AUSTAR
奥 星

Austar Lifesciences Limited
奧星生命科技有限公司

(Incorporated in the Cayman Islands with limited liability)

(Stock Code: 6118)

ANNOUNCEMENT OF ANNUAL RESULTS FOR THE YEAR ENDED 31 DECEMBER 2021

	2021	2020
	RMB'000	*RMB'000*
Revenue	**2,015,028**	1,295,980
Gross profit	**479,008**	323,530
Profit before income tax	**319,225**	41,489
Profit attributable to the owners of the Company	**277,300**	33,100
Total assets	**2,044,777**	1,378,844
Net assets	**788,420**	524,574
Gross profit margin	**23.8%**	25.0%
Current ratio	**1.5**	1.4
Gearing ratio	**16.4%**	12.7%
Net debt to equity ratio	**Net Cash**	Net Cash
Basic earnings per share *(Note)*	**RMB0.54**	RMB0.06
Diluted earnings per share *(Note)*	**RMB0.54**	RMB0.06

Note:

The calculation of earnings per share is based on the profit attributable to the owners of the Company for each of the years ended 31 December 2021 and 2020 and the weighted average number of shares during that year. The Company had no dilutive ordinary shares for each of the years ended 31 December 2021 and 2020.

ANNUAL RESULTS

The board ("**Board**") of directors ("**Directors**", each a "**Director**") of Austar Lifesciences Limited ("**Company**" or "**AUSTAR**") is pleased to announce the audited consolidated results of the Company and its subsidiaries (collectively, the "**Group**") for the year ended 31 December 2021 ("**Year**"), together with the comparative figures for the year ended 31 December 2020 as follows:

CONSOLIDATED INCOME STATEMENT

	Note	**For the year ended 31 December 2021** *RMB'000*	For the year ended 31 December 2020 *RMB'000*
Revenue	*3*	**2,015,028**	1,295,980
Cost of sales	*6*	**(1,536,020)**	(972,450)
Gross profit		**479,008**	323,530
Selling and marketing expenses	*6*	**(170,289)**	(148,692)
Administrative expenses	*6*	**(128,094)**	(98,695)
Net impairment losses on financial and contract assets		**(6,243)**	(12,139)
Research and development expenses	*6*	**(65,598)**	(48,268)
Other income		**6,330**	8,039
Other gains – net	*5*	**196,804**	6,955
Operating profit		**311,918**	30,730
Finance income	*4*	**1,471**	3,115
Finance costs	*4*	**(4,824)**	(2,833)
Finance (cost)/income – net		**(3,353)**	282
Share of net profits of investments accounted for using the equity method		**10,660**	10,477
Profit before income tax		**319,225**	41,489
Income tax expense	*8*	**(46,601)**	(9,884)
Profit for the year		**272,624**	31,605
Profit/(loss) attributable to:			
The owners of the Company		**277,300**	33,100
Non-controlling interests		**(4,676)**	(1,495)

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	Note	**For the year ended 31 December 2021** *RMB'000*	For the year ended 31 December 2020 *RMB'000*
Profit for the year		**272,624**	31,605
Other comprehensive income			
Items that may be reclassified to profit or loss			
Currency translation differences		**(8,767)**	(10,441)
Changes in the fair value of financial assets at fair value through other comprehensive income		–	74
Share of other comprehensive (loss)/income of investments accounted for using the equity method		**(11)**	711
Other comprehensive loss for the year, net of tax		**(8,778)**	(9,656)
Total comprehensive income for the year		**263,846**	21,949
Total comprehensive income attributable to:			
The owners of the Company		**268,685**	23,362
Non-controlling interests		**(4,839)**	(1,413)
		263,846	21,949
Earnings per share for profit attributable to the owners of the Company – basic and diluted (RMB)	*9*	**0.54**	0.06

CONSOLIDATED BALANCE SHEET

	Note	As at 31 December 2021 RMB'000	As at 31 December 2020 RMB'000
ASSETS			
Non-current assets			
Property, plant and equipment		**188,452**	68,625
Right-of-use assets		**123,353**	117,300
Intangible assets		**21,113**	23,459
Deferred income tax assets		**8,915**	7,047
Investments accounted for using the equity method		**39,703**	62,940
Prepayments and other receivables		**–**	10,190
Total non-current assets		**381,536**	289,561
Current assets			
Inventories		**423,261**	209,240
Contract assets	*12*	**377,937**	238,119
Trade and notes receivables	*11*	**296,299**	279,417
Prepayments and other receivables		**173,686**	56,469
Pledged bank deposits		**172,317**	127,927
Term deposits with initial terms of over three months		**21,294**	162
Cash and cash equivalents		**198,447**	177,949
Total current assets		**1,663,241**	1,089,283
Total assets		**2,044,777**	1,378,844
EQUITY			
Equity attributable to the owners of the Company			
Share capital		**4,071**	4,071
Reserves		**371,207**	379,822
Retained earnings		**411,306**	134,006
		786,584	517,899
Non-controlling interests		**1,836**	6,675
Total equity		**788,420**	524,574

CONSOLIDATED BALANCE SHEET *(continued)*

	Note	As at 31 December 2021 RMB'000	As at 31 December 2020 RMB'000
LIABILITIES			
Non-current liabilities			
Lease liabilities		**34,890**	32,337
Long-term borrowings	*14*	**54,271**	–
Deferred income		**746**	452
Deferred income tax liabilities		**30,254**	15,797
Total non-current liabilities		**120,161**	48,586
Current liabilities			
Trade and other payables	*13*	**598,992**	439,957
Contract liabilities	*12*	**466,689**	322,177
Current income tax liabilities		**5,716**	832
Short-term borrowings	*15*	**54,830**	30,000
Lease liabilities		**9,969**	12,718
Total current liabilities		**1,136,196**	805,684
Total liabilities		**1,256,357**	854,270
Total equity and liabilities		**2,044,777**	1,378,844

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2021

1. GENERAL INFORMATION

The Company was incorporated in the Cayman Islands on 9 January 2014 as an exempted company with limited liability. The address of the Company's registered office is Cricket Square, Hutchins Drive, P.O. Box 2681, Grand Cayman KY1-1111, Cayman Islands.

The Company is an investment holding company and its subsidiaries are principally engaged in providing integrated engineering solutions to pharmaceutical manufacturers and research institutes, as well as manufacturing and distribution of pharmaceutical equipments and consumables in the People's Republic of China (the "**PRC**"). The ultimate holding company of the Company is Standard Fortune Holdings Limited, a company incorporated in the British Virgin Islands (the "**BVI**") with limited liability and wholly owned by Mr. Ho Kwok Keung, Mars ("**Mr. Mars Ho**", also the "**Controlling Shareholder**"), Chairman of the Board and the Chief Executive Officer of the Company (the "**Chief Executive Officer**").

Ordinary shares of HK$0.01 each in the share capital of the Company ("**Shares**") have been listed on the Main Board of The Stock Exchange of Hong Kong Limited ("**Stock Exchange**") on 7 November 2014.

The consolidated financial statements are presented in thousands of Renminbi Yuan ("**RMB**") unless otherwise stated, and is approved for issue by the Board on 25 March 2022.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

This note provides a list of the significant accounting policies adopted in the preparation of the consolidated financial statements. These policies have been consistently applied to all the years presented, unless otherwise stated. The financial statements are for the Group consisting of the Company and its subsidiaries.

The consolidated financial statements of the Group have been prepared in accordance with International Financial Reporting Standards ("**IFRSs**") and requirements of the Companies Ordinance (Cap. 622 of the Laws of Hong Kong). The consolidated financial statements have been prepared on a historical cost basis, except for certain financial assets measured at fair value.

(a) New and amended standards adopted by the Group

The Group has applied the following amendments for the first time for their annual reporting period commencing 1 January 2021:

- Interest Rate Benchmark Reform – Phase 2 - amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16

The amendments listed above did not have any impact on the amounts recognised in prior periods and are not expected to significantly affect the current or future periods.

(b) New standards and interpretations not yet adopted

Certain new accounting standards and interpretations have been published that are not mandatory for 31 December 2021 reporting period and have not been early adopted by the Group. These standards are not expected to have a material impact on the Group in the current or future reporting periods and on foreseeable future transactions.

3. SEGMENT INFORMATION

The chief operating decision-makers ("**CODM**") have been identified as the Chief Executive Officer, the vice presidents and the Directors who review the Group's internal reports in order to assess performance and allocate resources.

The CODM considers the business primarily from a product and service perspective, which mainly includes six reportable operating segments: (1) Liquid and Bioprocess System; (2) Clean Room and Automation Control and Monitoring System; (3) Powder and Solid System; (4) GMP Compliance Service; (5) Life Science Consumables; and (6) Distribution and Agency of Pharmaceutical Equipment.

The measurement of results and assets of the operating segments are the same as those described in the summary of significant accounting policies. The CODM evaluates the performance of the reportable segments based on gross profit.

The segment results for the year ended 31 December 2021 are as follows:

	Liquid and Bioprocess System *RMB'000*	Clean Room and Automation Control and Monitoring System *RMB'000*	Powder and Solid System *RMB'000*	GMP Compliance Service *RMB'000*	Life Science Consumables *RMB'000*	Distribution and Agency of Pharmaceutical Equipment *RMB'000*	Total *RMB'000*
Segment revenue and results							
Segment revenue	970,095	537,759	140,205	72,630	428,394	30,749	2,179,832
Inter-segment revenue	(87,142)	(58,053)	(1,912)	(6,516)	(7,324)	(3,857)	(164,804)
Revenue	882,953	479,706	138,293	66,114	421,070	26,892	2,015,028
Recognised at a point in time	203,368	15,932	13,391	1,802	421,070	19,806	675,369
Recognised over time	679,585	463,774	124,902	64,312	–	7,086	1,339,659
Cost of sales	(739,208)	(389,431)	(96,599)	(37,733)	(258,026)	(15,023)	(1,536,020)
Segment results							
Gross profit	143,745	90,275	41,694	28,381	163,044	11,869	479,008
Other segment items							
Amortisation	3,426	186	38	18	–	7	3,675
Depreciation	15,496	6,419	1,272	664	3,563	486	27,900
(Reversal of)/provision for impairment losses on financial and contract assets	(4,102)	7,157	996	490	1,500	202	6,243
Provision for impairment of inventories	3,302	1,889	650	308	273	122	6,544
Impairment of goodwill	1,091	–	–	–	–	–	1,091
Share of net profits of investments accounted for using the equity method	6,356	639	–	–	3,665	–	10,660

The segment results for the year ended 31 December 2020 are as follows:

	Liquid and Bioprocess System *RMB'000*	Clean Room and Automation Control and Monitoring System *RMB'000*	Powder and Solid System *RMB'000*	GMP Compliance Service *RMB'000*	Life Science Consumables *RMB'000*	Distribution and Agency of Pharmaceutical Equipment *RMB'000*	Total *RMB'000*
Segment revenue and results							
Segment revenue	634,619	303,465	120,822	55,595	254,508	20,800	1,389,809
Inter-segment revenue	(46,131)	(39,029)	(297)	(2,866)	(4,338)	(1,168)	(93,829)
Revenue	588,488	264,436	120,525	52,729	250,170	19,632	1,295,980
Recognised at a point in time	139,202	42,855	13,741	2,162	250,170	19,632	467,762
Recognised over time	449,286	221,581	106,784	50,567	–	–	828,218
Cost of sales	(498,237)	(207,239)	(86,414)	(26,754)	(140,819)	(12,987)	(972,450)
Segment results							
Gross profit	90,251	57,197	34,111	25,975	109,351	6,645	323,530
Other segment items							
Amortisation	2,715	704	54	23	–	9	3,505
Depreciation	16,729	5,957	1,435	801	3,066	407	28,395
Provision for impairment losses on financial and contract assets	7,670	1,899	783	357	1,293	137	12,139
(Reversal of)/provision for impairment of inventories	(818)	1,021	518	218	(533)	70	476
Impairment of goodwill	3,141	–	–	–	–	–	3,141
Share of net profits of investments accounted for using the equity method	7,559	123	–	–	2,795	–	10,477

