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CHINA ISOTOPE & RADIATION CORPORATION

中國同輻股份有限公司

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

(Stock Code: 1763)

ANNOUNCEMENT OF UNAUDITED ANNUAL RESULTS FOR THE YEAR ENDED 31 DECEMBER 2021

ANNUAL RESULTS

The board of directors (the “**Board**”) of China Isotope & Radiation Corporation (the “**Company**”, together with its subsidiaries, the “**Group**” or “**we**”) is pleased to announce the unaudited annual results for the year ended 31 December 2021 (“**2021**” or the “**Reporting Period**”), together with the comparative figures for the same period of 2020, as follows:

UNAUDITED CONSOLIDATED STATEMENT OF PROFIT OR LOSS
for the year ended 31 December 2021
(Expressed in Renminbi (“RMB”))

	<i>Note</i>	2021 RMB’000 (Unaudited)	2020 <i>RMB’000</i>
Revenue	4	5,143,694	4,274,183
Cost of sales		<u>(1,901,790)</u>	<u>(1,658,196)</u>
Gross profit		3,241,904	2,615,987
Other income	5	61,569	67,615
Selling and distribution expenses		(1,820,458)	(1,442,556)
Administrative expenses		(497,984)	(451,567)
Research and development costs		(196,214)	(152,531)
Impairment losses on trade and other receivables		<u>(10,996)</u>	<u>(22,173)</u>
Profit from operations		777,821	614,775
Finance costs	6(a)	(35,803)	(34,977)
Share of profits less losses of associates		6,962	(12,028)
Share of profits of joint ventures		<u>53,698</u>	<u>28,393</u>
Profit before taxation	6	802,678	596,163
Income tax	7	<u>(129,641)</u>	<u>(120,640)</u>
Profit for the year		<u>673,037</u>	<u>475,523</u>
Attributable to:			
Equity shareholders of the Company		335,751	213,582
Non-controlling interests		<u>337,286</u>	<u>261,941</u>
Profit for the year		<u>673,037</u>	<u>475,523</u>
Earnings per share	8		
Basic and diluted (RMB)		<u>1.05</u>	<u>0.67</u>

UNAUDITED CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

for the year ended 31 December 2021

(Expressed in RMB)

	2021 RMB'000 (Unaudited)	2020 RMB'000
Profit for the year	673,037	475,523
Other comprehensive income for the year (after tax and reclassification adjustments):		
Item that may be reclassified subsequently to profit or loss:		
Exchange differences on translation of share of profits less losses of an associate	(2,623)	(1,805)
Items that will not be reclassified to profit or loss:		
Remeasurement of net defined benefit liability	(1,469)	(513)
Equity investments at FVOCI-net movement in fair value reserve (non-recycling)	10,047	(10,858)
Other comprehensive income for the year	5,955	(13,176)
Total comprehensive income for the year	678,992	462,347
Attributable to:		
Equity shareholders of the Company	341,921	200,517
Non-controlling interests	337,071	261,830
Total comprehensive income for the year	678,992	462,347

UNAUDITED CONSOLIDATED STATEMENT OF FINANCIAL POSITION
at 31 December 2021
(Expressed in RMB)

	<i>Note</i>	2021 RMB'000 (Unaudited)	2020 RMB'000
Non-current assets			
Property, plant and equipment		2,512,947	2,210,150
Investment property		19,670	20,768
Intangible assets		156,496	148,363
Goodwill		44,036	43,875
Interests in associates		52,500	65,263
Interests in joint ventures		594,252	552,748
Long-term receivables		37,176	35,440
Unquoted equity investments		150,410	137,014
Deferred tax assets		214,445	200,556
Other non-current assets		35,255	—
		<u>3,817,187</u>	<u>3,414,177</u>
Current assets			
Inventories		691,923	590,025
Contract assets		29,424	—
Trade and bill receivables	9	2,821,153	2,368,502
Deposits and other receivables		153,733	142,185
Prepayments		212,358	113,910
Cash at bank and on hand		2,748,190	2,556,493
		<u>6,656,781</u>	<u>5,771,115</u>
Current liabilities			
Bank loans		118,084	90,220
Corporate bond		499,996	—
Trade payables	10	337,856	199,503
Accruals and other payables		2,816,406	2,327,407
Lease liabilities		53,368	29,907
Provisions		76,554	73,906
Income tax payable		69,398	51,226
		<u>3,971,662</u>	<u>2,772,169</u>
Net current assets		<u>2,685,119</u>	<u>2,998,946</u>
Total assets less current liabilities		<u>6,502,306</u>	<u>6,413,123</u>

	<i>Note</i>	2021 RMB'000 (Unaudited)	2020 RMB'000
Non-current liabilities			
Bank loans		144,680	72,762
Corporate bond		–	499,784
Deferred income		43,875	59,146
Lease liabilities		40,500	56,971
Defined benefit retirement obligation		49,898	53,503
Deferred tax liabilities		17,347	14,186
Provisions		131,706	125,861
Other long-term payables		42,912	25,300
		<u>470,918</u>	<u>907,513</u>
Net assets		<u>6,031,388</u>	<u>5,505,610</u>
Capital and reserves			
Share capital	<i>11</i>	319,875	319,875
Reserves		3,859,415	3,571,323
Total equity attributable to equity shareholders of the Company		4,179,290	3,891,198
Non-controlling interests		1,852,098	1,614,412
Total equity		<u>6,031,388</u>	<u>5,505,610</u>

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(Expressed in RMB unless otherwise indicated)

1 STATEMENT OF COMPLIANCE

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

The IASB has issued certain amendments to IFRSs that are first effective or available for early adoption for the current accounting period of the Group. Note 3 provides information on any changes in accounting policies resulting from initial application of these developments to the extent that they are relevant to the Group for the current and prior accounting periods reflected in these financial statements.

2 BASIS OF PREPARATION OF THE FINANCIAL STATEMENTS

The consolidated financial statements for the year ended 31 December 2021 comprise the Company and its subsidiaries (together referred as the “Group”) and the Group’s interest in associates and joint ventures.

The measurement basis used in the preparation of the financial statements is the historical cost basis except that the equity investments are stated at their fair value.

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

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

3 CHANGES IN ACCOUNTING POLICIES

The Group has applied the following amendments to IFRSs issued by the IASB to these financial statements for the current accounting period:

- Amendments to IFRS 9, IFRS 7, IFRS 4 and IFRS 16, *Interest rate benchmark reform – phase 2*
- Amendments to IFRS 16, *Covid-19-related rent concessions beyond 30 June 2021*

None of these developments have had a material effect on how the Group’s results and financial position for the current or prior years have been prepared or presented in this financial report. The Group has not applied any new standard or interpretation that is not yet effective for the current accounting period.

4 REVENUE AND SEGMENT REPORTING

(a) Revenue

The Group is principally engaged in research, development, manufacturing and sale of a broad range of pharmaceuticals and radioactive source products, also design, manufacturing, construction and installation of gamma ray irradiation facilities, provision of irradiation service for sterilisation purpose, and sale of radiation therapy equipment as well as independent clinical laboratory services.

(i) Disaggregation of revenue

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

	2021 <i>RMB'000</i> (Unaudited)	2020 <i>RMB'000</i>
Revenue from contracts with customers within the scope of IFRS 15		
Disaggregated by major products of service lines		
– sales of pharmaceuticals	3,742,267	2,970,402
– sales of radioactive source products	488,772	412,300
– sales of radiation therapy equipment	195,726	136,366
– sales of medical device	39,917	246,973
– irradiation services	135,870	96,351
– technical services	168,997	142,927
– revenue from construction contracts	47,569	6,271
– independent clinical laboratory services	227,800	129,375
– others	96,776	133,218
	<u>5,143,694</u>	<u>4,274,183</u>

Disaggregation of revenue from contracts with customers by the timing of revenue recognition is disclosed in Note 4(b).

The Group's customer base is diversified and there is no customer with whom transactions have exceeded 10% of the Group's revenue in 2021 and 2020.

