabies vaccine (HDC) progressed during the period.

Selling and Distribution Expenses

The Company's selling and distribution expenses primarily consisted of marketing and promotion expenses, staff cost and market outreach expenses, etc. The marketing and promotion expenses primarily consisted of costs and expenses paid to our CSOs for various marketing and academic promotion activities, industry research and post-sales customer service. The staff cost primarily included salaries, share-based compensation, benefits and other compensation for our sales staff.

The Company's selling and distribution expenses amounted to RMB224.9 million in the first half of 2023, representing a decrease of RMB8.1 million or 3.5%, as compared to the selling and distribution expenses of RMB233.0 million in the first half of 2022, primarily because share-based compensation expenses to employees decreased during the period.

Administrative Expenses

The Company's administrative expenses primarily consisted of staff cost, depreciation and amortization and professional service fees, etc. Professional service fees primarily included professional fees for auditing, lawyers, evaluation and consulting, etc.

The Company's administrative expenses amounted to RMB115.7 million in the first half of 2023, representing a decrease of RMB69.9 million or 37.7%, as compared to the administrative expenses of RMB185.6 million in the first half of 2022, primarily because both share-based compensation expenses to employees and professional services expenses to intermediaries relating to the listing of the Company decreased during the period.

Finance Costs

The Company's finance costs primarily consisted of interest on bank loans and interest on lease liabilities.

The Company's finance costs amounted to RMB19.1 million in the first half of 2023, representing an increase of RMB8.9 million or 87.2%, as compared to the finance costs of RMB10.2 million in the first half of 2022, primarily because interest on bank loans increased as bank loans increased.

Income Tax Expenses

The Company's income tax was a credit of RMB52.4 million in the first half of 2023, representing a decrease of RMB130.8 million or 71.4%, as compared to the income tax credit of RMB183.2 million in the first half of 2022, primarily because of a relatively significant one-off deferred income tax credit enjoyed by a subsidiary in the corresponding period last year as its income tax rate reduced from 25% to 15% under local income tax policies.

Impairment Losses on Financial Assets

The Company's provision for impairment losses on financial assets amounted to RMB3.7 million in the first half of 2023, representing a decrease of RMB2.9 million or 44.7%, as compared to the provision for impairment losses on financial assets of RMB6.6 million in the first half of 2022, primarily due to the decreased provision for bad debts of receivables.

Loss for the Period

The Company's loss amounted to RMB257.4 million in the first half of 2023, recording an increase in loss of RMB308.3 million or a decrease in earnings of 605.3%, as compared to the earnings of RMB50.9 million in the first half of 2022, primarily due to the significant increase in research and development costs, the increase in income tax expenses caused by the reduction in income tax credit as well as the slightly decreased revenue in the first half of 2023.

Liquidity and Financial Resources

As at June 30, 2023, the Company's cash and cash equivalents and time deposits totaled RMB754.9 million, representing a decrease of RMB42.9 million or approximately 5.4%, as compared to the cash and cash equivalents and time deposits of RMB797.8 million as at December 31, 2022, and such decrease was mainly used for R&D expenses.

As at June 30, 2023, the Company's current assets amounted to approximately RMB2,548.3 million, and the current liabilities amounted to approximately RMB2,269.7 million.

Inventories

The Company's inventories balance amounted to RMB547.6 million as at June 30, 2023, representing an increase of RMB42.9 million or 8.5%, as compared to the inventories balance of RMB504.7 million as at December 31, 2022, primarily due to the slight increase in the stock at the end of the period.

Trade Receivables

The carrying amount of the Company's receivables amounted to RMB1,052.4 million as at June 30, 2023, representing a decrease of RMB0.2 million, with the decrease being less than 0.1%, as compared to the carrying amount of receivables of RMB1,052.6 million as at December 31, 2022.

Capital Expenditure

The Company's capital expenditure amounted to RMB111.0 million in the first half of 2023, primarily for constructing new production facilities, purchasing new equipment for the industrialization of pipeline vaccines and upgrading current manufacturing facilities, and the capitalized expenditure of the vaccine candidate development. The Company's capital expenditure in the first half of 2023 decreased by RMB343.9 million or 75.6% as compared to RMB454.9 million in the first half of 2022, primarily due to a decrease in the expenditure for industrialization works in the first half of 2023 as industrialization construction for primary vaccines were largely completed.

Borrowings and Gearing Ratio

The Company's total financial indebtedness (including interest-bearing bank borrowings, lease liabilities and amounts due to related parties) amounted to RMB1,687.5 million as at June 30, 2023, representing an increase of RMB288.8 million or 20.6%, as compared to the total financial indebtedness of RMB1,398.7 million as at December 31, 2022, primarily due to the increase in bank borrowings in the first half of 2023.