A reconciliation of segment gross profit to total profit before income tax is provided as follows:

	For the year ended 31 December 2021 *RMB'000*	For the year ended 31 December 2020 *RMB'000*
Liquid and Bioprocess System	**143,745**	90,251
Clean Room and Automation Control and Monitoring System	**90,275**	57,197
Powder and Solid System	**41,694**	34,111
GMP Compliance Service	**28,381**	25,975
Life Science Consumables	**163,044**	109,351
Distribution and Agency of Pharmaceutical Equipment	**11,869**	6,645
Total gross profit for reportable segments	**479,008**	323,530
Selling and marketing expenses	**(170,289)**	(148,692)
Administrative expenses	**(128,094)**	(98,695)
Net impairment losses on financial and contract assets	**(6,243)**	(12,139)
Research and development expenses	**(65,598)**	(48,268)
Other income	**6,330**	8,039
Other gains – net	**196,804**	6,955
Finance (cost)/income – net	**(3,353)**	282
Share of net profits of investments accounted for using the equity method	**10,660**	10,477
Profit before income tax	**319,225**	41,489

The segment assets as at 31 December 2021 and 2020 are as follows:

	As at 31 December 2021		As at 31 December 2020	
	Total assets	**Investments accounted for using the equity method**	Total assets	Investments accounted for using the equity method
	RMB'000	***RMB'000***	*RMB'000*	*RMB'000*
Liquid and Bioprocess System	**834,531**	**17,890**	543,838	17,758
Clean Room and Automation Control and Monitoring System	**362,161**	**21,813**	255,687	23,010
Powder and Solid System	**100,912**	**–**	71,943	–
GMP Compliance Service	**36,464**	**–**	33,197	–
Life Science Consumables	**259,063**	**–**	159,687	22,172
Distribution and Agency of Pharmaceutical Equipment	**9,254**	**–**	6,745	–
Total segment assets	**1,602,385**	**39,703**	1,071,097	62,940
Unallocated				
Deferred income tax assets	**8,915**		7,047	
Headquarter assets	**433,477**		300,700	
Total assets	**2,044,777**		1,378,844	

Geographical information

The following tables present information on revenue and certain assets of the Group by geographical regions:

	For the year ended 31 December 2021	For the year ended 31 December 2020
	RMB'000	*RMB'000*
Revenue		
Mainland China	**1,890,654**	1,219,015
Other locations	**124,374**	76,965
	2,015,028	1,295,980

	As at 31 December 2021	As at 31 December 2020
	RMB'000	*RMB'000*
Non-current assets other than financial assets and deferred tax assets		
Mainland China	**303,794**	192,213
Other locations	**68,827**	80,111
	372,621	272,324

4. FINANCE (COST)/INCOME – NET

	For the year ended 31 December 2021 *RMB'000*	For the year ended 31 December 2020 *RMB'000*
Interest expense		
– Bank borrowings	**(2,381)**	(1,038)
– Lease liabilities	**(2,021)**	(1,755)
Exchange losses	**(422)**	(40)
Finance costs	**(4,824)**	(2,833)
Finance income		
– Bank deposits	**1,379**	2,624
– Loan to PALL-AUSTAR Lifesciences Limited ("**PALL-AUSTAR JV**")	**92**	491
	1,471	3,115
	(3,353)	282

5. OTHER GAINS – NET

	For the year ended 31 December 2021 *RMB'000*	For the year ended 31 December 2020 *RMB'000*
Gains on disposal of a joint venture	**198,988**	–
Losses on disposal of property, plant and equipment	**(716)**	(47)
Exchange (losses)/gains	**(3,322)**	4,396
Others	**1,854**	2,606
	196,804	6,955

6. EXPENSES BY NATURE

	For the year ended 31 December 2021 *RMB'000*	For the year ended 31 December 2020 *RMB'000*
Raw materials	**1,202,876**	722,907
Staff costs, including directors' emoluments *(Note 7)*	**414,432**	308,833
On-site subcontract fee	**67,864**	48,225
Travel expenses	**34,693**	33,676
Freight and port charges	**28,153**	22,796
Depreciation		
– Property, plant and equipment	**11,936**	12,005
– Right-of-use assets	**15,964**	16,390
Professional fees	**17,929**	12,319
Technical service fee	**13,055**	9,768
Promotion expenses	**12,764**	12,681
Business entertainment expenses	**12,561**	8,535
Sales tax and surcharges	**10,439**	8,180
Warranty provision	**9,521**	8,663
Office expenses	**7,931**	7,233
Impairment of inventories	**6,544**	476
Auditor's remuneration		
– Audit service	**3,599**	3,991
– Non-audit service	**725**	724
Amortisation	**3,675**	3,505
Repair and maintenance	**2,186**	2,618
Bank charges	**1,920**	1,818
Communication expenses	**1,879**	2,560
Human resources management expenses	**1,356**	1,873
Impairment of goodwill	**1,091**	3,141
Labour insurance premiums	**681**	676
Convention service expenses	**674**	1,423
Property management fee	**429**	1,306
Renovation expenses	**198**	562
Other operating expenses	**14,926**	11,221
	1,900,001	1,268,105

7. STAFF COSTS, INCLUDING DIRECTORS' EMOLUMENTS

	For the year ended 31 December 2021 *RMB'000*	For the year ended 31 December 2020 *RMB'000*
Salaries and bonuses	**318,805**	277,392
Pension and social obligations	**95,627**	31,441
	414,432	308,833

8. INCOME TAX EXPENSE

	For the year ended 31 December 2021 *RMB'000*	For the year ended 31 December 2020 *RMB'000*
Current income tax expense	**33,836**	5,571
Deferred income tax expense	**12,765**	4,313
	46,601	9,884

The Company was incorporated in the Cayman Islands as an exempted company with limited liability and, accordingly, is exempted from local income tax.

The Group's subsidiaries incorporated in the BVI under the International Business Companies Act or, as the case may be, BVI Business Companies Act of the BVI are exempted from local income tax.

The taxation of the Group's subsidiaries in Hong Kong is calculated at 16.5% of the estimated assessable profits for the year (2020: 16.5%), except for a subsidiary of the Group in Hong Kong which is a qualifying entity applicable to the two-tiered profits tax rates. Under the two-tiered profits tax rates regime, the profits tax rate for the first HK$2 million of assessable profits will be lowered to 8.25%, and assessable profits above HK$2 million will continue to be subject to the rate of 16.5%.

The taxation of the Group's subsidiary in Germany is calculated at 30% of the estimated assessable profit for the year (2020: 30%).

Corporate income tax in the PRC is calculated based on the statutory profit or loss of subsidiaries incorporated in the PRC in accordance with the PRC tax laws and regulations, after adjusting certain income and expense items, which are not assessable or deductible for income tax purposes. According to the PRC Corporate Income Tax Law promulgated by the PRC government, the tax rate for the Company's PRC subsidiaries is 25%, except for certain subsidiaries which are taxed at preferential tax rates. Shanghai Austar Pharmaceutical Technology Equipment Ltd. ("**Shanghai Austar**"), Austar Hansen Lifesciences (Shanghai) Limited ("**Austar Hansen**") and Austar Pharmaceutical Equipment (Shijiazhuang) Ltd. ("**Austar SJZ**") are high and new technology enterprises certified by relevant local authorities in the PRC. These entities are entitled to preferential corporate income tax rates of 15% upon fulfilment of certain conditions under the tax ruling. Austar SJZ has been enjoying preferential corporate income tax rate since 2014 and renewed its "High and New Technology Enterprise" qualification for another three years in 2021. Shanghai Austar and Austar Hansen have been enjoying preferential corporate income tax rate since 2013 and renewed their "High and New Technology Enterprise" qualification for another three years in 2019.

9. EARNINGS PER SHARE

(a) Basic

Basic earnings per share is calculated by dividing the profit attributable to the owners of the Company by the weighted average number of ordinary shares in issue during the year.

	For the year ended 31 December 2021	For the year ended 31 December 2020
Profit attributable to the owners of the Company *(RMB'000)*	**277,300**	33,100
Weighted average number of ordinary shares in issue *(Thousands)*	**512,582**	512,582
Basic earnings per share *(RMB)*	**0.54**	0.06

(b) Diluted

As the Company had no dilutive ordinary shares for each of the years ended 31 December 2021 and 2020, diluted earnings per share for the years ended 31 December 2021 and 2020 are the same as basic earnings per share.

10. DIVIDENDS

The Board did not propose any final dividend for the year ended 31 December 2021 (2020: nil).

11. TRADE AND NOTES RECEIVABLES

	As at 31 December 2021	As at 31 December 2020
	RMB'000	*RMB'000*
Trade receivables *(Note (b))*	**302,930**	265,311
Notes receivable *(Note (a))*	**24,746**	46,462
	327,676	311,773
Less: loss allowance	**(31,377)**	(32,356)
	296,299	279,417

Notes:

(a) Most of the notes receivable are bank acceptance with maturity dates within six months (2020: within six months).

(b) The ageing analysis of gross trade receivables (including amounts due from related parties of trading in nature) based on sales contracts at the respective balance sheet dates is as follows:

	As at 31 December 2021	As at 31 December 2020
	RMB'000	*RMB'000*
Within 6 months	**176,980**	165,784
6 months to 1 year	**45,925**	20,817
1 to 2 years	**38,582**	41,513
2 to 3 years	**27,210**	10,594
Over 3 years	**14,233**	26,603
	302,930	265,311

Most of the trade receivables are due within 90 days in accordance with the sales contracts.

12. ASSETS AND LIABILITIES RELATED TO CONTRACTS WITH CUSTOMERS

The Group has recognised the following assets and liabilities related to contracts with customers:

	As at 31 December 2021 *RMB'000*	As at 31 December 2020 *RMB'000*
Contract assets	**386,482**	240,778
Loss allowance of contract assets	**(9,951)**	(4,699)
	376,531	236,079
Costs incurred to obtain contracts	**1,406**	2,040
Total contract assets	**377,937**	238,119
Contract liabilities	**(466,689)**	(322,177)

13. TRADE AND OTHER PAYABLES

	As at 31 December 2021 *RMB'000*	As at 31 December 2020 *RMB'000*
Trade payables	**350,846**	280,591
Notes payables	**1,500**	16,331
Payroll and welfare payable	**98,623**	64,499
Taxes other than income taxes payable	**13,410**	15,067
Warranty provision	**13,517**	12,109
Accrued expenses	**40,119**	17,401
Employee payable	**3,208**	3,494
Loan from a non-controlling shareholder of a subsidiary	**1,263**	1,410
Others	**76,506**	29,055
	598,992	439,957

The ageing analysis of trade payables (including amounts due to related parties of trading in nature) based on invoice date is as follows:

	As at 31 December 2021 *RMB'000*	As at 31 December 2020 *RMB'000*
Within 6 months	**326,305**	247,112
6 months to 1 year	**7,335**	12,667
1 to 2 years	**4,419**	13,036
2 to 3 years	**5,546**	2,146
Over 3 years	**7,241**	5,630
	350,846	280,591

14. LONG-TERM BORROWINGS

	As at 31 December 2021 *RMB'000*	As at 31 December 2020 *RMB'000*
Bank borrowings, secured *(Note)*	**54,271**	–

Note:

As at 31 December 2021, secured long-term bank borrowings are denominated in RMB and secured by the Group's buildings, land use right and construction in progress. For the year ended 31 December 2021, the long-term bank borrowings bear interest rate of 4.65% and 4.75% per annum (2020: Nil) and are repayable by quarterly instalments up to 29 December 2025.