(ii) Revenue expected to be recognised in the future arising from contracts with customers in existence at the reporting date.

As at 31 December 2021, the aggregated amount of the transaction price allocated to the remaining performance obligations under the Group's existing contracts is RMB4,283,000 (2020: RMB10,746,000). This amount mainly represents revenue expected to be recognised in the future from construction contracts entered into by the customers with the Group. The Group will recognise the expected revenue in future when or as the work is completed, which is expected to occur within the next 12 months.

The Group has applied the practical expedient in paragraph 121 of IFRS 15 to its sales contracts such that the above information does not include information about revenue that the Group will be entitled to when it satisfies the remaining performance obligations under the sales contracts that had an original expected duration of one year or less.

The above amount also does not include any amounts of completion bonuses that the Group may earn in the future by meeting the conditions set out in the Group's construction contracts with customers, unless at the reporting date it is highly probable that the Group will satisfy the conditions for earning those bonuses.

(b) Segment reporting

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

- Pharmaceuticals: manufacturing and sale of a range of imaging diagnostic and therapeutic radio pharmaceuticals imaging, UBT diagnostic kits and test analyzers, in vitro immunoassay diagnostic reagents and kits and other products.
- Radioactive source products: sale of medical and industrial radioactive source products and technical services.
- Irradiation: provision of irradiation services to manufacturers of medical facilities, pharmaceuticals, cosmetics and food in the PRC for sterilization purposes, and also design, manufacturing and installation of gamma ray irradiation facilities to irradiation service providers.
- Radiation therapy equipments and related services: sale of radiation therapy equipments and provision of related maintenance services.
- Independent clinical laboratory services and other businesses: provision of independent clinical laboratory services for customers, sale of radiation therapy equipment and other miscellaneous services.

(i) Segment results, assets and liabilities

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

Revenue and expenses are allocated to the reportable segments with reference to revenue generated by those segments and the expenses incurred by those segments. The measure used for reporting segment profit is gross profit. The Group's other income and expense items, such as other income, selling and distribution expenses, administrative and other operating expenses, and assets and liabilities, are not measured under individual segments. Accordingly, neither information on segment assets and liabilities nor information concerning capital expenditure, interest income and interest expenses is presented.

Disaggregation of revenue from contracts with customers by timing of revenue recognition, as well as information regarding the Group's reportable segments as provided to the Group's most senior executive management for the purposes of resource allocation and assessment of segment performance for the years ended 31 December 2021 and 2020 is set out below.

	Year ended 31 December 2021 (Unaudited)					
	Pharmaceuticals <i>RMB'000</i>	Radioactive source products <i>RMB'000</i>	Irradiation <i>RMB'000</i>	Radiation therapy equipments and related services <i>RMB'000</i>	Independent clinical medical and laboratory services and other businesses <i>RMB'000</i>	Total <i>RMB'000</i>
Disaggregated by timing of revenue recognition						
Point in time	3,753,365	520,167	135,870	224,189	336,030	4,969,621
Over time	-	-	8,260	165,813	-	174,073
Revenue from external customers	3,753,365	520,167	144,130	390,002	336,030	5,143,694
Inter-segment revenue	1,677	34,661	116	14,222	1,687	52,363
Reportable segment revenue	3,755,042	554,828	144,246	404,224	337,717	5,196,057
Reportable segment profit (gross profit)	2,696,586	232,355	73,748	127,029	135,549	3,265,267
	Year ended 31 December 2020					
	Pharmaceuticals <i>RMB'000</i>	Radioactive source products <i>RMB'000</i>	Irradiation <i>RMB'000</i>	Radiation therapy equipments and related services <i>RMB'000</i>	Independent clinical medical and laboratory services and other businesses <i>RMB'000</i>	Total <i>RMB'000</i>
Disaggregated by timing of revenue recognition						
Point in time	2,979,582	452,058	96,351	136,366	509,566	4,173,923
Over time	-	-	6,271	93,989	-	100,260
Revenue from external customers	2,979,582	452,058	102,622	230,355	509,566	4,274,183
Inter-segment revenue	614	19,307	59	3,493	1,777	25,250
Reportable segment revenue	2,980,196	471,365	102,681	233,848	511,343	4,299,433
Reportable segment profit (gross profit)	2,159,867	214,106	49,346	71,708	128,888	2,623,915

(ii) Reconciliations of reportable segment profit (gross profit)

	2021 RMB'000 (Unaudited)	2020 <i>RMB'000</i>
Reportable segment profit (gross profit)	3,265,267	2,623,915
Elimination of inter-segment profit (gross profit)	(23,363)	(7,928)
Consolidated gross profit	<u>3,241,904</u>	<u>2,615,987</u>

(iii) Geographic information

All of the Group's operations are carried out and most of the Group's customers are located in the PRC. The Group's non-current assets, including property, plant and equipment, investment property, lease prepayments and intangible assets are all located or allocated to operations located in the PRC.

5 OTHER INCOME

	2021 RMB'000 (Unaudited)	2020 <i>RMB'000</i>
Interest income	26,254	27,479
Government grants	14,220	23,634
Dividend income on unquoted equity investments	4,739	7,792
Rental income from operating leases	7,794	6,555
Net foreign exchange loss	(1,649)	(1,710)
Net gain/(loss) on disposal of property, plant and equipment	219	(1,113)
Disposal of interest in an associate	4,548	–
Others	5,444	4,978
	<u>61,569</u>	<u>67,615</u>

6 PROFIT BEFORE TAXATION

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

(a) Finance costs

	2021 <i>RMB'000</i> (Unaudited)	2020 <i>RMB'000</i>
Interest on bank loans	8,852	9,695
Interest on corporate bonds	19,105	19,102
Interest on lease liabilities	4,864	4,297
Less: interest expense capitalised into construction in progress	<u>(4,342)</u>	<u>(5,619)</u>
	28,479	27,475
Interest accretion on reclamation obligations, net	3,511	3,963
Interest cost on defined benefit retirement plans	1,762	1,776
Interest cost on long-term payables	<u>2,051</u>	<u>1,763</u>
	<u><u>35,803</u></u>	<u><u>34,977</u></u>

The borrowing costs have been capitalised at 4.44% per annum (2020: 4.75%).

(b) Staff costs[#]

	2021 <i>RMB'000</i> (Unaudited)	2020 <i>RMB'000</i>
Salaries, wages and other benefits	601,055	472,865
Cash settled share-based payment expenses	–	12,738
Contributions to defined contribution retirement plans	65,203	6,090
Expenses recognised in respect of defined benefit retirement plans	<u>894</u>	<u>1,049</u>
	<u><u>667,152</u></u>	<u><u>492,742</u></u>

Employees of the Company's subsidiaries in the PRC are required to participate in a defined contribution retirement scheme administered and operated by the local municipal government. The Company's subsidiaries in the PRC contribute funds which are calculated on certain percentages of the average employee salary as agreed by the local municipal government to the scheme to fund the retirement benefits of the employees. To reduce the impact of the COVID-19 pandemic on enterprises, governments in certain regions in the PRC had gradually reduced or exempted the social insurance contributions in 2020.

(c) **Other items**

	2021 <i>RMB'000</i> (Unaudited)	2020 <i>RMB'000</i>
Depreciation [#]		
– property, plant and equipment	174,747	151,808
– investment property	1,097	1,241
Amortisation [#]		
– intangible assets	17,662	18,776
Recognise/(reverse) impairment losses		
– trade and bill receivables	15,547	19,565
– prepayments, deposits and other receivables	(4,551)	2,608
– property, plant and equipment	–	4,152
Auditors' remuneration		
– audit services	3,736	3,418
Increase in provisions for reclamation obligations	4,791	4,347
Cost of inventories [#]	1,703,554	1,477,564

[#] Cost of inventories includes RMB340,712,000 (2020: RMB310,985,000) relating to staff costs, depreciation and amortisation expenses, which are also included in the respective total amounts disclosed separately above or in Note 6(b) for each of these types of expenses.