The Company's gearing ratio (calculated by dividing total financial indebtedness by total equity as of the end of the period) was 30.3% as at June 30, 2023, representing an increase of 6.4%, as compared to the gearing ratio of 23.9% as at December 31, 2022, mainly due to the increase in the balance of bank borrowings.

Charge on Assets

As of June 30, 2023, part of the Group's bank loans were secured by (i) mortgages over the Group's buildings, which had a net carrying value as at June 30, 2023 of approximately RMB277.4 million (December 31, 2022: approximately RMB286.5 million); (ii) mortgages over the Group's leasehold land, which had a net carrying value as at June 30, 2023 of approximately RMB60.1 million (December 31, 2022: approximately RMB61.1 million); and (iii) guarantees provided by the Company and a subsidiary of the Group.

Save for the above, as of June 30, 2023, the Group did not have any other charges over its assets.

Foreign Exchange Exposure

Most of the Group's businesses and all bank loans have been traded in RMB so there is no significant foreign exchange fluctuation risk. The Board does not expect that fluctuations in the RMB exchange rate and exchange fluctuations of other foreign currencies will have a significant impact on the Group's business or performance. The Group currently has no relevant foreign exchange risk hedging policies and therefore it has not carried out any hedging transactions to manage the potential risks of foreign currency fluctuations.

Contingent Liabilities

As at June 30, 2023, the Group did not have any significant contingent liability that would have a material impact on its financial position or results of operations.

CORPORATE GOVERNANCE AND OTHER INFORMATION

The Model Code for Securities Transactions by Directors and Supervisors

The Company has devised its own code of conduct regarding Directors' and Supervisors' dealings in the Company's securities on terms no less exacting than the Model Code. The Company has made specific inquiries to all Directors and Supervisors and they all confirmed that they complied with the standards specified in the Company's own code during the six months ended June 30, 2023.

Corporate Governance Code

The Board has adopted the code provisions of the Corporate Governance Code. The Board has reviewed the Company's corporate governance practices and is satisfied that the Company has complied with the code provisions set out in Part 2 of the Corporate Governance Code during the six months ended June 30, 2023, with the exception of code provision C.2.1, which requires the roles of chairman and chief executive to be held by different individuals.

Pursuant to code provision C.2.1 in Part 2 of the Corporate Governance Code, the roles of chairman and chief executive should be separate and should not be performed by the same individual. Mr. Yan ZHOU, the chairman of the Board and chief executive officer of the Company, currently performs both of these roles. The Board believes that, in view of the experience, personal profile and role of Mr. Zhou in the Company, Mr. Zhou has an extensive understanding of our business as the chief executive officer of the Company and is therefore the Director best suited to identify strategic opportunities and to be the core of the Board. The combined role of chairman of the Board and chief executive officer of the Company by the same individual can promote the effective execution of strategic initiatives and facilitate the flow of information between the management and the Board. The Board will continue to review and consider splitting the roles of chairman of the Board and the chief executive officer at an appropriate time, taking into account the circumstances of the Group as a whole.

Purchase, Sale or Redemption of the Company's Listed Securities

During the six months ended June 30, 2023, neither the Company nor any of its subsidiaries had purchased, sold or redeemed any of the Company's listed securities.

Employee and Remuneration Policy

As of June 30, 2023, we had approximately 1,572 employees, as compared to approximately 1,528 employees as of June 30, 2022. Total employee benefits expenses including Directors' remuneration in the first half of 2023 amounted to RMB175.2 million, as compared to the expenses of RMB231.9 million in the first half of 2022. Remuneration is determined with reference to performance, skills, qualifications and experience of the staff concerned and in accordance with the prevailing industry practice.

In addition to salaries and bonuses, other employee benefit expenses include pension, housing fund, medical insurance and other social insurance, as well as share-based payment expenses and others. We have adopted the employee stock incentive scheme prior to the IPO to offer valuable incentives to attract and retain quality personnel. We have been evaluating, and may adopt, new stock incentive schemes that comply with the requirements of the Listing Rules. The remuneration of the Directors is reviewed by the Remuneration Committee and approved by the Board. The relevant Director's experience, duties and responsibilities, time commitment, the Company's performance and the prevailing market conditions are taken into consideration in determining the emolument of the Directors.

Significant Investments, Acquisitions and Disposals

We did not have any significant investments, material acquisitions or material disposals of subsidiaries, associates and joint ventures during the six months ended June 30, 2023.