15. SHORT-TERM BORROWINGS

	As at 31 December 2021 *RMB'000*	As at 31 December 2020 *RMB'000*
Bank borrowings, secured *(Note (a))*	**20,000**	20,000
Bank borrowings, guaranteed *(Note (b))*	**34,830**	10,000
	54,830	30,000

Note:

(a) As at 31 December 2021, secured short-term bank borrowings are denominated in RMB and secured by the Group's buildings and right-of-use assets. For the year ended 31 December 2021, the short-term bank borrowings bear interest rate of 4.57% (2020: 4.57%) per annum and is repayable within one year.

(b) As at 31 December 2021, certain short-term bank borrowings were guaranteed by (Austar SJZ and Austar Equipment Limited,) subsidiaries of the Company. For the year ended 31 December 2021, the short-term bank borrowings bear interest rates range from 3.00% to 5.00% per annum and are repayable within one year (2020: 3.65%).

MANAGEMENT DISCUSSION AND ANALYSIS

Market Review

The new COVID-19 omicron variant has been found to be more contagious, causing another peak of infection cases globally in the second half of 2021. China's policy on infection control as what is called "zero tolerance" remained unchanged in the entire year of 2021. Even though economic activities were interrupted occasionally by travel restrictions and quarantine measures, the business in China has been operating relatively easier as compared to other major countries, the disruption in the supply chain is one of the key topics business leaders have been focusing in finding new strategies to cope with, including adjustment to supply chain strategy not limited to inventory back-up and change of vendors. The supply of COVID-19 vaccines in major countries has been improving. The World Health Organisation (WHO) has reviewed and approved two Chinese vaccine manufacturers for emergency use for its global COVAX vaccine distribution program in the first half of 2021. The drug safety and efficacy recognition brought about by such approvals triggers the interest of some pharmaceutical companies and governments in developing countries to establish partnerships with these WHO-approved COVID-19 vaccine manufacturers with the intention to secure fast and effective supply of vaccines for their own citizens. Enthusiasm for investment in COVID-19 vaccine facilities is high among those emerging countries with high population and especially those suffering from a shortage of COVID-19 vaccine supply. In China, it is believed that the current manufacturing capacities of COVID-19 vaccines are sufficient, witnessing a decline in demand of new COVID-19 vaccine capital expenditure (CAPEX) projects in the second half of 2021.

Due to the BioNTech's mRNA technology breakthrough and the application opportunities offered by the outbreak of the COVID-19 pandemic and fueled by the successful clinical performance, delivering and distribution of Pfizer, there are tremendous motivation and encouragement for using mRNA technology to other therapeutic treatments. Even though the mRNA technology requires a lot of process knowledge with patent protection to reach quality product results, these technology barriers have not hindered the momentum in investment and research studies in vaccine applications as well as other therapies. This has become a hot topic in 2021, witnessed by fund flowing into the mRNA technology platform for various therapeutic treatments. Investments in cell and gene therapies fueled by the capital market in 2021 have been igniting passionate enthusiasm from all stakeholders involved scientists to consumables, instruments and equipment vendors.

During the 14th Five-Year Plan in China, one of key initiatives in pharmaceutical industry is to encourage green production of pharmaceutical ingredient bulk chemicals as the awareness of environmental, health and safety issues has been increasing due to requirement of policy compliance and concerns from the public. Oral solid dosage (OSD) and Active Pharmaceutical Ingredient (API) manufacturers are encountering severe cost pressure due to the market trend by centralised procurement. Under the influence of environmental protection concerns and other factors, the output of APIs decreased sharply, causing the price of APIs to rise significantly, as a result an increase in the production cost of chemical and pharmaceutical enterprises in the downstream. Both OSD and API manufacturers drive to go upstream and go downstream respectively with the intention to have full control of the supply-chain and costs, which have been witnessed by the surge in CAPEX projects in chemical drugs with demand of huge manufacturing facilities with more intelligent integrated and modular solutions for optimised operation efficiencies and flexibilities. The National Health Commission of China, together with five other government departments, including the Ministry of Science and Technology, the National Healthcare Security Administration, and the National Medical Products Administration etc., released a joint circular containing a second list of encouraged generic drugs in 2021. This policy will definitely push forward the pace of investment on research and development of generic drugs targeting on substituting some specific original brand drugs to reduce the burden of government healthcare fund spending.

With the promotion of the health insurance reform policy, the scope of the volume-based procurements is becoming wider and wider. Enterprises are facing significant cost pressure, which will promote the demands on operation excellence consultancy services.

While in 2021, major focus was put onto the COVID-19 vaccine research and development (R&D) in the biopharma industry for supply chain, manufacturing, and investment sectors respectively, CAPEX for R&D, monoclonal antibody drugs and cell and gene therapies have been increased since the end of 2021.

Business Review

The compound annual growth rate (CAGR) of the revenue of the Group in the last 5 years was 38.5%. The Group recorded a growth of 55.5% in revenue reaching more than RMB2 billion (approximately US$316.6 million) as compared to the year 2020. The Group recorded an operating profit of approximately RMB311.9 million for the Year, a significant increase as compared to the year 2020. The Group recorded a profit attributable to the owners of the Company of approximately RMB277.3 million for the Year, partly attributable to the one-off gain recognised from the Group's disposal of its equity interest in PALL-AUSTAR JV, one of our joint ventures, to the joint venture partner. The order-in-take for the Year amounted to RMB2,663.0 million, recording a significant growth of approximately 43.3%, which will contribute a good basis of order backlog for revenue recognition in 2022. COVID-19 vaccine related projects, which require extremely fast delivery time, have been exerting pressure on the Group's operations; on the other hand, it has helped the Group to seek for innovative methodologies to shorten the lead time and the site construction time, and benefited the Group's operations efficiency in the medium and long term. In 2021, strong repeated orders received from the Group's existing COVID-19 vaccine manufacturing clients for various product lines such as clean utilities, bioprocessing systems, automation systems and validation services have demonstrated that trust from our clients has been developed out of our quality and services delivered. It is foreseeable that the COVID-19 vaccine related projects in China may not have the same momentum of growth in 2022 as in the second half of 2021, the project enquires related to COVID-19 vaccine had been slowing down in China, but outside China, there are still potential COVID-19 projects under negotiation and existing projects under construction. During the Year, business in the biologics sector was active not only in vaccines but also for clients producing drugs like insulin, blood bio-products, and monoclonal antibiotics, which the Group had obtained numerous orders for equipment and systems.

The recent performance achievement of the Group is believed to be partly the result of organisational transformation which was initiated several years ago, bringing about consolidation of the project and business execution platform and the functional system support platform. The Group is determined to continuously push forward the following key initiatives which have started several years ago namely, Global Expansion Strategies, AUSTAR Transformation Initiatives, Technology-Application Focus Branding, Knowledge Acquisition Enhancement and Core-Product Manufacturing. All these initiatives including developing equipment and system technologies for gene and cell therapies, digitalisation services, system integration capacities, new technologies for API and OSD equipment and systems require extra resources and additional expenses, which may adversely impact the Group's profit margin for the time being. However, it is expected that such initiatives will result in favorable financial and business results in the long run. With our corporate strategies and commitment on our visions and strategies, the Group will continuously invest in CAPEX, human resources, geographical expansion and enhancing product and application solution competences, with the intention to bring about more satisfactory business results for our shareholders. This business approach of the mixing of mature business and start-up business is expected to create strong revenue and profit for the Group in mid-long term.

The Group is still further investing efforts in service business including digitalisation consulting services, biopharma occupational safety consulting services and contamination control consulting services. It is believed that the concepts of our newly established facility management services will be embraced by some start-up companies such as cell and gene therapy companies or Contract Development and Manufacture Organization (CDMO) companies as those clients might take time to consolidate resources to take care of the maintenance and upgrade of their production systems by their own talents. It is believed that the service business is able to generate new significant streams of income and higher margin of profits for the Group in the coming future.

ORDER-IN-TAKE

Set out below is a breakdown of the value of the Group's order-in-take (value-added-tax ("**VAT**") included) by business segment:

	For the year ended 31 December				
	2021		2020		Change
Order-in-take by business segment	***RMB'000***	**%**	*RMB'000*	%	%
Liquid and Bioprocess System	**1,207,477**	**45.4%**	878,656	47.3%	37.4%
Clean Room and Automation Control and Monitoring System	**524,786**	**19.7%**	435,866	23.5%	20.4%
Powder and Solid System	**226,225**	**8.5%**	152,409	8.2%	48.4%
GMP Compliance Service	**117,673**	**4.4%**	46,818	2.5%	151.3%
Life Science Consumables	**548,875**	**20.6%**	323,153	17.4%	69.8%
Distribution and Agency of Pharmaceutical Equipment	**37,923**	**1.4%**	20,964	1.1%	80.9%
Total	**2,662,959**	**100.0%**	1,857,866	100.0%	43.3%

During the Year, the total order-in-take amounted to approximately RMB2,663.0 million, representing a significant increase of approximately 43.3% from approximately RMB1,857.9 million for the year ended 31 December 2020, attributable to the increase in order-in-take amount of all the business segments in particular the high increase in Liquid and Bioprocess System, Powder and Solid System, GMP Compliance Service and Life Science Consumables. In 2021, the Group's business kept fast growth mainly due to its full spectrum of pharmaceutical technology knowledge and sophisticated product line covering the whole drug lifecycle and repeated orders from COVID-19 vaccine manufacturing clients and a series of motivating factors, such as Cell-and-Gene Therapy and CMO (Contract Manufacturing Organization)/CDMO. COVID-19 has changed cognitive habits in the pharmaceutical industry, increasing investment in bio-safety and improving the requirement of high-end clean utilities, bioprocess equipment, regulatory compliance and operation excellence. The Group as a technology-based pharmaceutical engineering solution provider with in-depth understanding and interpretation of the requirements of Compilation of Global Data Integrity and Regulations Guidance can meet the requirements of bio-safety and clean which resulted in the growth of core equipment such as bioreactor, freeze-dryer, single use consumable and instrument with appropriate compliance application solution.

Liquid and Bioprocess System

Through several years of persistent endeavours committed to the service, research and development of customized integrated solutions and various advanced solutions for the leading biopharmaceutical enterprises and research institutes worldwide, driven by accumulation of continuous experience gained by project execution, and with strong support from the experienced key account managers, and strongly supported by outstanding performance of COVID-19 projects execution with tight lead time and high quality requirements, the Group has gained market recognition, and the business segment of Liquid and Bioprocess System has grown to be regional champion business. The order-in-take amount of the business segment of Liquid and Bioprocess System amounted to approximately RMB1,207.5 million for the Year, representing an outstanding increase of approximately RMB328.8 million or 37.4% from approximately RMB878.7 million for the year ended 31 December 2020. Based on experience and reputation acquired in participation in the construction in a number of the emergent COVID-19 vaccine design and construction projects in China, the Group has the strong competence to acquire the business opportunities of vaccine projects, which has a huge growth potential. The Group will also endeavour to expand the presently regional champion business to overseas market by its core competitiveness through integration, rich process automation experience, and customised technology application.