7 INCOME TAX IN THE CONSOLIDATED STATEMENT OF PROFIT OR LOSS

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

	2021 <i>RMB'000</i> (Unaudited)	2020 <i>RMB'000</i>
Current tax		
Provision for the year	141,232	75,382
Under/(over) provision in respect of prior years	2,486	(18,654)
	143,718	56,728
Deferred tax		
Origination and reversal of temporary differences	(14,077)	63,912
	129,641	120,640

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

	2021 RMB'000 (Unaudited)	2020 <i>RMB'000</i>
Profit before taxation	802,678	596,163
National tax on profit before taxation at PRC statutory tax rate	200,670	149,041
Tax effect of non-deductible expenses	8,867	7,507
Tax effect of non-taxable income	(17,487)	(6,039)
Tax effect of unused tax losses and temporary differences not recognised	50,314	27,318
Tax concessions (<i>Note (ii)</i>)	(109,725)	(50,614)
Tax effect of unused tax losses and temporary differences not recognised in previous year but utilised in current year	(5,228)	(4,134)
Under/(over) provision in respect of prior years	2,486	(18,654)
Tax effect of changes in tax rate	1,145	17,041
Others	(1,401)	(826)
Actual tax expense	129,641	120,640

Notes:

- (i) The Company and its subsidiaries established in the PRC are subject to PRC Corporate Income Tax rate of 25% (2020: 25%).
- (ii) Certain subsidiaries of the Group are approved High and New Technology Enterprises and subject to a preferential PRC Corporate Income Tax rate of 15% during the approved period, subject to fulfillment of recognition criteria.

8 EARNINGS PER SHARE

The calculation of basic earnings per share is based on the profit attributable to ordinary equity shareholders of the Company of RMB335,751,000 (2020: RMB213,582,000) and the weighted average of 319,874,900 ordinary shares (2020: 319,874,900 ordinary shares), calculated as follows:

Weighted average number of ordinary shares

	2021 (Unaudited)	2020
Ordinary shares at 1 January	319,874,900	319,874,900
Effect of issue of ordinary shares	—	—
Weighted average number of ordinary shares at 31 December	319,874,900	319,874,900

The Company did not have any potential dilutive shares in existence during the years ended 31 December 2021 and 2020. Accordingly, diluted earnings per share is the same as basic earnings per share.

9 TRADE AND BILL RECEIVABLES

	2021 <i>RMB'000</i> (Unaudited)	2020 <i>RMB'000</i>
Bill receivables	82,889	53,197
Trade receivables due from		
– related parties under CNNC	37,867	17,516
– associates and joint ventures	29,943	57,038
– third parties	2,827,504	2,382,279
	<u>2,978,203</u>	<u>2,510,030</u>
Less: loss allowance	157,050	141,528
	<u><u>2,821,153</u></u>	<u><u>2,368,502</u></u>

All of the trade and bill receivables, net of allowance for doubtful debts, are expected to be recovered within one year.

Aging analysis

The aging analyses of trade and bill receivables, based on the invoice dates and net of loss allowance, are as follows:

	2021 <i>RMB'000</i> (Unaudited)	2020 <i>RMB'000</i>
Within 1 year	2,520,825	2,073,272
1 to 2 years	231,773	256,320
2 to 3 years	54,667	26,997
Over 3 years	13,888	11,913
	<u><u>2,821,153</u></u>	<u><u>2,368,502</u></u>

Trade and bill receivables are required to be settled in accordance with contract terms and are generally due immediately without credit period.

As at 31 December 2021, bill receivables amounting to RMB7,987,000 (2020: RMB3,996,000) was measured at FVOCI. The fair value of bill receivables was at a level 2 fair value measurement which has been calculated by discounting the expected future cash flows using rates currently available for instruments with similar terms, credit risk and remaining maturities.

During the year, there was no transfer between level 1 and level 2 fair value hierarchy or transfer into or out of level 3 (2020: Nil).

10 TRADE PAYABLES

	2021 <i>RMB'000</i> (Unaudited)	2020 <i>RMB'000</i>
Trade payables due to		
– related parties under CNNC	45,157	21,602
– associates and joint ventures	3,711	3,994
– third parties	288,988	173,907
	<u>337,856</u>	<u>199,503</u>

(a) Aging analysis

As of the end of the reporting period, the aging analyses of trade payables, based on the invoice dates, are as follows:

	2021 <i>RMB'000</i> (Unaudited)	2020 <i>RMB'000</i>
Within 1 year	311,583	164,610
1 to 2 years	18,777	29,250
2 to 3 years	7,496	5,643
	<u>337,856</u>	<u>199,503</u>

All of the trade payables are expected to be settled within one year or are repayable on demand.

11 SHARE CAPITAL

	2021 (Unaudited)		2020	
	No. of shares <i>'000</i>	<i>RMB'000</i>	No. of shares <i>'000</i>	<i>RMB'000</i>
Ordinary shares issued				
At 1 January	319,875	319,875	319,875	319,875
Shares issued	–	–	–	–
At 31 December	<u>319,875</u>	<u>319,875</u>	<u>319,875</u>	<u>319,875</u>

All shareholders are entitled to receive dividends as declared from time to time and are entitled to one vote per share at shareholders' meetings of the Company. All shares rank equally with regard to the Company's residual assets.

On 6 July 2018, the Company issued 79,968,700 H shares with par value of RMB1.00 per share at a price of HKD21.6 per share by way of initial public offering to Hong Kong and overseas investors. On 3 August 2018, the over-allotment option granted by the Company was partially exercised. The Company issued and allotted an aggregate of 100 H shares at HKD21.6 each. After the issuance and allotment of these shares, the registered and issued ordinary shares of the Company increased to 319,874,900 shares with 79,968,800 H shares being listed on The Stock Exchange.

MANAGEMENT DISCUSSION AND ANALYSIS

The Group is primarily engaged in the research, development, manufacturing and sale of diagnostic and therapeutic radiopharmaceuticals and radioactive source products for medical and industrial applications, the provision of irradiation service for sterilisation purpose and EPC service for the design, manufacturing and installation of gamma ray irradiation facilities and the provision of independent clinical medical and laboratory services and medicine equipment to hospitals and other medical institutions.

BUSINESS REVIEW

For the year ended 31 December 2021, we operated five business segments, namely pharmaceuticals, radioactive source products, irradiation, independent clinical medical and laboratory services and other business and radiation therapy equipments and related services. In 2021, we will continue to increase our market development efforts and achieve faster growth in economic benefits. Revenue achieved for 2021 was RMB5,143.7 million, representing a year-on-year increase of 20.3%. Net profit for the year was RMB673.0 million, representing a year-on-year increase of 41.5%, and net profit attributable to equity shareholders of the Company was RMB335.8 million, representing a year-on-year increase of 57.2%.

Business Segments

1. *Pharmaceuticals*

The Group is a leading manufacturer of diagnostic and therapeutic radiopharmaceuticals in China, primarily engaged in the research, development, manufacturing and sale of a wide range of imaging diagnostic and therapeutic radiopharmaceuticals, UBT kits and analyzers and in vitro diagnostic reagents and kits in the domestic market.

During the Reporting Period, the Group adhered to the strategic development plan of each business segment. In respect of pharmaceutical segment, our subsidiary HTA obtained the drug registration certificate for “therapeutic sodium iodine-131 capsule” in April 2021. It was China’s first new radiopharmaceutical preparations (the first generic drug of its kind), which was a generic drug of listed drug abroad, to obtain a registration certificate since 2005. It was the HTA’s first product whose application has been successfully filed upon the promulgation of the new drug registration regulation and also the first product offering as an oral solid preparation being regarded as having passed the consistency evaluation. The approval of this product offering will provide a new option for the clinical treatment of thyroid cancer and hyperthyroidism in China. With its continuous promotion in clinical applications, it will help improve the life quality of patients with thyroid cancer and hyperthyroidism. The Group continues to promote the one-stop solution for brachytherapy and implement the entire digital supply chain to enhance the precision of treatment. The Group’s integration of key products for brachytherapy has ensured the successful implementation of the first clinical treatment of hepatocellular carcinoma in China with the use of the licensed Y-90 resin microspheres, which is a landmark achievement in the history of hepatocellular carcinoma treatment in China and will benefit the widest range of hepatocellular carcinoma patients in China in the future.