Use of IPO Proceeds

We received approximately HK$91.61 million in net proceeds (the "**Net Proceeds**") from the IPO. Since the completion of the IPO, the Company has been utilizing, and intends to continue to utilize, the Net Proceeds in the manner consistent with that mentioned in the section headed "Future Plans and Use of Proceeds" of the Prospectus. For the six months ended June 30, 2023, the use of net proceeds were as follows:

		Net proceeds allocated for related purposes *(HK$'000)*	Percentage of total net proceeds *(%)*	Actual use of proceeds for the six months ended June 30, 2023 *(HK$'000)*	Unutilized proceeds for the six months ended June 30, 2023 *(HK$'000)*	Expected timing for full utilization of the unused amount
1.	The development of our mRNA COVID-19 vaccine candidate, as follows[(1)]:	38,747	42.30	5,957	32,790	
	(1) conduct clinical trials	31,144	34.00	5,957	25,187	On or before June 30, 2024
	(2) obtain registration approvals	7,603	8.30	–	7,603	On or before June 30, 2024
2.	The development of our pneumococcal vaccine candidates, including PCV13, PCV20 and PPSV23	6,412	7.00	6,412	–	N/A[(2)]
3.	The development of other vaccine candidates in our pipeline	9,801	10.70	2,774	7,027	On or before December 31, 2023
4.	To fund the capital expenditure on the construction of new production facilities for our new vaccine products, as follows:	32,060	35.00	3,186	28,874	
	(1) to fund the capital expenditure on the new mRNA vaccine production facilities in Ningbo	23,503	25.66	3,075	20,428	On or before December 31, 2024
	(2) to fund the capital expenditure on construction of new production facilities by Rong'an Bio for serum-free Vero cell human rabies vaccine, including:	8,557	9.34	111	8,446	
	(i) equipment procurement	5,575	6.09	–	5,575	On or before December 31, 2023
	(ii) plant decontamination and renovation, and equipment installation and testing	2,982	3.25	111	2,871	On or before December 31, 2023
5.	To be invested in our sales and marketing activities	4,590	5.00	4,590	–	N/A[(3)]
Total		**91,610**	**100.00**	**22,919**	**68,691**	

Notes:

(1) In March 2023, our Company decided to cease the plan to commercialize this candidate, which is a monovalent mRNA COVID-19 vaccine against the original strain (i.e. the SARS-CoV-2 virus strain that caused the initial COVID-19 outbreak of COVID-19, while it still needs to pay some research and development and clinical trial registration fees that have already been incurred.

(2) As of June 2023, the net proceeds allocated for development of pneumococcal vaccine candidates (including PCV13, PCV20 and PPSV23) were fully utilized.

(3) The net proceeds allocated for investing in sales and marketing activities were fully utilized during January 2023.

Issuance of Unlisted RMB Denominated Ordinary Shares

At the Board meeting held on March 8, 2023, the Board approved the proposal on the issuance of Unlisted RMB Denominated Ordinary Shares under a specific mandate subject to certain conditions (the "**Proposed Issuance**"). The Proposed Issuance was considered and approved at the 2023 first extraordinary general meeting, the 2023 first class meeting for holders of Domestic Shares, and the 2023 first class meeting for holders of H Shares convened on April 28, 2023. The Board considers that the Proposed Issuance will help further strengthen the Company's competitive strength, enhance risk resilience and promote healthy development of business.

Under the Proposed Issuance, the Company intends to issue not more than 242,212,519 Unlisted RMB Denominated Ordinary Shares to (a) no more than 35 qualified investors, which do not include any existing Shareholders, and (b) existing Shareholders (if any). The actual subscribers and the number and class(es) of Unlisted RMB Denominated Ordinary Shares to be subscribed for are subject to the approval by the regulatory authorities. In accordance with Article 127 of the PRC Company Law, the issue price of Shares pursuant to the Proposed Issuance shall be at or above the nominal value of the Shares, being RMB1.00 per Share.

For details of the Proposed Issuance, please refer to the announcement dated March 8, 2023 and the circular dated April 11, 2023 of the Company. As of the date of this announcement, the Company has not issued any Unlisted RMB Denominated Ordinary Shares under the Proposed Issuance. The Company shall disclose the update on the progress of the Proposed Issuance in a timely manner according to the requirements of relevant laws and regulations as well as the Listing Rules.

Interim Dividend

No interim dividend was declared by the Board for the six months ended June 30, 2023.