Clean Room and Automation Control and Monitoring System

Through the clean room engineering business expansion in many life-science sectors, integrating new technology with integrated space sterilization system, dust particle online monitoring, floating bacteria monitoring, energy saving control, energy efficiency analysis and intelligent control system together to provide customers with computerised system confirmation and validation documents, continuously bringing the customer cost-effective solutions, the Group gaining good market reputation has enlarged its scale in the business segment of Clean Room and Automation Control and Monitoring System, accompanied by increase of vaccine related orders by strategic customers and growth in system turnkey engineering projects with strong design capability. The order-in-take amount of the business segment of Clean Room and Automation Control and Monitoring System amounted to RMB524.8 million for the Year, representing an increase of approximately RMB88.9 million or 20.4% from approximately RMB435.9 million for the year ended 31 December 2020. The Group will capture more business opportunities in the Pharma IT business as a system integrator to offer comprehensive automation and digitalisation systems by self-developed and partners' information systems.

Powder and Solid System

With the pharmaceutical clients' increased requirement on cost saving and efficiency improvement resulted by centralised procurement initiated by the public healthcare institutions, and strongly supported by the Group's deep understanding of technology and application in intelligent manufacturing of powder and solid system and market recognition, the Group captured more business opportunities, and experienced a high-speed business growth in the past two years. The order-in-take amount of the business segment of Powder and Solid System increased strongly by approximately RMB73.8 million or 48.4% from approximately RMB152.4 million for the year ended 31 December 2020 to approximately RMB226.2 million for the Year. As a technology based pharmaceutical solution provider with system integration capability, the Group has developed the competence to meet with the clients' demands of integrated solution, and built up a good foundation for future development.

GMP Compliance Service

For the past few years, the Group has brought the benefits of improving the quality and efficiency to clients and built up a good reputation in the GMP Compliance Service field. The order-in-take amount of the business segment of GMP Compliance Service increased by approximately RMB71.0 million or 151.3% from approximately RMB46.8 million for the year ended 31 December 2020 to approximately RMB117.8 million for the Year. Accompanied by the trend of stricter regulations and standards in GMP on-site inspection, there is huge potential of increased opportunities in this business segment. Meanwhile, the Group will seek business opportunities in the overseas market, such as Northeast Asia and Southeast Asia.

Life Science Consumables

After several years' effort on the integration of various products and services, the Group has built unique competence by offering a complete solution of Washing, Disinfection and Sterilization. Driven by this competence and huge comsumables demand increase under COVID-19 with the fast business development in pharma laboratory one-stop solution, the business segment of Life Science Consumables experienced a significant increase in the order-in-take amount by approximately RMB225.7 million or 69.8% from approximately RMB323.2 million for the year ended 31 December 2020 to approximately RMB548.9 million for the Year. The Group will continue to launch more diversified life science consumables and services with the latest technology to its customers. This segment maintained continuous strong growth in the past three years, and still has a huge potential growth, including environmental monitoring information system, rapid transfer port and bags, microbiological online monitoring technology in CAR-T and CMO.

Distribution and Agency of Pharmaceutical Equipment

The order-in-take amount of the business segment of Distribution and Agency of Pharmaceutical Equipment experienced an increase by approximately RMB17.0 million or 80.9% from approximately RMB21.0 million for the year ended 31 December 2020 to approximately RMB37.9 million for the Year. The Group will continue to engage in the distribution of various types of high-end pharmaceutical equipments together with its joint ventures and overseas business partners providing clients with the most intimate and timely service.

Backlogs

Set out below is a breakdown of the Group's closing value of backlogs (excluded VAT) and the corresponding number of contracts by business segment as at 31 December 2021:

	As at 31 December 2021			
Backlogs by business segment	*Number of contracts*	*%*	*RMB'000*	*%*
Liquid and Bioprocess System	398	24.7%	805,162	50.6%
Clean Room and Automation Control and Monitoring System	208	12.9%	384,378	24.1%
Powder and Solid System	257	16.0%	164,893	10.4%
GMP Compliance Service	92	5.7%	108,454	6.8%
Distribution and Agency of Pharmaceutical Equipment	654	40.7%	129,829	8.1%
Total	1,609	100.0%	1,592,716	100.0%

Production, Execution and Organisation

The facility of Austar UK Limited, a wholly-owned subsidiary of the Group, at Huddersfield, West Yorkshire, UK was accredited by ISO9001 authority in early 2021 with some more space extension for accommodating more staff and assembly/testing. Under the strong leadership of the management of Austar UK Limited, the Group is confident that the team in UK is able to support the Company's ambition in global expansion by offering a solid product development and manufacturing platform in Europe. H+E Pharma GmbH ("**H+E Pharma**"), the Group's majority-controlled subsidiary, at Stuggart, Germany was able to consolidate the service and spare part businesses, which was carved out from Hager+Elsasser, to serve European clients directly by an independent service team situated in Germany. H+E Pharma has been successful in securing relatively good orders on water purification equipment and systems from reputed European clients in 2021, and its wholly-owned subsidiary, a manufacturing arm of H+E Pharma, has been busy in building up its capacity and competence to keep up with the momentum of order-in-take. In the China region, the Group has improved its production management organisation and integrated all production sites in the regions of Shanghai, Shijiazhuang and Nanjing under one leadership team, which will facilitate the progress of resources integration, technology process optimisation and realise the standardisation of production quality.

The Group's new manufacturing facility in Shanghai of an aggregate gross area of approximately 31,200 square metres is under construction and is expected to become operational in the second quarter of 2022. This expansion strategy is in line with our expected growth in equipment and system sales and it is believed to be able to meet the growth demand in the coming 5 years. Overall upgrading of manufacturing conditions will provide more space for new product research and manufacturing, and offer opportunities for improvement, including production management process and quality management; and it can be further improved through enhancing the digitalisation tools and optimising the key production processes in the new facility. A new manufacturing centre located in Nanjing, the PRC focusing on design and manufacturing of freeze-drying equipment integrated with automatic loading systems and sterile containment isolators, has commenced operations since the last quarter of 2020. With this new facility at Nanjing, all types and models of freeze-dryers currently required in the market can be produced and tested at this site.

A new lyophilization laboratory in the Nanjing manufacturing centre is equipped with all necessary process optimisation instrument and equipment. With this laboratory and our world-class process specialists, we are able to help clients through our training, testing and consulting services to solve issues in freeze-drying process development which typically affect protein drug stabilities. A new equipment manufacturing facility at Shijiazhuang, the PRC of an aggregate gross area of approximately 24,000 square metres, is under construction and is scheduled to be completed in the second quarter of 2022. With this expansion, the growth paths of the Group's Powder and Solid System business and Clean Room and Automation Control and Monitoring System business in the coming few years will not be hindered by space. In the Group's existing facility in Shijiazhuang, a laser welding machine, for the welding of thin plates, was introduced and has largely increased working efficiency and quality.

The LEAN-based AUSTAR Production System (APS) has been under continuous improvement and development. Its relevant targets and action plans have been worked out and are now under execution step by step. These APS concepts and practices will be utilised by the Group's other manufacturing sites once they have been proven successful. A series of improvement implementations have been taken in the form of LEAN operation, quality control (IQC, PQC and OQC), Andon System, working time system, project material checking and KPI tracking systems. We believed that the continuous improvement of working efficiency and product quality will bring about clear benchmarks and constructive action items to be set as guiding principles. Due to the increasing project volume and extremely short delivery time of COVID-19 vaccine projects, the Group's Project Execution Centre has overcome lots of challenges in 2021 to meet with clients' expectations. The team keeps improving operation efficiency through using tools of value stream analysis and Just-In-Time standardisation, project management platform informatisation, the visualised site installation videos, execution procedure simplification, documentation system and equipment component standardisation, which largely increased project execution efficiency. Improvement in design methodologies, site management practices and software tools, and LEAN management has helped the Project Execution Centre to shorten the lead time and improve project quality. As clients tend to request more integrated solutions, the packages of equipment and systems have become more sophisticated and complex, requiring more mature project management team skills and knowledge to handle. Remote factory acceptance tests and remote client's site acceptance tests with some innovative ideas and creative tools have been implemented during the lockdown travel restrictions, which will be helpful in the near future saving travel time and costs from clients, and the Group would be able to offer the same quality of testing and qualification results as face-to-face presence on-site. The technical teams of the Project Execution Centre are proactively engaging their training and learning process with front-end proposal solution teams, that a recent successful project acquisition of a recombinant coagulation factor process system of blood bioproducts demonstrated a seamless cooperation between the two teams.

In the area of the automation execution, the team promoted highly efficient programming mode using excel for the batch generation of SCL source codes for the batch generation of programs. This greatly reduced the software programming cycle and error rate, and at the same time improved the utilisation of resources of clients and lowered the operational cost. Following the new PRC Drug Administration Law, the team also revised or prepared the quality system documents based on the specifications on contract manufacturing and market authorization holder system to meet the requirements on complete independent quality systems for the market authorization holders and the drug manufacturers.

Sales and Marketing

As reflected from the spike in sales order-in-take in the year 2021, the sales team has demonstrated its strength and resilience. The Group's internal sales cooperation model is designed to encourage sales teams from different sectors and different product lines to support each other to offer a more relevant solution to our clients. This model is facilitated by a sophisticated business-intelligent information system of customer relations management to ensure our clients are properly taken care of and our sales team are working cost-effectively.

In 2021, the reorganisation of sales teams among different business segments was planned to establish a biological and chemical drug sales team respectively in the China region, which became effective in January 2022. Such arrangement, focusing on key account clients and specific industrial sectors, would be helping to better understand the clients' needs and market intelligence.

In China, through years of sales talent and organisation development, the Group's sales process is relatively mature. The China sales team is led by key account managers, and supported by specific matter experts and technology application team for technical expertises and proposal preparation and presentation.

For global expansion, we have been gradually building up the team according to execution strategies, as in the last few years, the European and Southeast Asia teams were recruited to take care directly the related sales leads and enquires. More agents in the Southeast Asia and Middle-East North Africa regions have been engaged in sourcing out more sales opportunities. It is believed that the Group's global sales team is able to contribute a greater portion share of sales order-in-take gradually in near future after the COVID-19 pandemic has subsided.

To be in line with the Group's global expansion strategy, the Group carried out different kinds of marketing activities to facilitate this process of increasing AUSTAR brand awareness. During the Year, the Group organised 29 events worldwide, 22 offline events were organised in China in the form of expo, seminar, industry meeting, together with workshops with Bio-Bay and Design constitutions to share the up-to-date technology solutions and products. AUSTAR brand awareness is increasing steadily within the European market, which has been aided through 2021 by our attendance at trade shows such as Making Pharmaceuticals Coventry UK, Bio Expo Istanbul, Turkey, CPhI & PMEC Worldwide in Milan, Italy and ISPE Manchester, UK.

Over 260 business news and technical articles were released on the Group's social media platforms (WeChat, LinkedIn, Twitter, Facebook etc.) to update recipients on the Group's business progress. The Group established its first video account in WeChat to share short videos of projects, products, and events; 15 videos were released in 2021 with very positive feedback. 85 online webinars were organised to share technology solutions and knowledge with clients in different countries and regions. We believe digital marketing is an effective approach for business promotion and communication, especially during the pandemic period.