During the Reporting Period, we recorded RMB3,753.4 million of revenue from sales of pharmaceuticals, representing a year-on-year increase of 26.0%. As for the imaging diagnostic and therapeutic radiopharmaceuticals, we recorded RMB1,453.1 million of revenue, representing an increase of 10.6% from the corresponding period in 2020. As for breath test, we recorded RMB2,153.4 million of revenue, representing a year-on-year increase of 39.9%.

2. *Radioactive source products*

The Group is a major manufacturer of medical and industrial radioactive source products in China and also a radioactive source producer with a most complete range of radioactive source product offerings in China, primarily engaged in the research, development, manufacturing and sale of various medical and industrial radioactive sources products as well as provision of related technical services.

During the Reporting Period, the radioactive source segment faced the downward pressure of the economy in the post-epidemic era, and the impact of “Carbon Neutrality” and “Peak Carbon Dioxide Emissions” on traditional high energy-consuming industries, so we actively sought breakthroughs, with the steady progress of domestic substitution. The medical gamma knife source maintained its absolute leading position in the domestic market, and industrial applications such as non-destructive testing radioactive sources rose against the trend, with increase in sales of the non-destructive testing radioactive sources. Krypton-85 thickness gauge sources were upgraded and relaunched into the market after 8 years of production suspension and were recognized by lithium battery giants. Several breakthroughs have been made in the localization of well logging sources. With the advantage of the Company’s radioactive source products, the overall service has developed rapidly and effectively.

As for the export of radioactive sources, the Group has successfully solved various difficulties such as container and transportation faced by the export of independent cobalt-60 radioactive sources, and realized the independent export of cobalt-60 radioactive sources for the first time on December 17, 2021, possessing the ability to supply cobalt-60 radioactive sources to international customers independently, and realized export sales revenue of RMB46.0 million for the year.

During the Reporting Period, the Group recorded RMB520.2 million of revenue from sales of radioactive source products, representing a year-on-year increase of 15.1%.

3. Irradiation

In the field of irradiation processing, the Group mainly aimed at providing the manufacturers of medical devices, food, traditional Chinese medicine and cosmetics for sterilisation in China, and meanwhile EPC services related to the design, manufacturing and installation of irradiation facilities is also accessible.

The Group actively promoted the irradiation product market and achieved record sales of new irradiation products, with sales of radiant cross-linked floor heating pipes reaching RMB11.0 million and revenue from testing services reaching RMB6.4 million. Overcoming the impact of the COVID-19, BINE, a subsidiary of the Company, commenced the installation and commissioning of the Malaysian irradiation station project as scheduled and signed another EPC contract for the export of cobalt-60 radioactive sources irradiation facilities.

During the Reporting Period, the Group recorded RMB144.1 million of revenue from irradiation-related business, representing a year-on-year increase of 40.4%.

4. Radiation therapy equipments and related services

During the Reporting Period, the National Health Commission issued 28 permits for high-end radiation therapy equipment, and the Group's two products in the medical equipment business received a total of 26 permits, accounting for 93%. Revenue for the year was RMB390.0 million, representing a year-on-year increase of 69.3%. The Group accelerated the nationalization of Tomo C, a tomotherapy system, and is undergoing NMPA registration inspection by the State Food and Drug Administration. The self-developed radiotherapy management software system-ICS2.0 and Ruizhi Cloud System (銳智雲系統) were officially released in November.

5. Independent clinical medical and laboratory services and other businesses

Our Group's independent clinical medical and laboratory services, as a downstream extension of our in vitro diagnostic reagents sales of the Company, are mainly being offered to medical institutions. We offer independent clinical medical and laboratory services with respect to hepatitis, endocrine, bone metabolism, cardiovascular disease, diabetes and other diseases.

During the Reporting Period, the Group's medical testing centres were at the forefront of the fight against the COVID-19, actively carrying out work related to nucleic acid testing of COVID-19. Nucleic acid testing sampling sites have been set up in Beijing, Chengdu, Wuhan and Hefei to provide nucleic acid sampling services for individuals and to provide door-to-door sampling services. We have also provided the nucleic acid testing services for some personnel of the Winter Olympic Games. In addition to the nucleic acid business, we have also increased the promotion of blood test business, actively developed the medical examination market, and signed cooperation agreements with some medical examination centers.

During the Reporting Period, revenue from independent clinical medical and laboratory services and other businesses of the Group was RMB336.0 million, representing a year-on-year decrease of 34.1%, of which revenue from our independent clinical medical and laboratory services recorded RMB227.8 million, representing a year-on-year increase of 77.0%.

The table below sets forth our revenue by business segment in 2021 and 2020:

<i>(RMB in million, except for percentage)</i>	Year ended 31 December 2021		Year ended 31 December 2020	
	Amount	%	Amount	%
Pharmaceuticals	3,753.4	73.0	2,979.6	69.7
Radioactive source	520.2	10.1	452.1	10.6
Irradiation	144.1	2.8	102.6	2.4
Radiation therapy equipments and related services	390.0	7.6	230.4	5.4
Independent clinical medical and laboratory services and other businesses	336.0	6.5	509.5	11.9
Total	<u>5,143.7</u>	<u>100.0</u>	<u>4,274.2</u>	<u>100.0</u>

Marketing

During the Reporting Period, the Group continued to push brand building work. Brand is one of the most important intangible assets of an enterprise. The Group is committed to deeply plowing the field of nuclear technology application and creating value for customers through products and services in a mutually successful way. In 2021, the Group will continue to optimize the brand structure system and standardize the brand image, and implement brand strategies that are more suitable for the current development stage to help realize the two-way transmission of brand assets, accumulation of brand assets and continuous improvement of brand value.

Meanwhile, the Group actively promoted the marketing of strontium-89 chloride injections, sodium iodine-131 capsules, radiant cross-linked floor heating pipes and other products. Strontium-89 chloride injection was innovatively promoted through academic demonstration bases. Throughout the year, the Group promoted the academic demonstration base work of two key hospitals through scientific research support, academic salons and clinical observation studies to boost sales growth.

The “Demonstration base construction projects for the promotion of nuclear medicine application for medical diagnosis” was launched in 5 medical institutions throughout the year, and the project acceptance and awarding work was completed in five other medical institutions. As of 31 December 2021, the Group and the Nuclear Medicine Branch of the Chinese Medical Association commenced the project start-up work for 63 hospitals, accelerating the popularisation of nuclear medicine with the applications in clinical diagnosis and treatment, which effectively helped us to expand the market for our products.

With the project “Overall Nuclear Medicine Solutions” created by the Group, we are now capable of undertaking the whole cycle of business such as planning and design, construction, equipment support and operation services, and started construction of 8 projects in 2021, creating a sample project of nuclear medicine department design and construction. Going forward, the project will continuously enhance our market service capacity and increase the revenue from new business.

Scientific Research and Innovation

The Group has strong research and development strengths. Our scientific research team comprising 471 research and development personnel and assistants focuses on extensive researching and optimizing production technologies, the development of new products and the safety and efficacy upgrading of existing products. To prevent and control the COVID-19 pandemic and resolve the issue of lacking standards for irradiation and sterilization of medical protective clothing, the Group has commenced research on the irradiation and sterilization process standards for medical protective clothing materials, and has established the “Irradiation and Sterilization Process Specification for Medical Protective Clothing Materials” (《醫用防護服材料輻照滅菌工藝規範》). To prevent and control the COVID-19 in cold chain foods, the Group has carried out research on the COVID-19 irradiation and disinfection dosage and design on the COVID-19 inactivation process, preventing and controlling the COVID-19 in imported cold chain foods making use of irradiation technology. We have always actively conducted research and development work on various types of imaging diagnosis and therapeutic pharmaceuticals to fill the void of various fields of medical treatment and meet the medical needs of China. The therapeutic sodium iodine-131 capsule has been approved on 7 April 2021 for market launch. As of 31 December 2021, we had seven types of imaging diagnosis and therapeutic radiopharmaceuticals under research and development. Among them, two types of radiopharmaceuticals (i.e. iodine-131-MIBG injection and sodium fluorine-18 injection) were in clinical trial phase, two types of therapeutic radiopharmaceutical (i.e. palladium-103 sealed source and Ga-68-Dotatate injection) was awaiting approval for the clinical trial phase, and three types of imaging diagnosis and therapeutic radiopharmaceuticals were in various phases of research and development.