Audit Committee

The Company has established the Audit Committee in accordance with Rule 3.21 of the Listing Rules and the Corporate Governance Code and set out the terms of reference. The Audit Committee consists of five members, namely Professor Ker Wei PEI, Mr. Hui OUYANG, Mr. Xiaoguang GUO, Mr. Jie ZHOU and Mr. Xin ZHOU. Professor Ker Wei PEI, Mr. Hui OUYANG and Mr. Xiaoguang GUO are independent non-executive Directors, and Mr. Jie ZHOU and Mr. Xin ZHOU are non-executive Directors. Professor Ker Wei PEI is the chairman of the Audit Committee and possesses the appropriate professional qualifications.

The unaudited interim condensed consolidated financial information of the Group for the six months ended June 30, 2023 has been reviewed by the Audit Committee.

Material Matters after the Reporting Period

On July 4, 2023, AIM Honesty received the second instance judgment from an intermediate people's court of the PRC in respect of a claim concerning the subrogation rights of a creditor arising before an acquisition. Pursuant to this written judgment, AIM Honesty was obliged to pay an amount of RMB28,697,000 with interest at loan prime rate. As at June 30, 2023, the Group recorded relevant payables of RMB30,889,000, including the principal of RMB28,697,000 and interest of RMB2,192,000, to the creditors as "other payables and accruals".

Except as disclosed above, no material matter has occurred since June 30, 2023 and up to the date of this announcement.

Publication of the Interim Results Announcement and Interim Report

This results announcement is published on the HKEx website at www.hkexnews.hk and the Company's website at www.aimbio.com. The interim report of the Company for the six months ended June 30, 2023 will be published on the websites mentioned above and dispatched to the Shareholders in due course.

DEFINITIONS

"AIM Explorer"	AIM Explorer Biomedical R&D Co., Ltd. (艾美探索者生命科學研發有限公司), a company incorporated under the laws of PRC on September 10, 2018, a wholly-owned subsidiary of our Company;
"AIM Honesty"	AIM Honesty Biopharmaceutical Co., Ltd. (艾美誠信生物製藥有限公司), a company incorporated under the laws of PRC on September 20, 1993, a wholly-owned subsidiary of our Company;
"AIM Innovator"	AIM Innovator Biomedical Research (Shanghai) Co., Ltd. (艾美創新者生物醫藥研究(上海)有限公司), a company incorporated under the laws of PRC on May 17, 2021 and owned as to 95% by our Company, and 1% by each of AIM Action, AIM Honesty, AIM Weixin, AIM Zeren Biopharmaceutical (Liaoning) Co., Ltd. (艾美責任生物製藥(遼寧)有限公司) (a company incorporated under the laws of PRC on January 28, 2023 and a wholly-owned subsidiary of our Company), and Rong'an Bio;
"AIM Action"	AIM Action BioPharm Co., Ltd. (艾美行動生物製藥有限公司) (previously known as AIM Kanghuai Biopharmaceutical (Jiangsu) Co., Ltd. (艾美康淮生物製藥(江蘇)有限公司)), a company incorporated under the laws of PRC on October 13, 2011, a wholly-owned subsidiary of our Company;
"AIM Weixin"	AIM Weixin Biopharmaceutical (Zhejiang) Co., Ltd. (艾美衛信生物藥業(浙江)有限公司), a company incorporated under the laws of PRC on December 24, 2002 and owned as to 94.25% by our Company and 5.75% by Shanghai Beibi Road Cultural Development Co., Ltd. (上海北壁之路文化發展有限公司), a company incorporated under the laws of PRC on March 28, 2017, a wholly-owned subsidiary of our Company;
"Audit Committee"	the audit committee of the Board of Directors;
"Board" or "Board of Directors"	the board of Directors of our Company;
"CDC(s)"	Centre(s) for Disease Control and Prevention (疾病預防控制中心);
"Corporate Governance Code"	the Corporate Governance Code as set out in Appendix 14 to the Listing Rules;
"China" or "the PRC"	the People's Republic of China, which for the purpose of this announcement only, references to "China" or "the PRC" exclude Taiwan, Macau Special Administration Region and Hong Kong;