Continuous accumulation of new tools and timely updating of existing materials are the foundation for quick response to various business needs. Videos for key projects and brochures for new products and technology were established and shared in the resource centre on the Group's official website, with less hardcopies being produced and more e-copies being used, we believe it is an efficient and environmental way for clients to receive the most up-to-date materials. Our H+E Pharma website in the German language was launched to better support business growth in German-speaking countries.

A new service brand and a set of freeze-dryer product brands were added into our brand portfolio; under the 12 technology applications of the Group, more specific business and product brands will join our brand family.

Special promotion has been done to celebrate the Group's 30th anniversary, the first Group corporate image promotion video was produced and shown in international expos, helping clients worldwide to better understand the Group's key application technologies, core values and visions with positive feedback and comments; a 30th anniversary memory book which highlighted the Group's historical achievements and voices from clients and staff was created to commemorate the event.

Research and Development

As at 31 December 2021, the Group has obtained 287 patents. During the Year, the Group obtained 63 registered patents, and applications for 89 patents are currently in progress.

The Group's automation engineering team has been developing a set of flexible control systems with batch control functions and batch record reports for both small-scale API and biopharma process system projects to meet the needs of different clients. The traditional solution, was to use dedicated batch software, being sophisticated and powerful but expensive and difficult for clients to accept for small scale or low-budget projects. This newly developed control system can greatly reduce the cost and increase the flexibility of its system operation. The Group has also upgraded the visual design specifications of the Human Machine Interface (HMI). Comparing with traditional workstation HMI interface design, project execution efficiency is improved and function is made more user friendly, which largely improved customer satisfaction.

Process equipment for APIs like filter-dryers and vacuum cone mixer/dryers are under continuous improvement development supported by specialist consultants. More standardised models and function performance improvement of mechanical mills for both APIs and OSD form drugs are in R&D progress. A 500 kg big-batch wet granulation and fully integrated system for OSD was developed to meet the strong demand in the market for cost-effective solutions as requested by our clients who are facing price pressure due to the governmental volume-based procurement policy. Acquired projects with robots and automatic guided vehicles (AGVs) equipped in the integrated systems allow our technical teams opportunities to apply the most advanced material handling tools in the conventional OSD sector.

A co-axial mixing device for high viscosity and high shear force applications is under our development program. This device will be used to integrate into our equipment and systems for formulation preparation of especially high viscosity drug products.

One set of ILC (In-line conditioning) machine has been developed and built up in 2021. It has a wide application in mAbs (monoclonal antibodies) process; with this technology it can save the capital investment, facility space and operation costs.

In terms of water purification technology, the Group has successfully built a membrane integrated high-purity water equipment. The membrane integrated water treatment process is a water treatment process that combines different membrane processes such as ultrafiltration, microfiltration, reverse osmosis, and electrodeionisation (EDI) to achieve the purpose of efficient removal of pollutants and deep desalination. The purified water by the full membrane method can be directly used in medical devices, laboratories, animal houses under the present regulatory policies in China and can be directly used for pharmaceutical applications in the international market. It has a wide range of market prospects.

The Group partnered with a reputed university in China to conduct analysis, simulation and evaluation in the area of "energy consumption simulation", "cleanliness redundancy control technology based on Internet real-time monitoring" and "computer room group control technology". Such partnership with the Group's contribution by its industry knowledge and experience can help pharmaceutical clients achieve higher ranking of environmental, social and governance (ESG) and efficient energy-cost-operation.

The Group developed alternative pharmaceutical clean room 100mm panels in 2021 and is able to allow clients with more choices and flexibilities in clean room engineering solutions. After the Group's successful launch of the autoclavable cleanroom garment, the disposable cleanroom garment has been successfully marketed at the end of 2021. It is expected that the product will be widely used by clients of CMOs (Contract Manufacturing Organizations), CAR-T enterprises, and COVID-19 vaccine manufacturers with high production capacity requirements. In addition, the R&D of sterile presaturated wipes (無菌預浸漬抹布) and sterile latex gloves are in progress.

Works have been done by the Group on the development of aseptic rapid transferring technology and corresponding consumables. This technology and the corresponding consumables will complete the comprehensive solutions in the field of aseptic transfer, ensure the compliance of pharmaceutical enterprises in the future, and maintain technological leadership.

With the help of an advanced HMI and hardware manufacturing experience, the launch of BIOSYSTEC bioreactor system has enhanced the Group competitiveness in the core equipment of biopharmaceutical research and development sector.

The development of a new generation of automatic lyophilization loading equipment with advanced technology is under progress. This new technology is expected to solve the clients operation issues in the area of sterility risk control.

The Austar UK team has deployed some new manufacturing tools like 3-D printing to improve cost-effectiveness and development pace.

Prospects

The Group's global expansion initiative will be one of the key drivers for growth in the coming years. The technology and knowledge gained through significant amount of project execution from small scale to huge scale projects in China can contribute to brand recognition and high chances of project acquisition in emerging countries.

The Group's service business ranging from consulting to facility management services has its service scope and diversity developing rapidly and the service business volume gaining a significant growth in the last several years and it is expected that the service business will continue to grow to support more balance on scope of offerings to avoid the Group's sustainability to become too reliant on clients' CAPEX investment.

Apart from our core sector, in the biopharma sector of the life science industry, more and more clients in industrial sectors like medical devices, diagnostics, animal health and laboratory animal research are engaging the Group from facility and process design to equipment, systems, and consumables. The Group's growth opportunities are not only focusing on the booming sector like cell and gene therapies but also on those industrial sectors as mentioned above.

Since the establishment of the Group, the business focus has been on commercialised facilities in our client product life cycle. The Group's success in the research sector of life sciences with more and more project acquisition are attributed to a strategy of more research laboratory products and services being able to make offerings. More and more Contract Research Organization (CRO) and CDMO clients are contributing to the Group's revenue.

The Group has been developing 12 technology applications in our competence and knowledge model and individual specific technology application teams are being gradually established step by step in the following 2 to 3 years. 11 technology application teams were established, namely Pharmaceutical Automation & Digitalization, Cleaning, Sterilization & Disinfection, Clean Utilities, Biopharma Process and Technology, Containment Technology, Cleanroom/HVAC/EMS/BMS, Filling & Freeze-drying, Biosafety Technology and Facilities, Lab & Quality, Pharmaceutical Formulation Technology, and Regulatory Compliance & Operation Excellence, where regular workshops were held for the purpose of better unification of the technology capability of individual product lines into comprehensive technology solutions. It is believed that with these cross-business-unit professional technical application teams, more up-to-date technology solutions can be provided to the clients.

Liquid and Bioprocess System

Following the impact brought by the COVID-19 pandemic and the eagerness for vaccine, the order-in-take increased to a historic level; the expected extremely short delivery times of these projects pushed the Group to be more flexible in the management process and to evolve accordingly to adapt the Group to deal with such emergency occasions.

The Group has obtained orders for bioprocess preparation systems and clean utility systems for COVID-19 vaccine projects in China and some emerging countries. Through the Group's Bioprocess System Engineering business unit, the business' mid-long-term objectives are to bring our presently regional champion business unit onto the highest global level. Our goal is to become a global top-tier bioprocess equipment and system supplier. With more and more experience gained by project execution, we believe the business is able to develop more solid technical competence and the offerings would become more specific and more adaptable to specific needs, and as a result, more market opportunities and competence upgrade are foreseeable.

Opportunities for advanced therapeutics and medicine in China could be felt everywhere in the last two years. It is believed that the enthusiasm on breakthrough and prospects on R&D from policy regulators, scientists, entrepreneurs and investors has created a vibrant market of vendors and suppliers providing resources, technologies, equipment and systems like AUSTAR. Our recent orders in the Year from the key cell and gene therapy companies have restrengthened our confidence in our capacities in this sector. The talents and knowledge acquisition with fast learning skills and innovative solutions are important for this new dynamic sector.

Powder and Solid System

The Group's knowledge of automation control and information systems is making contributions on the growth of the powder and solid system engineering business as the industry is now under urgent need for automation and digitalisation change process. Such distinguished technical core competence of digitalisation applications can help this business segment to offer cliche solutions in the highly competitive equipment and system market.

To improve the quality and yield of drugs, API companies pay more attention to advanced technologies such as continuous-flow micro-reactions, continuous crystallisation and crystal form control, and process analysis in the production process to increase the stability of drugs in order to increase the market share through new technologies. This will further promote the digitalisation of API companies.

The increasing importance of civil health since the COVID-19 pandemic would accelerate the revolution of healthcare and life sciences industries and bring business opportunities to the Group. Under the influence of China's national centralised volume-based procurement policy, most qualified and capable successful bidders in China has increased their CAPEX investment in drug R&D, and will bring more opportunities to laboratory-scale equipment and imported production equipment.

The business extension from formulations to API manufacturing, and the business extension from existing API to formulations manufacturing is still one of the key trends of pharmaceutical industry development in China in 2022. Modular-design application reduces production cost and improves operation flexibility, which has successfully helped the Powder and Solid System business segment securing orders. This modular technology would be one of the key technologies for API manufacturing in the coming years. The core competence of this business would be accelerated by its application of automated devices like robots and AGVs integrated by automation control system together with customer-made production information system. Demand from some emerging countries for establishment of API facilities and chemical compound product technology transfer as supply-chain back-up and cost-pressure will further drive this business segment to grow.

The business extension from CRO to CDMO, from CMO to CDMO, and conventional pharmaceutical companies to CDMO will continue to develop following the development trend of the previous year. Due to the lack of talents for pharmaceutical engineering projects, such companies are more inclined to choose integrated solutions from regulations, design, process, equipment, etc., and will bring greater business opportunities for the Group. The Powder and Solid System business segment which integrates data, control, equipment will also become the first choice for highly toxic and active customers. The demand for projects seeking profit margin improvement from automation upgrading, continuous manufacturing and streamlined production system has grown rapidly. The development of innovative drugs will bring about more CAPEX investment. The pharmaceutical market will be further optimised with more sophisticated and advanced APIs and OSD facilities to be built.

The demand for high toxic/potent drugs is still increasing, and hormones manufacturers have started to combine the upstream and downstream processes to enhance their competitiveness. The Group is able to support this trend with its knowledge and experience. The success of the Powder and Solid System business segment is heavily dependent on its knowledge set of containment application technology, material handling technology and formulation process system engineering and supported by fundamental knowledge of occupational safety compliance, pharmaceutical quality compliance and automation control engineering.

With the deepening of the requirements of environmental, health and safety (EHS) regulations, the choice of safe, healthy and environmental protection solutions is the primary choice for clients. The Group's containment technology, explosion-proof and intelligent solutions have brought good feedback with significant order-in-take increase in the Year, and have laid a good foundation for future development.

Clean Room and Automation Control and Monitoring System

Relying on the Group's high-standard Heating Ventilation and Air Conditioning (HVAC), Building Management System (BMS) and Environmental Monitoring System (EMS) and verification technology and high-quality clean panels, the Clean Room and Automation Control and Monitoring System business segment keeps providing integrated service solutions for high-end clients. The business segment will cover more life sciences sectors such as animal research laboratories, medical device facilities, OSD workshops and soft capsule workshops. Through the integration of technical competence of HVAC and sterilisation technology, automation controls, and informatisation management, the business segment aims to be a turnkey solution provider integrating engineering design, equipment and systems, site installation and Good Engineering Practice (GEP) project management.