During the Reporting Period, the Group achieved remarkable results in the work on intellectual properties, with a total of 115 patents applied, including 53 patents for inventions, 141 patent authorizations obtained, including 14 invention patents, and 20 software copyrights registered. As of 31 December 2021, we had 494 active licensed patents, continuously strengthening our business strength in China. The Group has established a complete research and development system and was awarded the “International Atomic Energy Agency (IAEA) Collaborating Center for Radioisotope Products” (國際原子能機構(IAEA)放射性同位素製品協作中心); the Research and Development Centre for radiopharmaceuticals of HTA was awarded the “National Atomic Energy Agency Research and Development Centre for Nuclear Technology (Radiopharmaceutical Engineering Transformation)”. Headway has been approved as “Carbon Isotope Exhalation Engineering Innovation Laboratory” (碳同位素呼氣工程創新實驗室) in Shenzhen, and set up a joint laboratory for radiopharmaceutical innovation and transformation with Shanghai Institute of Materia Medica, Chinese Academy of Sciences (中科院上海藥物研究所) and China Pharmaceutical University. We will continue to work with foreign and domestic outstanding enterprises to carry out innovations of the operational system and mechanism, and gradually establish a high-level enterprise research and development centre covering various nuclear technology application fields.

International Business

During the Reporting Period, the Group actively explored the international market and exported cobalt sources, breath test kits, radioimmunity kits, COVID-19 test kits, oxygen generators, ventilators and other anti-epidemic materials to dozens of countries and regions such as Indonesia, Thailand, Bangladesh, Singapore, South Korea, Peru, Italy, Germany, India, United Arab Emirates and Uzbekistan, realizing a total export revenue of RMB106.6 million. Although the demand for anti-epidemic medical supplies decreases in 2021 compared to 2020, the international revenue of our regular products still achieved significant growth. During this period, breakthroughs were made in our international business: following the export of a cobalt source irradiation station in 2013, we exported an overall solution for irradiation stations to Malaysia for the third times, bringing about a good brand effect in the irradiation industry in Southeast Asia; sodium iodine-131 oral solution was successfully exported to Indonesia for the first time, which opened the channel for exporting domestic short half-life radiopharmaceuticals to overseas and laid the foundation for the large-scale operation of the radiopharmaceuticals. As the world's third largest supplier of cobalt sources, the Group continued to carry out the cobalt-60 radioactive source export business. Domestic CN-101 type cobalt-60 radioactive source was successfully exported to Vietnam, marking that the Group initially has the ability to export domestic cobalt sources independently. The Group signed an exclusive agency agreement on the export of industrial radioactive sources and continued to export equipment containing radioactive sources to South Asia. The Group supplied anti-epidemic medical materials to relevant United Nations organizations in addition to exporting the coronavirus test kits listed in the white list of the Ministry of Commerce. In addition, the Group actively promoted internal and external business synergies, expanded international channels, sent staff to work at IAEA, improved export risk management mechanisms, conducted business training, and continued to strengthen internal management and business system construction, which helped the Group to further improve its internationalized operation.

Capital Operation

During the Reporting Period, the Group has entered into agreements to acquire two enterprises with a total planned investment of RMB86.36 million.

S/N	Acquired enterprise	Agreement signature date	Acquisition completion	Acquisition amount (RMB in million)	Principal businesses	Shareholding percentage
1	Suzhou CNNC Huadong Radiation Co., Ltd.	2021.8.24	2021.12.30	57.43	irradiation service for sterilisation purpose and third-party testing	Acquired 48.41% of the entire equity of minority shareholders (100% shareholding after acquisition)
2	Guangzhou Zhongda Zhongshan Medical Technology Development Co., Ltd.	2021.11.10		28.93	Science and technology information consulting services; technology project agency services; medical research and experimental development; pharmaceutical research and development; chemical products wholesale (except hazardous chemicals); instrument wholesale; electronic components wholesale; chemical products retail (except hazardous chemicals); electronic components retail; trade agency; house leasing	49.892%

As of 31 December 2021, the Company's actual amount paid to Tongfu Fund was RMB480 million, and the total actual amount paid to the Fund was RMB1.6 billion, so the Company's proportion accounted for 30%. After evaluation, the net assets of Tongfu Fund measured at fair value as of December 31, 2021 are RMB1,655.7 million. The value of the Company's share of Tonghu Fund's net asset was RMB493.9 million, accounted for 4.7% of the Group's total assets. In 2021, the Company's investment income in Tongfu Fund was RMB26.2 million, and the Company received dividends of RMB12.2 million.

Production Capacity

The manufacturing and production facilities of the Group have a wide geographical coverage in China. In 2021, we will make concerted efforts to pursue the "CIRC speed" in order to accelerate the construction of projects, with the completion of three pharmaceutical centers in Shantou, Qingdao and Kunming, bringing the cumulative number of centers to 20. The production lines of positronic drugs in Shantou, Xuzhou, Jinan, Shijiazhuang and Chengdu have been certified, and there are 12 medical centers that can supply positron drugs. Seven pharmaceuticals centers have entered the production certification stage and five are under construction, forming a network layout across 32 major cities nationwide.

The diagnostic and therapeutic radiopharmaceuticals manufacturing bases were mainly located in four regions (i.e. Beijing, Ningbo, etc.), and the medical bases in North China and Shanghai that are newly planned and laid out were progressing in an orderly manner. The UBT diagnostic kits and test analyzers manufacturing bases were located in two regions (i.e. Shenzhen and Tongcheng). The stable isotope industry base project completed the nodal tasks on schedule. The radioactive source manufacturing bases were located in two regions (i.e. Beijing and Leshan). The newly planned research, development and production base for radioactive sources is also being actively promoted. The in vitro immunoassay diagnostic reagents and kits manufacturing bases were located in Beijing and other regions.

The designed capacity for the year 2021 are set out in the table below:

Imaging diagnostic and therapeutic radiopharmaceuticals:

	Year ended 31 December 2021 Annual designed capacity
Fluorine-18-FDG injections (Ci)	22,953
Molybdenum-99/technetium-99m generators (Ci)	32,445
Technetium-99m labeled injections (vial)	1,183,950
Sodium iodine-131 oral solution (Ci)	22,036
Iodine-125 sealed sources (unit)	1,000,000
Strontium-89 chloride injections (vial)	67,400

UBT kits and analyzers:

	Year ended 31 December 2021 Annual designed capacity
Carbon-13/14 UBT kits (unit)	100,000,000
Carbon-13/14 UBT analyzers (unit)	8,500

In vitro immunoassay reagents and kits:

	Year ended 31 December 2021 Annual designed capacity
RIA kits (unit)	200,000
EIA reagents, CLIA reagents and TRFIA reagents (unit)	100,000

Radioactive source products:

	Year ended 31 December 2021 Annual designed capacity
Cobalt-60 source for gamma knife (Ci)	3,600,000
Iridium-192 brachytherapy sources (Ci)	10,000
Cobalt-60 radioactive source for irradiation service (Ci)	14,400,000
Iridium-192 non-destructive testing radioactive sources (Ci)	1,500,000
Caesium-137 radioactive sources (Ci)	59,000
Americium-241/Beryllium neutron sources (Ci)	1,000
Selenium-75 non-destructive testing radioactive source (Ci)	150,000

Future Development

Today, the world is quickening its evolution on rapid changes unseen in a century, and the external environment has become increasingly complex and difficult. Although China's economic development is facing the triple pressure of shrinking demand, supply shocks, and weakening expectations, the Chinese economy is resilient, stable and improving, and the fundamentals of long-term improvement remain unchanged. As a leading enterprise in the industry, the Group will comprehensively, accurately and dialectically seize changes in the internal and external environment, face up to multiple practical difficulties, become aware of multiple evolution possibilities, grasp hold of multiple opportunities, effectively respond to multiple challenges, always maintain strategic focus, further strengthen awareness towards the main business, the main battlefield and the main direction of attack, unswervingly do our own work well, and give top priority to development and resolve issues in development by means of development, thus allowing the foundation of stability becoming more solid and the momentum of progress continuing to strengthen.