"Companies Ordinance"	the Companies Ordinance (Chapter 622 of the Laws of Hong Kong), as amended, supplemented or otherwise modified from time to time;
"Company", "our Company", or "the Company"	AIM Vaccine Co., Ltd. (艾美疫苗股份有限公司), a joint stock company incorporated in the PRC with limited liability on November 9, 2011;
"COVID-19"	the Coronavirus Disease 2019;
"CSO(s)"	contract sales organization(s);
"CTA"	clinical trial application, the PRC equivalent of investigational new vaccine application;
"Director(s)" or "our Director(s)"	the director(s) of our Company;
"Domestic Share(s)"	ordinary share(s) in the share capital of the Company with a nominal value of RMB1.00 each, which is (are) subscribed for and paid up in Renminbi by PRC domestic investors and not listed on any stock exchange;
"GMP"	Good Manufacturing Practice, guidelines and regulations from time to time issued pursuant to the PRC Drug Administration Law (《中華人民共和國藥品管理法》) as part of quality assurance which aims to minimize the risks of contamination, cross contamination, confusion and errors during the manufacture process of pharmaceutical products and to ensure that pharmaceutical products subject to these guidelines and regulations are consistently produced and controlled in conformity to quality and standards appropriate for their intended use;
"Group A, C, Y and W135 MPSV" or "MPSV4"	Group A, C, Y and W135 MPSV, a vaccine used for the prevention of epidemic cerebrospinal meningitis in children aged above two years old;
"Group", "the Group", "our Group", "we" or "us"	our Company and its subsidiaries;
"HAV"	hepatitis A virus;
"HBV"	hepatitis B virus;
"HDC"	human diploid cell;
"HFMD"	hand foot and mouth disease;
"HFRS"	hemorrhagic fever with renal syndrome;
"H Share(s)"	overseas listed foreign share(s) in the issued share capital of the Company, with a nominal value of RMB1.00 each, listed on the Stock Exchange;

"HKEx"	Hong Kong Exchanges and Clearing Limited;
"HK$" or "Hong Kong dollars" or "HK dollars"	Hong Kong dollars, the lawful currency of Hong Kong;
"Hong Kong" or "HK"	the Hong Kong Special Administrative Region of the PRC;
"Independent Third Party(ies)"	an individual or a company which, to the best of our Directors' knowledge, information and belief, having made all reasonable enquiries, is not a connected person of the Company within the meaning of the Listing Rules;
"IPO"	the initial public offering and listing of the Company's H Shares on the Main Board of the Stock Exchange on October 6, 2022;
"Licensed Manufacturing Facility"	our manufacturing facility in each of Rong'an Bio, AIM Honesty, AIM Action and AIM Weixin, which have obtained valid production permits and passed GMP inspections, each a Licensed Manufacturing Facility, collectively Licensed Manufacturing Facilities;
"Listing Rules"	the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited;
"Liverna"	Liverna Therapeutics Inc. (珠海麗凡達生物技術有限公司), a company incorporated under the laws of PRC on June 21, 2019 and owned as to 50.1546% by our Company. The other minority shareholders of Liverna are Independent Third Parties;
"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"	Model Code for Securities Transactions by Directors of Listed Issuers as set out in Appendix 10 to the Listing Rules;
"mRNA"	messenger ribonucleic acid or messenger RNA, 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;
"NDA"	new drug application (藥品註冊證書申請);
"NDA approval"	new drug application approval (藥品註冊證書批准);
"NIFDC"	the National Institutes for Food and Drug Control of the PRC (中國食品藥品檢定研究院);

"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 Company's prospectus dated September 23, 2022;
"Remuneration Committee"	the remuneration and appraisal committee of the Board of Directors;
"RMB" or "Renminbi"	Renminbi, the lawful currency of the PRC;
"Rong'an Bio"	Ningbo Rong'an Biological Pharmaceutical Co., Ltd. (寧波榮安生物藥業有限公司), a company incorporated under the laws of PRC on April 30, 2001 and owned as to 20% by our Company and 80% by AIM Weixin;
"Share(s)"	ordinary share(s) in the issued share capital of our Company with a nominal value of RMB1.00 each;
"Shareholder(s)"	holder(s) 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;
"Unlisted Foreign Share(s)"	ordinary share(s) issued by the Company with a nominal value of RMB1.00 each and is (are) held by non-PRC investors and not listed on any stock exchange;
"Unlisted RMB Denominated Ordinary Share(s)"	Domestic Share(s) and/or Unlisted Foreign Share(s), as the case may be; and
"%"	percentage.

By order of the Board
AIM Vaccine Co., Ltd.
Mr. Yan ZHOU
Chairman of the Board,
Executive Director and Chief Executive Officer

Hong Kong, August 29, 2023

As at the date of this announcement, the Board of Directors of the Company comprises Mr. Yan ZHOU, Mr. Wen GUAN and Mr. Shaojun JIA as executive Directors; Mr. Jie ZHOU, Mr. Xin ZHOU, Mr. Jichen ZHAO and Ms. Aijun WANG as non-executive Directors; and Professor Ker Wei PEI, Mr. Xiaoguang GUO, Ms. Jie WEN and Mr. Hui OUYANG as independent non-executive Directors.