Utility automation has recorded a steady growth in the Year and the Group has maintained a competitive advantage in the field of sterile preparations, and its market share in human vaccines has further increased. Projects for cell therapy clients were acquired.

The demand for local software has increased in the China market because of expectations on better service quality, higher software flexibility and lower costs. Apart from partnering with world-class companies, AUSTAR started a few years ago to prepare the Group in terms of organisation and knowledge to be able to have its self-developed software for some specific small-scale project cases. The first large-scale API factory construction project using self-developed information system is expected to be delivered by the end of 2022.

The business segment aims to provide pharmaceutical companies with full life cycle digital solutions from digitalisation strategy consulting to digitalisation application implementation and after-sales service through working with industry leading partners and experience accumulation. A REMOIIS platform was established to offer unique, flexible, and versatile solutions. Integrating automation control and informatisation capabilities to facilitate pharmaceutical companies to build world-class informatised research and manufacturing enterprises with multifunctional, multi-products and modular design concept. Based on the "intelligent factory software and hardware integration" solution, with the industrial internet cloud platform as the core carrier and linking world-leading technical partners to form a new manufacturing ecology of "smart manufacturing + cloud", the Clean Room and Automation Control and Monitoring System business segment has a vision to become an industry leader in the intelligent pharmaceutical research and manufacturing operation information system in Asia.

GMP Compliance Service

The GMP Compliance Service business segment is divided into three sections: compliance consultancy, engineering consultancy and operation consultancy. By the end of 2026, the three sections are expected to comprise 50%, 30% and 20% of the total business volume of the business segment respectively. The strategy for increasing business competitiveness and reducing risks would be to diversify its products and extending business regions.

Focusing on the projects of biological products and biosimilar products, high potency chemical products and antibody-drug conjugate products, and innovative products, the business segment will develop clients in Northeast Asia and Southeast Asia while maintaining the market share in China.

Continuous attention should be paid to GMP regulations and guidelines, especially the EU GMP Annex 1 *Manufacture of Sterile Products*, the ICH Guideline Q9 (R1) on *Quality Risk Management*, and it is expected that those policies will impact the business segment, such as the series of new regulations on drug registration and inspection in China is expected to promote the increasing demand for the compliance consultancy.

Key actions will be taken to prepare for future business growth. The application of software and cloud services will be promoted, and the quality risk management will be integrated with the compliance consultancy services. The engineering and equipment system consultancy services will be actively integrated into the Group's 12 technology applications to improve the overall competitiveness of the Group's business.

The operation excellence consultancy service will help clients improve the quality and efficiency by various kinds of methods, such as the improvement of the procedures and the application informatisation.

Life Science Consumables

Based on a 3 to 5 year business planning, the product line business of contamination control consumables of the Life Science Consumables business segment is committed to promoting the application of rapid microbial detection technology in pharmaceutical processes, building a clean process R&D platform, and carrying out intelligent clean room microbial control. After the Chinese Pharmacopoeia have released the preparation method of Water For Injection (WFI), the business segment is expected to actively promote the microbiological online monitoring technology in CMO and the CAR-T industries and make preparation for challenges that the Group may encounter.

During the Year, the cleaning process development and cleaning verification services of the Wash, Decontamination and Sterilization business have been further recognised by the industry, and more requirements for R&D of customised cleaning process equipment have been discovered. Based on the continuous improvement of cleaning process knowledge, the strategy of providing guidance to clients at the control strategy stage for customised clean process equipment is really important.

As smart factories are expected to prevail in the pharmaceutical industry, in the field of aseptic control, human contamination will be reduced, and production efficiency will be increased when intelligent robots replace the manual operation. During the Year, the business segment has completed R&D for offline environmental monitoring information management system and has formulated R&D for cleanroom disinfection robot technical route, which is a good start for intelligent contamination control.

With the maturity of the rapid transfer technology, aseptic transportation in the pharmaceutical industry will face a revolution. The requirements for its core components, rapid transfer port (RTP) and rapid transfer bag (RTB), are expected to increase dramatically. With Fosun Kite and WuXi Junuo's Car-T approval for market, it is believed that the Chinese market for advanced therapy medicinal products (ATMP) will enter a stage of rapid development, and that the ATMP production line has huge market potentials.

Lab engineering and lab IT business are closely integrated to form an intelligent solution. To promote the laboratory construction and informitisation business, digitalisation solutions are introduced during the laboratory construction design phase to form an intelligent solution.

As biopharmaceutical clients continued to increase their requirements for product quality and cost control performance, continuous manufacturing is bound to become a magic weapon for most key biopharmaceutical companies instead of conventional batch production. Therefore, whether the Group can provide a complete solution for the continuous production of biopharmaceuticals from upstream to downstream has become a struggling goal for the recent years. In the last several years with application knowledge accumulation, the Group has already equipped to support the required Process Analysis Technology (PAT) technology platform for the upstream continuous production of biopharma clients. In the next 3 to 5 years, the Group will continue to expand this technology with its application on downstream bioprocess and establish more data analysis and project cases and eventually the goal is to be able to offer a complete PAT upstream and downstream solution to our biopharma clients.

RESULTS OF OPERATIONS

Revenue

The Group provides its services and products under six business segments, namely, (1) Liquid and Bioprocess System, the major types of which include pharmaceutical water system, and liquid preparation and bioprocess system; (2) Clean Room and Automation Control and Monitoring System, the major types of which include clean room enclosure system, and automation control and monitoring system; (3) Powder and Solid System; (4) GMP Compliance Service; (5) Life Science Consumables; and (6) Distribution and Agency of Pharmaceutical Equipment.

For the Year, the Group's total revenue amounted to approximately RMB2,015.0 million, representing an increase of approximately 55.5% over 2020, all business segments recorded increase but in particular the significant increase in revenue from the business segments of Liquid and Bioprocess System, Life Science Consumables, and Clean Room and Automation Control and Monitoring System.

The following table sets forth, for the years ended 31 December 2021 and 2020, the breakdown of the Group's revenue by business segment:

	For the year ended 31 December				
	2021		2020		Change
Revenue by business segment	***RMB'000***	*%*	*RMB'000*	*%*	*%*
Liquid and Bioprocess System	**882,953**	**43.8%**	588,488	45.4%	50.0%
Clean Room and Automation Control and Monitoring System	**479,706**	**23.8%**	264,436	20.4%	81.4%
Powder and Solid System	**138,293**	**6.9%**	120,525	9.3%	14.7%
GMP Compliance Service	**66,114**	**3.3%**	52,729	4.1%	25.4%
Life Science Consumables	**421,070**	**20.9%**	250,170	19.3%	68.3%
Distribution and Agency of Pharmaceutical Equipment	**26,892**	**1.3%**	19,632	1.5%	37.0%
Total	**2,015,028**	**100.0%**	1,295,980	100.0%	55.5%

Liquid and Bioprocess System

The Group's revenue from the business segment of Liquid and Bioprocess System increased significantly by approximately RMB294.5 million or 50.0% from approximately RMB588.5 million for the year ended 31 December 2020 to approximately RMB883.0 million for the Year. The increase was mainly attributable to the increase in the closing amount of backlog as at 31 December 2020 and the increase in the order-in-take in the business segment of Liquid and Bioprocess System for the Year, and high project execution efficiency with good quality in the COVID-19 vaccine projects.

Clean Room and Automation Control and Monitoring System

The Group's revenue from the business segment of Clean Room and Automation Control and Monitoring System increased by approximately RMB215.3 million or 81.4% from approximately RMB264.4 million for the year ended 31 December 2020 to approximately RMB479.7 million for the Year. The increase was mainly attributable to the increase in the closing amount of backlog as at 31 December 2020 and the increase in order-in-take in the business segment of Clean Room and Automation Control and Monitoring System during the Year, a part of which was recognised as revenue.

Powder and Solid System

The Group's revenue from the business segment of Powder and Solid System increased by approximately RMB17.8 million or 14.7% from approximately RMB120.5 million for the year ended 31 December 2020 to approximately RMB138.3 million for the Year. The increase was mainly attributable to the increase in the closing amount of backlog as at 31 December 2020 and the increase in the order-in-take in the business segment of Powder and Solid System for the Year, a part of which was recognised as revenue.

GMP Compliance Service

The Group's revenue from the business segment of GMP Compliance Service increased by approximately RMB13.4 million or 25.4% from approximately RMB52.7 million for the year ended 31 December 2020 to approximately RMB66.1 million for the Year. This was mainly driven by the increasing demand due to stricter regulations and standards in GMP on-site inspection.

Life Science Consumables

The Group's revenue from the business segment of Life Science Consumables increased by approximately RMB170.9 million or 68.3% from approximately RMB250.2 million for the year ended 31 December 2020 to approximately RMB421.1 million for the Year, which was primarily attributable to the core competence by offering a complete solution of Washing, Disinfection and Sterilization, and continuous launching of more diversified life science consumables and services with the latest technology.

Distribution and Agency of Pharmaceutical Equipment

The Group's revenue from the business segment of Distribution and Agency of Pharmaceutical Equipment increased by approximately RMB7.3 million or 37.0% from approximately RMB19.6 million for the year ended 31 December 2020 to approximately RMB26.9 million for the Year. The Group will continue to explore and distribute various types of high-end pharmaceutical equipment.

The following table sets forth the breakdown of the Group's revenue by geographical regions for the years ended 31 December 2021 and 2020:

	For the year ended 31 December				
	2021		2020		Change
Revenue	***RMB'000***	*%*	*RMB'000*	*%*	*%*
Mainland China	**1,890,654**	**93.8%**	1,219,015	94.1%	55.1%
Other locations	**124,374**	**6.2%**	76,965	5.9%	61.6%
Total	**2,015,028**	**100.0%**	1,295,980	100.0%	55.5%

The Group derived its revenue mainly from customers in Mainland China, which accounted for approximately 93.8% of the total revenue for the Year (2020: approximately 94.1%).

Cost of sales

The Group's cost of sales increased by approximately RMB563.5 million or 58.0% from approximately RMB972.5 million for the year ended 31 December 2020 to approximately RMB1,536.0 million for the Year. Such increase was mainly in line with the increase in revenue.

Gross profit and gross profit margin

The Group's gross profit increased by approximately RMB155.5 million or 48.1% from approximately RMB323.5 million for the year ended 31 December 2020 to approximately RMB479.0 million for the Year, resulted from growth in both revenue and gross profit from all business segments. The gross profit margin decreased slightly from approximately 25.0% for the year ended 31 December 2020 to approximately 23.8% for the Year, which was due to the decrease in gross profit margin from the business segments of Clean Room and Automation Control and Monitoring System, GMP Compliance Service and Life Science Consumables.

The following table sets forth the breakdown of the Group's gross profit and gross profit margin by business segment for the years indicated:

	For the year ended 31 December					
	2021			2020		
Gross profit and gross profit margin by business segment	***RMB'000***	*%*	**Gross profit margin** *%*	*RMB'000*	*%*	Gross profit margin *%*
Liquid and Bioprocess System	**143,745**	**30.0%**	**16.3%**	90,251	27.9%	15.3%
Clean Room and Automation Control and Monitoring System	**90,275**	**18.9%**	**18.8%**	57,197	17.7%	21.6%
Powder and Solid System	**41,694**	**8.7%**	**30.1%**	34,111	10.5%	28.3%
GMP Compliance Service	**28,381**	**5.9%**	**42.9%**	25,975	8.0%	49.3%
Life Science Consumables	**163,044**	**34.0%**	**38.7%**	109,351	33.8%	43.7%
Distribution and Agency of Pharmaceutical Equipment	**11,869**	**2.5%**	**44.1%**	6,645	2.1%	33.8%
Total	**479,008**	**100.0%**	**23.8%**	323,530	100.0%	25.0%

Notes:

1. Gross profit margin by business segment represents gross profit divided by revenue of the respective business segment for the year.