In terms of market development, the “Medium and Long-term Development Plan for Medical Isotopes (2021-2035)” (《醫用同位素中長期發展規劃(2021-2035年)》) jointly issued by eight ministries and commissions including the China Atomic Energy Authority proposes to promote the establishment of a nuclear medicine department, with the aim of achieving the full coverage of nuclear medicine in tertiary general hospitals by 2025 and implementing “One County, One Department” nationwide by 2035. Taking this opportunity, we will speed up the innovation of business models, and formulate and implement a CNNC solution of the national plan for “One County, One Department”, striving to achieve nationwide promotion by the end of the “14th Five-Year Plan” period. We will also continue to innovate the marketing model to promote an increase in the sales of the Company’s key products in the fields such as radiopharmaceuticals, radioactive sources, nuclear medicine equipment and irradiation applications through multiple channels. At the same time, we are deeply aware of the importance of industrial internationalization for the future development of the Company. To this end, the Company will actively explore the international market, make every effort to promote the globalization of nuclear technology application products and services, and continuously increase the international market share through independent establishment of overseas localized institutions, overseas mergers and acquisitions and other means.

In terms of deepening reform, we fully recognize that there is an urgent need to continuously deepen reform based on the actual situation of the Group to accelerate development. In the past few years, we took the initiative to seek changes and fully promoted the deepening of reforms, making positive progress in corporate governance, recruitment and employment, and incentive mechanisms. Currently, CIRC was enrolled in the list of companies in the “Scientific Reform Demonstration Action” of the State-owned Enterprise Leading Group of the State Council, therefore, more reform tools will be available. We will stay committed to our belief in reform, make every effort to promote the Company to complete the issuance and listing of A shares on the Science and Technology Innovation Board, focus on promoting the implementation of the “Three Systems” reform in enterprises at all levels, accelerate the improvement of the market-oriented operating mechanism, continue to expand the scope of pilot units for professional managers, actively and solidly promote the reform of mixed ownership, further optimize and adjust the organizational structure, and continuously enrich and optimize the medium and long-term incentive mechanism, resolving the root causes and deep-seated problems that restrict enterprise development through a series of reform measures, thus providing institutional guarantee for the high-quality development of the Group.

In terms of scientific and technological R&D, we are deeply aware of the fact that scientific and technological innovation is the first driving force to lead the development of enterprises. Unswervingly putting the building of scientific and technological innovation capabilities and the transformation of scientific research achievements at the core position of the overall development of the “14th Five-Year Plan”, we continue to step up investments in scientific research. In future development, we will adhere to the “Small Core, Big Collaboration” R&D model in deepening the industry-education-research integration to perfect and optimize the scientific and technological innovation ecology. We will actively participate in the construction of national laboratories and strengthen international scientific and technological cooperation, effectively stimulate all kinds of talents to innovate to create vitality, accelerate the creation of sources of original technology, and fully promote key projects to achieve nodal results.

In terms of industrial layout, we will vigorously put the “CIRC speed” into practice and quicken the construction of projects, such as the North China medical base, the Shanghai medical base, the Sichuan radioactive source R&D and production base and the CNNC Qinshan isotope production base, to accelerate improvement of the nationwide medical center network layout, promoting larger industrial scale with an increase in production capacity and consolidating competitive advantages with economies of scale. At the same time, we will actively promote the construction of a world-class project on securing R&D conditions for radiopharmaceuticals and radioactive sources, fully supporting the high-standard operation of the CIRC Branch Center of the National Research Center of Isotope Engineering and Technology, the CNNC Radiopharmaceuticals Engineering and Technology Research Center and the Joint Laboratory of China Pharmaceutical University.

In terms of management improvement, we will take CNNC's "Year of Lean Management" as an opportunity to deepen the lean management and iteratively upgrade the lean management system based on the "decay" characteristics of products, thus building a lean benchmarking demonstration workshop for business modules such as radioactive pharmaceuticals, radioactive sources and irradiation applications. We will promote the improvement of various market competitiveness indicators such as quality, safety, and cost with lean management. We will focus on safety production. We will fully complete the "Three-Year Action for Special Rectification of Safety Production" and the "Consolidation and Improvement Year" plan tasks, and promote the delivery and storage of the waste radioactive sources to ensure that the last group company in CIRC with Class II safety and environmental protection risk is eliminated on schedule. In accordance with the requirements of the Group's "Three-Year Action Plan for Improving Nuclear Safety Culture", we will establish CIRC safety culture system emphasizing on radiation safety. We will make efforts to promote the establishment of safety production standardization in units such as CNGT and BNIBT. We will plan and establish a mechanism for the management of R&D investments and intellectual property rights with the aim of creating a high and new technology enterprise. We will further optimize the organizational structure, operating mechanism and institutional flow to improve work efficiency and promote the modernization of our corporate governance system and governance capabilities. At the same time, we will accelerate the digital and intelligent transformation, and fully promote the construction of projects such as financial shared service centers, integrated management systems for irradiation operations and smart factories in the Guangdong medical base, gradually realizing reform in management that are supported by digitalization.

The "14th Five-Year Plan" is a period of strategic opportunity for the development of the nuclear technology application industry. For this reason, we have formulated the "17520" planning goals. 1 refers to the building of an internationally renowned supplier of isotopes and radiation technology application products and services in an all-round way. 7 refers to the leap of seven business units to a new level. 5 refers to the comprehensive improvement of the "Five Top" core capabilities. 20 refers to the accomplishment of twenty landmark achievements. In future development, we will unify our thinking and understanding, maintain strategic focus and practice the "CIRC speed" with focus on this goal, going all out to promote the implementation of the key tasks of the "14th Five-Year Plan", fully promoting the accelerated development of the nuclear technology application industry, thus further consolidating the Group's leading position in the industry.

Impact of Policy and Uncertainties

During the Reporting Period, the State Administration of Science, Technology and Industry for National Defense, together with organs such as the Ministry of Science and Technology, the Ministry of Public Security, the Ministry of Ecology and Environment, the Ministry of Transport, the National Health Commission, the National Healthcare Security Administration and the National Medical Products Administration, officially promulgated the "Medium and Long-term Development Plan for Medical Isotopes (2021-2035)", which was the first special plan issued by China for a single field of nuclear technology application. It was also the first major policy introduced to encourage the development of the nuclear medicine industry in recent years. It is an important signal for expanding the popularity of nuclear medicine, enabling an industrial chain which is self-contained and controllable as well as speeding up the R&D of innovative nuclear medicines and equipment. It is expected to address the issue that the regulatory authorities pay insufficient attention to the subdivision of nuclear medicine.

Looking at the status of development of domestic medical isotopes, there are currently more than 30 radioisotopes used for diagnosis and treatment in the world, and eight of them are quite commonly used. Among the commonly used medical isotopes for reactor irradiation, there are three kinds that China can produce and supply independently. Although there is a corresponding system for the management of medical isotopes, the implementation standards of the system are not uniform and perfect. In terms of the R&D of drugs with isotopes, there are few domestic first-in-class drugs, and the speed of R&D is relatively slow. Despite the release of the "Medium and Long-term Development Plan for Medical Isotopes (2021-2035)", there is still a gap between domestic radiopharmaceuticals and those of developed countries in terms of the overall level of production, R&D and application, and long-term efforts are still necessary for the popularity of nuclear medicine and the training of talents. In addition, policies supporting the development of the industry are not perfect.