2. Total gross profit margin represents gross profit divided by total revenue for the year.

Liquid and Bioprocess System

The gross profit from the business segment of Liquid and Bioprocess System increased by approximately RMB53.4 million or 59.3% from approximately RMB90.3 million for the year ended 31 December 2020 to approximately RMB143.7 million for the Year. The gross profit margin from the business segment of Liquid and Bioprocess System increased from approximately 15.3% for the year ended 31 December 2020 to approximately 16.3% for the Year, mainly attributable to innovative methodologies to shorten the lead time and the site construction time.

Clean Room and Automation Control and Monitoring System

The gross profit from the business segment of Clean Room and Automation Control and Monitoring System increased by approximately RMB33.1 million or 57.8% from approximately RMB57.2 million for the year ended 31 December 2020 to approximately RMB90.3 million for the Year. The gross profit margin from the business segment of Clean Room and Automation Control and Monitoring System decreased from approximately 21.6% for the year ended 31 December 2020 to approximately 18.8% for the Year, which was primarily due to the keen market competition in the product lines of Clean Room and Automation Control and Monitoring System, and the Group undertook several projects with lower gross margin for the Year. The Group will continuously make better control over cost management through implementing LEAN-based manufacturing management.

Powder and Solid System

The Group's gross profit from the business segment of Powder and Solid System increased by approximately RMB7.6 million or 22.2% from approximately RMB34.1 million for the year ended 31 December 2020 to approximately RMB41.7 million for the Year. The gross profit margin from the business segment of Powder and Solid System increased from approximately 28.3% for the year ended 31 December 2020 to approximately 30.1% for the Year, primarily attributable to the improved product manufacture and project execution efficiency.

GMP Compliance Service

The Group's gross profit from the business segment of GMP Compliance Service increased by approximately RMB2.4 million or 9.3% from approximately RMB26.0 million for the year ended 31 December 2020 to approximately RMB28.4 million for the Year. The gross profit margin from the business segment of GMP Compliance Service decreased from approximately 49.3% for the year ended 31 December 2020 to approximately 42.9% for the Year, which was mainly due to the undertaking of projects with a relatively lower gross profit in light of the keen market competition for the Year. The Group will keep on providing high quality service and improving cost control management.

Life Science Consumables

The Group's gross profit from the business segment of Life Science Consumables increased by approximately RMB53.6 million or 49.1% from approximately RMB109.4 million for the year ended 31 December 2020 to approximately RMB163.0 million for the Year. The gross profit margin from the business segment of Life Science Consumables decreased from approximately 43.7% for the year ended 31 December 2020 to approximately 38.7% for the Year, which was partly due to the increase of lower margin business of laboratory instruments and engineering and lower margin orders from some strategic clients.

Distribution and Agency of Pharmaceutical Equipment

The Group's gross profit from the business segment of Distribution and Agency of Pharmaceutical Equipment increased by approximately RMB5.3 million or 78.6% from approximately RMB6.6 million for the year ended 31 December 2020 to approximately RMB11.9 million for the Year. The gross profit margin from the business segment of Distribution and Agency of Pharmaceutical Equipment increased from approximately 33.8% for the year ended 31 December 2020 to approximately 44.1% for the Year, which was mainly due to higher portion of high-margin services of the business.

Other income

Other income decreased by approximately RMB1.7 million or 21.3% to approximately RMB6.3 million for the Year from approximately RMB8.0 million for the year ended 31 December 2020, mainly due to the decrease in the subsidies granted by local government authorities of the PRC in the Year.

Other gains – net

Other gains-net increased by approximately RMB189.8 million to approximately RMB196.8 million for the Year from approximately RMB7.0 million for the year ended 31 December 2020, mainly attributable to the one-off net gain from the disposal of 60% equity interest in PALL-AUSTAR JV of approximately RMB199.0 million, but partially offset by the decrease from currency exchange losses from retranslation of foreign currency denominated trade related balances.

Selling and marketing expenses

Selling and marketing expenses increased by approximately RMB21.6 million or 14.5% to approximately RMB170.3 million for the Year from approximately RMB148.7 million for the year ended 31 December 2020. The increase was mainly due to the increase in the staff costs, warranty provision and depreciation of right-of-use assets by the total amount of approximately RMB32.3 million, but partially offset by the decrease in the marketing promotion expenses, professional fees and freight and port charges by the total amount of approximately RMB7.6 million.

Administrative expenses

Administrative expenses increased by approximately RMB29.4 million or 29.8% to approximately RMB128.1 million for the Year from approximately RMB98.7 million for the year ended 31 December 2020. The increase was primarily attributable to the increase in the staff costs, travel expenses, impairment of inventories and professional fees by the total amount of approximately RMB32.1 million, but partially offset by the decrease in convention service expenses, depreciation of right-of-use assets and technical service fee by approximately RMB2.3 million.

Research and development expenses

As at 31 December 2021, the Group had 45 research and development personnel which accounted for approximately 2.8% of the Group's total number of employees. The Group cooperated with well-known academic institutions in order to upgrade the Group's technology level. The Group's research and development expenses increased by approximately RMB17.3 million or 35.9% to approximately RMB65.6 million for the Year from approximately RMB48.3 million for the year ended 31 December 2020, mainly due to the increase of staff costs and materials utilised in more research projects. The Group will make continuous efforts to enhance research and development activities.

Finance (cost)/income – net

The Group recorded a net finance income of approximately RMB0.3 million for the year ended 31 December 2020 and recorded a net finance cost of approximately RMB3.3 million for the Year, mainly due to the decrease of interest income of approximately RMB1.6 million, and the increase of interest expense of approximately RMB2.0 million during the Year.

Share of net profit of investments accounted for using the equity method

The Group's share of net profit of investments accounted for using equity method increased by approximately RMB0.2 million, from approximately RMB10.5 million for the year ended 31 December 2020 to approximately RMB10.7 million for the Year, primarily due to the increase in profit contribution from the associates, ROTA Verpackungstechnik GmbH & Co.KG and ROTA Verpackungstechnik Verwaltungsgesellschaft GmbH and the joint venture PALL AUSTAR JV which was disposed in March 2021, and partially offset by the decrease in profit contribution from the joint venture, STERIS-AUSTAR Pharmaceutical Systems Hong Kong Limited.

Profit before income tax

Profit before income tax increased substantially by approximately RMB277.7 million to approximately RMB319.2 million for the Year from approximately RMB41.5 million for the year ended 31 December 2020, which was primarily due to the factors as described above in this section.

Income tax expense

Income tax expense increased by approximately RMB36.7 million, from approximately RMB9.9 million for the year ended 31 December 2020 to approximately RMB46.6 million for the Year, which was mainly due to the increase of profit before income tax of approximately RMB277.7 million.

Profit for the year

Profit for the year increased substantially by approximately RMB241.0 million to approximately RMB272.6 million for the Year from approximately RMB31.6 million for the year ended 31 December 2020, which was primarily attributable to the factors as described above in this section.

LIQUIDITY AND FINANCIAL RESOURCES

The following table summarises the Group's consolidated statement of cash flows:

	For the year ended 31 December	
	2021	2020
	RMB'000	*RMB'000*
Net cash (used in)/generated from operating activities	**(103,451)**	52,224
Net cash generated from/(used in) investing activities	**65,022**	(59,806)
Net cash generated from/(used in) financing activities	**59,349**	(5,513)
Net increase/(decrease) in cash and cash equivalents	**20,920**	(13,095)

For the Year, the Group had net cash used in operating activities of approximately RMB103.5 million mainly attributable to:

i. the profit before income tax for the year of approximately RMB319.2 million, eliminated the gains on disposal of a joint venture of approximately RMB199.0 million, plus the depreciation of property, plant, equipment and right-of-use assets in total of approximately RMB27.9 million and the amortisation of intangible assets of approximately RMB3.7 million;

ii. the increase in contract liabilities of approximately RMB144.5 million, and trade and other payables of approximately RMB124.9 million; and

iii. partially offset by the increase in contract assets of approximately RMB146.1 million, inventories of approximately RMB222.7 million, restricted cash of approximately RMB44.4 million, trade and other receivables of approximately RMB113.0 million.

For the Year, the Group had net cash generate from investing activities of approximately RMB65.0 million, which was mainly attributable to:

i. proceeds from disposal of the Group's 60% equity interest in the joint venture, PALL-AUSTAR JV, of approximately RMB185.4 million; and

ii. partially offset by purchasing of property, plant, equipment, intangible assets and land use right of in total of approximately RMB115.9 million; and the increase in term deposits with initial terms of over three months of approximately RMB 21.1 million.

For the Year, the Group had net cash generated from financing activities of approximately RMB59.3 million mainly due to the proceeds from borrowings of approximately RMB109.1 million but partially used for the repayments of borrowings of approximately RMB30.0 million, principal elements of lease payments of approximately RMB15.4 million and interest paid of approximately RMB4.4 million.

As at 31 December 2021 and 31 December 2020, the Group had cash and cash equivalents of approximately RMB198.4 million and RMB177.9 million respectively, and balances of pledged bank deposits under the current assets were approximately RMB172.3 million and RMB127.9 million respectively, and term deposits with initial terms of over three months of approximately RMB21.3 million and RMB0.2 million respectively.

Net current assets

The Group's net current assets as at 31 December 2021 had increased by approximately RMB243.4 million, from approximately RMB283.6 million as at 31 December 2020 to approximately RMB527.0 million as at 31 December 2021.

As at 31 December 2021, the Group's total current assets amounted to approximately RMB1,663.2 million, which was an increase of approximately RMB573.9 million as compared with approximately RMB1,089.3 million as at 31 December 2020. The increase was primarily attributable to:

i. the increase in contract assets of approximately RMB139.8 million, inventories of approximately RMB214.1 million, pledged bank deposits of approximately RMB44.4 million, trade and notes receivables of approximately RMB16.9 million, and prepayment and other receivables of approximately RMB117.2 million, which was mainly attributable to the fast business expansion during the Year; and

ii. the increase in cash and cash equivalents of approximately RMB20.5 million.

As at 31 December 2021, the Group's total current liabilities amounted to approximately RMB1,136.2 million, which was an increase of approximately RMB330.5 million as compared with approximately RMB805.7 million as at 31 December 2020. The increase was primarily due to the increase in contract liabilities of approximately RMB144.5 million, trade and other payables of approximately RMB159.0 million, short-term borrowings of approximately RMB24.8 million, but partially offset by the decrease from the lease liabilities of approximately RMB2.7 million.

Borrowings and gearing ratio

As at 31 December 2021, the total short-term interest-bearing bank borrowings amounted to RMB54.8 million. The secured short-term bank borrowings amounted to RMB20.0 million and bear interest rate of 4.57% per annum (2020: 4.57% per annum), and the guaranteed short-term bank borrowings amounted to RMB34.8 million and bear interest rates range from 3% to 5% per annum (2020: 3.65% per annum). The long-term bank borrowings amounted to RMB54.3 million and bear interest rates of 4.65% and 4.75% per annum (2020: Nil).