In summary, from the perspective of the development status of the medical isotope industry, the favorable impact of policy factors on the nuclear medicine industry will not be significant in the short term. Going forward, with the continuous development of the industry, the relevant constraints will be solved, and the medical isotope industry and even the nuclear medicine industry may usher in rapid development. The Group will cope with changes in the industry, seize the opportunity period, and increase investments in the R&D and supply of key nuclides, the building of production capacity and the promotion of the nuclear medicine industry to maintain high-quality development.

Impact of the COVID-19

Currently, the global COVID-19 pandemic is still spreading. In China, local sporadic COVID-19 outbreaks have occurred but the overall situation remains stable. The Group coordinated the alignment of epidemic prevention and control with production and operation, with the business developments trending well and the economic performance indicators exceeding the pre-epidemic level in an all-round way. At the same time, we fully fulfilled the responsibilities of a central enterprise. Giving full play to our independent medical testing advantages, we actively participated in the prevention and control of the epidemic. We provided urgent assistance to Shijiazhuang in January, helped out Nanjing in July and supported Jiayuguan in October, and completed millions of nucleic acid tests throughout the year, which has further enhanced our social influence and reputation.

In the long run, the COVID-19 pandemic has also brought opportunities for the development of the nuclear technology application industry. Irradiation technology has played an irreplaceable role in fighting against the pandemic, which has been fully affirmed by all sectors of society, and China has further increased its emphasis on the nuclear technology application industry. The outbreak of the COVID-19 pandemic has prompted the country to pay more attention to health issues, and people's demand for living in good health and preventing and treating disease has grown day by day, providing an important opportunity for the development of industries such as radiopharmaceuticals, medical diagnosis and high-end nuclear medical equipment. The Company will fully grasp the opportunities brought by the pandemic, and taking the planning initiative and following the trend, make every effort to promote the accelerated development of related industries.

FINANCIAL REVIEW

Revenue

We derived our revenue mainly from five major business segments: (1) pharmaceuticals; (2) radioactive source products; (3) irradiation; (4) radiation therapy equipments and related services; and (5) independent clinical medical and laboratory services and other businesses.

Our revenue increased by 20.3% from RMB4,274.2 million in 2020 to RMB5,143.7 million in 2021, which was mainly due to an increase in revenue from our pharmaceuticals, radioactive source products segment and radiation therapy equipments and related services segment.

Cost of Sales, Gross Profit and Gross Margin

Our cost of sales increased by 14.7% from RMB1,658.2 million in 2020 to RMB1,901.8 million in 2021, which was mainly due to an increase in cost of sales of our pharmaceuticals segment.

Our gross profit increased by 23.9% from RMB2,616.0 million in 2020 to RMB3,241.9 million in 2021 and our gross margin increased from 61.2% to 63.0%. The increase in gross profit was primarily due to the increase in gross profit of the pharmaceuticals segment with higher revenue.

Other Income

Our other income decreased by 8.9% from RMB67.6 million in 2020 to RMB61.6 million in 2021, mainly due to the decrease in government subsidies in 2021.

Selling and Distribution Expenses

Our selling and distribution expenses increased by 26.2% from RMB1,442.6 million in 2020 to RMB1,820.5 million in 2021. This is mainly due to the increase in sales of the pharmaceuticals segment resulting from the improving pandemic situation. Therefore, the corresponding sales service fees have all increased significantly.

As a percentage of revenue, selling and distribution expenses increased from 33.8% in 2020 to 35.4% in 2021.

Administrative Expenses and Credit Impairment Losses

Our administrative expenses and credit impairment losses increased by 12.6% from RMB626.3 million in 2020 to RMB705.2 million in 2021, mainly due to (i) the increased research and development expense resulting from more investments in research and development, and (ii) the increased employee compensation.

As a percentage of revenue, administrative expenses decreased from 14.7% in 2020 to 13.7% in 2021.

Finance Costs

Our finance costs increased 2.4% from RMB35.0 million in 2020 to RMB35.8 million in 2021, mainly due to the increase in the interest expense from lease liabilities in 2021.

Share of Profits less Losses of Associates and Share of Profits of Joint Ventures

Our share of profits less losses of associates increased from negative RMB12.0 million in 2020 to positive RMB7.0 million in 2021, mainly due to the stop-losses of our associate, Shenzhen CICAM Manufacturing Co., Ltd. resulting from its liquidation. Our share of profits of joint ventures increased by 89.1% from RMB28.4 million in 2020 to RMB53.7 million in 2021, mainly due to the appreciation of the investment projects of our joint venture Tongfu Innovation Fund (同福創新基金).

Profit before Tax

As a result of the foregoing, our profit before tax increased by 34.6% from RMB596.2 million in 2020 to RMB802.7 million in 2021.

Income Tax

Our income tax increased by 7.5% from RMB120.6 million in 2020 to RMB129.6 million in 2021.

Our effective tax rate was 20.2% and 16.2% in 2020 and 2021, respectively.

Profit for the Year

As a result of the foregoing, our profit for the year increased by 41.5% from RMB475.5 million in 2020 to RMB673.0 million in 2021.

FINANCIAL POSITION

Overview

For the year ended 31 December 2021, the total assets of the Group increased slightly. The total assets, the total liabilities and the total equity were RMB10,474.0 million, RMB4,442.6 million and RMB6,031.4 million, respectively.

Net Current Assets

The table below sets forth our current assets, current liabilities and net current assets as at the dates indicated:

	<i>RMB in million</i>	
	31 December 2021	31 December 2020
Inventories	691.9	590.0
Contract assets	29.4	–
Trade and bill receivables	2,821.2	2,368.5
Deposits and other receivables	153.7	142.2
Prepayments	212.4	113.9
Cash at bank and on hand	2,748.2	2,556.5
Total Current Assets	<u>6,656.8</u>	<u>5,771.1</u>
Bank loans	118.1	90.2
Accrued bonds	500.0	–
Trade payables	337.9	199.5
Accruals and other payables	2,816.4	2,327.4
Lease liabilities	53.4	29.9
Provisions	76.5	73.9
Income tax payable	69.4	51.3
Total Current Liabilities	<u>3,971.7</u>	<u>2,772.2</u>
Net Current Assets	<u>2,685.1</u>	<u>2,998.9</u>

Our net current assets decreased by 10.5% from RMB2,998.9 million as of 31 December 2020 to RMB2,685.1 million as of 31 December 2021, which was mainly due to the increase in the Company's accrued bonds and other payables.

Adjusted Net Gearing Ratio and Quick Ratio

Our adjusted net gearing ratio (adjusted net debt (interest-bearing debt plus unaccrued proposed dividends) divided by adjusted equity (all components of equity less unaccrued proposed dividends)) was 14.8% and 16.1% as of 31 December 2020 and 31 December 2021, respectively.

Our quick ratio (total current assets excluding inventories divided by total current liabilities as of the same date) was 1.9 times and 1.5 times as of 31 December 2020 and 31 December 2021, respectively.

Analysis of Cash Flows

The following table sets forth the cash flows of the Group:

	<i>RMB in million</i>	
	31 December 2021	31 December 2020
Net cash generated from operating activities	804.5	291.9
Net cash used in investing activities	(923.1)	(423.9)
Net cash (used in)/generated from financing activities	(89.8)	(156.2)
Net (decrease)/increase in cash and cash equivalents	(208.4)	(288.2)
Cash and cash equivalents at the beginning of the year	2,351.6	2,640.3
Effect of changes in foreign exchange rate	(1.7)	(0.5)
Cash and cash equivalents at the end of the year	2,141.5	2,351.6

Trade and Other Receivables

Trade and other receivables are stated at amortised cost using the effective interest method less allowance for credit losses. As of 31 December 2021, our trade and other receivables (net of bad debt allowance of RMB165.2 million) were RMB3,187.2 million.