The Group's gearing ratio is approximately 16.4% as at 31 December 2021 (31 December 2020: 12.7%). The ratio is calculated based on the total debts as of the respective dates divided by total capital equity as of the respective dates and multiplied by 100%.

Pledged assets

As at 31 December 2021, in addition to pledged bank deposits of approximately RMB172.3 million, the Group had buildings and right-of-use assets having a total carrying amount of approximately RMB5.0 million and approximately RMB71.1 million respectively (31 December 2020: approximately RMB5.6 million and approximately RMB5.2 million respectively) and construction in progress having a carrying amount of approximately RMB85.0 million (31 December 2020: Nil) which are pledged as security for short-term bank borrowings and long-term bank borrowings with carrying amount of approximately RMB74.3 million (31 December 2020: approximately RMB20.0 million).

Contingent liabilities

The Group did not have any material contingent liabilities as at 31 December 2021 (31 December 2020: Nil).

HUMAN RESOURCES

As at 31 December 2021, the Group had 1,582 full-time employees for research and development, sales and marketing, administration, project management and execution and manufacturing, increased by 178 employees as compared to the number of employees as at 31 December 2020. The employee costs (including the Directors' remuneration) were approximately RMB414.4 million for the Year, which was an increase of approximately 34.2% as compared with approximately RMB308.8 million for the year ended 31 December 2020.

Employee costs of the Group increased mainly due to the Group's increase in its number of employees for the purpose of expanding the Group's operational scale and the Group's efforts in ensuring the attractiveness of its employee remuneration packages in accordance with the general standards set out in the Group's remuneration policy.

The Group regularly reviews its remuneration policies and employee benefits with reference to market practices and performance of individual employees. The remuneration of the employees and the Directors are determined by reference to their responsibilities, professional qualification, industry experience and performance. The emolument policy of the Directors is recommended by the remuneration committee of the Board and determined by the Board.

The Group has established various welfare plans including the provision of basic medical insurance, unemployment insurance and other relevant insurance for employees who are employed by the Group pursuant to the PRC rules and regulations and the existing policy requirements of the local government. The Group has also made statutory contributions for its employees in Hong Kong, Taiwan, India, Indonesia, Germany, UK and Malaysia.

The Group has formulated provisions and rules on employees' training, such as the "Training and Development Control Procedures" and the "Training Management Control Procedures", detailing the implementation of training and accountability in training. In addition, in the "Staff Handbook", the Group divides training into orientation, overseas training, management training, professional skills training and corporate culture training.

CAPITAL COMMITMENT

Capital expenditure of property, plant and equipment and intangible assets which have been contracted for but not yet incurred as of 31 December 2021 amounted to approximately RMB101.4 million, which was mainly from the unpaid commitment of construction of the new facility in Shanghai and Shijiazhuang, which are currently in progress.

SIGNIFICANT INVESTMENTS, MATERIAL ACQUISITION AND DISPOSAL OF SUBSIDIARIES, ASSOCIATED COMPANIES AND JOINT VENTURES

On 11 February 2021, the Group entered into an agreement with Beckman Coulter Hong Kong Limited ("**Purchaser**"), which indirectly owned 40% of the issued shares of PALL-AUSTAR JV, and PALL-AUSTAR JV pursuant to which the Purchaser conditionally agreed to purchase, and the Group conditionally agreed to sell, the 60% of the issued shares of PALL-AUSTAR JV held by the Group ("**Disposal**").

The Disposal constituted a major transaction of the Company under Chapter 14 of the Rules Governing the Listing of Securities on the Stock Exchange ("**Listing Rules**"), and was approved by the written approval from the controlling shareholder of the Company, Standard Fortune Holdings Limited, in lieu of holding a general meeting. For details of the Disposal, please refer to the announcement of the Company dated 15 February 2021 and the circular of the Company dated 23 March 2021.

The final consideration in respect of the Disposal was approximately US$34.4 million. The completion of the Disposal took place on 31 March 2021. Upon completion, the Group ceased to have any equity interest in PALL-AUSTAR JV.

Save as disclosed above, there were no other significant investments, material acquisition and disposal of subsidiaries, associates and joint ventures by the Group during the Year.

FOREIGN EXCHANGE RISK

The Group mainly operates in the PRC and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to Euro, US dollar and HK dollar. Foreign exchange risk arises from the ending balances of the internal borrowings amounted the Group's subsidiaries which have different functional currencies, the foreign currencies held by the Group's subsidiaries and offices and the sales of the Group's products and services to overseas customers who settle payments in foreign currencies. The Directors do not consider the foreign exchange rate risks as material to the Group and therefore, did not carry out any financial instruments such as forward currency exchange contracts to hedge the risks.

EVENTS OCCURRING AFTER THE REPORTING PERIOD

Reference is made to the announcement of the Company dated 1 March 2022, whereby the Company announced that the Group had completed the acquisition ("**Acquisition**") of the technology and ancillary business of 南京博健科技有限公司 (Nanjing Bojian Technology Co., Ltd.*) ("**Transferor**"). Under the Acquisition, the Group has acquired from the Transferor (i) the Transferor's technology of the products such as washing machine, sterilizing tunnel, filling line and cap machine; (ii) related intangible assets such as software copyright, trademark, domain name and other commercial symbols; and (iii) the personnel to carry out the target business including research and development, manufacturing, sales and after-sales service. The Transferor is a company established in the PRC with limited liability in which the Group held 0.09% equity interest and is principally engaged in the equipment design and manufacture of liquid filling line and powder filling line for vials. The Acquisition did not constitute a notifiable transaction or a connected transaction of the Company under Chapter 14 or Chapter 14A of the Listing Rules respectively.

FINAL DIVIDEND

The Directors do not recommend the payment of any dividend for the Year (2020: Nil).

CLOSURE OF REGISTER OF MEMBERS

For determining the entitlement to attend and vote at the forthcoming annual general meeting of the Company scheduled to be held on Friday, 27 May 2022 ("**2022 AGM**"), the register of members of the Company will be closed from Tuesday, 24 May 2022 to Friday, 27 May 2022, both days inclusive, during which period no transfer of Shares will be registered. In order to be eligible to attend and vote at the 2022 AGM, all transfer of Shares accompanied by the relevant shares certificates must be lodged with the Company's branch share registrar and transfer office in Hong Kong, Tricor Investor Services Limited at Level 54, Hopewell Centre, 183 Queen's Road East, Hong Kong by 4:30 p.m. on Monday, 23 May 2022.

CORPORATE GOVERNANCE PRACTICES

The Company recognises the importance of good corporate governance for enhancing the management of the Company as well as preserving the interests of the shareholders of the Company ("**Shareholders**") as a whole. The Company has adopted and committed to a code of corporate governance, containing the code provisions set out in the Corporate Governance Code ("**Corporate Governance Code**") contained in Appendix 14 to the Listing Rules.

Save for the deviation from code provision A.2.1 of the Corporate Governance Code (which has been re-numbered as code provision C.2.1 under the new Corporate Governance Code that came into effect on 1 January 2022) as described below, the Board considers that, the Company has complied, to the extent applicable and permissible, with the code provisions as set out in the prevailing Corporate Governance Code during the Year and the Directors will use their best endeavours to procure the Company to comply with such code and make disclosure of deviation from such code in accordance with the Listing Rules.

Code provision A.2.1 of the Corporate Governance Code (which has been re-numbered as code provision C.2.1 under the new Corporate Governance Code that came into effect on 1 January 2022) requires the responsibilities between the chairman and chief executive officer should be separated and should not be performed by the same individual. Mr. Ho Kwok Keung, Mars assumes the role of both of the chairman of the Board and the chief executive officer of the Company. The Board believes that vesting both the roles of chairman and chief executive officer in the same person has the benefit of ensuring consistent leadership within the Group and enables more effective and efficient overall strategic planning for the Group. The Board considers that the balance of power and authority of the present arrangement will not be impaired and this structure will enable the Company to make and implement decisions promptly and efficiently. In addition, the Board is of the view that the balanced composition of executive and non-executive Directors (including the independent non-executive Directors) on the Board and the various committee of the Board (primarily comprising independent non-executive Directors) in overseeing different aspects of the Company's affairs would provide adequate safeguards to ensure a balance of power and authority.

COMPLIANCE WITH THE MODEL CODE BY DIRECTORS

The Company has adopted the Model Code for Securities Transactions by Directors of Listed Issuers ("**Model Code**") as set out in Appendix 10 to the Listing Rules as its code of conduct regarding its Directors' securities transactions. The Directors are reminded of their obligations under the Model Code on a regular basis. Following specific enquiry, all Directors have confirmed that they have complied with the required standard set out in the Model Code during the Year.

PURCHASE, SALE OR REDEMPTION OF THE LISTED SECURITIES

During the Year, neither the Company nor any of its subsidiaries had purchased, redeemed or sold any of the Company's listed securities.

AUDIT COMMITTEE

The Board established the audit committee ("**Audit Committee**") on 21 October 2014 with written terms of reference in compliance with Rules 3.21 to 3.23 of the Listing Rules and the Corporate Governance Code. The Audit Committee currently comprises two independent non-executive Directors, namely Mr. Cheung Lap Kei and Madam Chiu Hoi Shan and one non-executive Director, namely Madam Ji Lingling. Mr. Cheung Lap Kei is the chairman of the Audit Committee. None of them is a member of the former or existing auditors of the Company. The terms of reference of the Audit Committee are published on the Company's website and the website of the Stock Exchange.

The primary duties of the Audit Committee are to review the half-yearly and annual results of the Company and to supervise the Group's financial report process and internal control system, and to formulate or review polices relating anti-bribery compliances by ensuring regular management review of relevant corporate governance measures and its implementation, and to communicate with external auditor on the audit procedures and accounting issues.

The Audit Committee has reviewed the consolidated financial statements of the Company for the Year.

SCOPE OF WORK OF PRICEWATERHOUSECOOPERS

The figures in respect of the Group's consolidated balance sheet, consolidated income statement, consolidated statement of comprehensive income and the related notes thereto for the year ended 31 December 2021 as set out in the preliminary announcement have been agreed by the Group's auditor, PricewaterhouseCoopers, to the amounts set out in the Group's audited consolidated financial statements for the year. The work performed by PricewaterhouseCoopers in this respect did not constitute an assurance engagement and consequently no opinion or assurance conclusion has been expressed by PricewaterhouseCoopers on the preliminary announcement.

PUBLICATION OF ANNUAL RESULTS AND ANNUAL REPORT

This annual results announcement is published on the website of the Stock Exchange (www.hkexnews.hk) and the Company's website (www.austar.com.hk). The annual report of the Company for the Year containing all the information required by the Listing Rules will be despatched to the Shareholders and published on the respective websites of the Stock Exchange and the Company in due course.

APPRECIATION

The Company would like to take this opportunity to thank all its valued Shareholders and various stakeholders for their continuous support. Also, the Company would like to express its appreciation to all the staff for their efforts and commitments to the Group.

On behalf of the Board
Austar Lifesciences Limited
Ho Kwok Keung, Mars
Chairman and Chief Executive Officer

Hong Kong, 25 March 2022

As at the date of this announcement, the Board comprises four executive Directors, namely Mr. Ho Kwok Keung, Mars, Mr. Ho Kin Hung, Mr. Chen Yuewu and Madam Zhou Ning; one non-executive Director, namely Madam Ji Lingling; and three independent non-executive Directors, namely Mr. Cheung Lap Kei, Madam Chiu Hoi Shan and Mr. Leung Oi Kin.

** For identification purpose only*