Trade and Other Payables

Our trade and other payables mainly consist of trade payables and accruals and other payables, which include receipts in advance, other taxes payables, deposits from distributors, payables to distributors, payables for staff-related costs, dividends payables and other accruals and payables. As of 31 December 2021, our trade and other payables were RMB3,154.3 million.

Bank Loans and Pledge of Assets

As of 31 December 2021, the unsecured long-term bank loans mainly included:

- (i) A loan principal of RMB0.6 million borrowed by a subsidiary of the Group in 2021 at an interest rate of 4.40%.
- (ii) A loan principal of RMB7.4 million borrowed by a subsidiary of the Group in 2021 at an interest rate of 4.40%.

As of 31 December 2021, the secured long-term bank loans mainly included:

- (i) A loan principal of RMB124.9 million borrowed by a subsidiary of the Group at an interest rate of 4.15%, for which was jointly guaranteed by the shareholders of the subsidiary.
- (ii) A loan principal of RMB5.0 million borrowed by a subsidiary of the Group at an interest rate of 4.05%, for which certain of the Group's properties with total carrying amount of RMB57.9 million and right of use assets with total carrying amount of RMB7.0 million were pledged.
- (iii) A loan principal of RMB6.9 million borrowed by a subsidiary of the Group at an interest rate of 5.44%, for which certain of the Group's properties with total carrying amount of RMB8.3 million and right of use assets with total carrying amount of RMB0.9 million were pledged.
- (iv) A loan principal of RMB5.9 million borrowed by a subsidiary of the Group at an interest rate of 4.80%, for which was jointly guaranteed by the shareholders of the subsidiary.

As of 31 December 2021, the short-term bank loans mainly included:

- (i) A loan principal of RMB5.0 million borrowed by a subsidiary of the Group in 2021 at an interest rate of 4.00%, for which was guaranteed by Beijing Capital Investment & Guarantee Co., Ltd. (北京首創融資擔保有限公司).
- (ii) A loan principal of RMB107.0 million borrowed by a subsidiary of the Group in 2021 at an interest rate of 3.10%, with an amount of RMB107.0 million remaining as at 31 December 2021.

Capital Expenditures

Our capital expenditures mainly comprise additions to plant and equipment and intangible assets. In 2021, our capital expenditures were RMB468.6 million.

Contingent Liabilities

As of 31 December 2021, we did not have any material contingent liabilities.

Foreign Exchange and Foreign Exchange Risk

During the year ended 31 December 2021, the Group was exposed to currency risk primarily through bank deposits denominated in foreign currency, which were primarily Hong Kong dollars. The Group monitors foreign exchange movements and determines exchange when necessary. The Group currently has no foreign exchange hedging policy.

Credit Risk

In order to minimise the credit risk, we have policies in place to monitor the exposures to these credit risks on an ongoing basis. Before accepting any new customer requiring credit over a certain credit amount, we carry out research into their creditability and assess their credit quality and define credit limits for that customer. Our individual credit evaluations focus on the customer's historical payment records, and take into account information specific to the customer as well as pertaining to the economic environment in which the customer operates.

We normally do not require collateral from customers. Therefore, our exposure to credit risk is influenced mainly by the individual characteristics of each customer rather than the industry in which the customer operates. The significant concentration of credit risk primarily arises when we rely heavily on individual customers. We will, however, perform periodic credit evaluation on our customers and monitor the compliance of credit terms by them. We believe we do not have any significant concentration of credit risk as the trade and bill receivables involve a large number of customers across diverse industries and geographical areas.

Liquidity Risk

Our policy is to regularly monitor current and expected liquidity requirements, and furthermore we issued small public corporate bonds in 2019 to raise funds for liquidity requirements from the Company's business expansion, to ensure that we maintain sufficient reserves of cash and adequate commitment funds from major financial institutions to meet both short-term and long-term liquidity requirements. Our Directors believe that there is no significant liquidity risk, as we have sufficient monetary capital to fund our operations.

DIVIDEND POLICY

When the Board recommends the declaration of cash dividends to shareholders at a general meeting, the decision to declare any dividends and the amount of dividends will depend on, among other things:

- our results of operations and cash flows;
- our financial position;
- overall performance;
- our future prospects;
- statutory, regulatory and contractual restrictions on the payment of dividends by us; and
- other factors that the Board deems relevant.

NO MATERIAL ADVERSE CHANGE

The Directors have confirmed that there was no material adverse change in our financial and trading position or prospects as of 31 December 2021.

SUBSEQUENT EVENTS

Save as disclosed above, no significant subsequent events take place after the Reporting Period to the date of this announcement.

USE OF PROCEEDS FROM THE INITIAL PUBLIC OFFERING

On 6 July 2018, H shares of the Company became listed on the Main Board of the Stock Exchange (stock code: 1763). Based on the offer price of HKD21.60 per H share and upon the partial exercise of the over-allotment option (100 Shares), the net proceeds that the Group received from the Global Offering were approximately HKD1,690.0 million after deduction of the underwriting commissions and other estimated expenses in relation to the Global Offering. As at 31 December 2021, current assets of approximately RMB268.1 million were used and approximately RMB536.1 million was used in selective mergers and acquisitions.

In accordance with the requirements of paragraph 11(8) of Appendix 16 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, the use of proceeds will be updated to provide the use of proceeds from the initial public offering for 2021 (including the expected timeline of full utilisation of the balance), which is set out below:

	<i>RMB in million</i>							
Use	Initial allocation of the net proceeds	Revised allocation of the net proceeds	Amount utilised as of 31 December 2018	Amount utilised as of 31 December 2019	Amount utilised as of 31 December 2020	Amount utilised as of 31 December 2021	Balance as of 31 December 2021	Expected time of full utilisation of balance
Investment in imaging diagnostic and therapeutic radiopharmaceuticals manufacturing and research and development bases	597.3	460.0	0.0	29.5	200.0	251.5	208.5	In 2022
Establishment of production and distribution subsidiaries	67.3	0.0	0.0	0.0	0.0	0.0	0.0	
Establishment of new production facilities	84.5	50.0	0.0	50.0	50.0	50.0	0.0	
Investment in the research and development of various imaging diagnostic and therapeutic radiopharmaceuticals, raw materials of radioactive source products, medical radioisotopes, and UBT products and related raw materials	253.6	118.3	0.0	76.6	101.2	105.4	12.8	In 2022
Investments/selective (mergers) acquisitions	286.5	536.1	51.4	529.9	536.1	536.1	0.0	
Working capital and general corporate purposes	143.3	268.1	71.7	232.5	268.1	268.1	0.0	
Total	<u>1,432.5</u>	<u>1,432.5</u>	<u>123.1</u>	<u>918.5</u>	<u>1,155.4</u>	<u>1,211.2</u>	<u>221.3</u>	

Note: The investment in the research and development in the use of proceeds is under preparation due to certain research and development projects to be newly launched. There may be differences between the actual and expected timeline for utilising the proceeds for investment in research and development. The specific timeline of utilisation of the proceeds for the investment in the research and development is subject to the actual timeline of utilisation of the projects. The Company will fulfill the disclosure obligations in accordance with the relevant requirements according to the progress of the projects.

EMPLOYEES AND REMUNERATION POLICY

The Group had a total of 3,120 employees as at 31 December 2021. During the year ended 31 December 2021, our staff costs (including directors' remuneration but excluding contributions to any pension plan) were approximately RMB667.2 million. The remuneration policy of the Group is to motivate and retain excellent staff so as to realise the long-term enterprise goals and objectives of the Group. The employee remuneration policy of the Group is determined after taking into account the overall salary level in the industry, employees' performance and other factors. The management regularly reviews the employee remuneration policy and arrangement of the Group.

We provide our employees with salaries and bonuses, as well as employee benefits, including employee retirement benefit schemes, medical and vocational injury insurance schemes and housing provident fund schemes. Our employees located in China are covered by the mandatory social security schemes defined by PRC local practice and regulations, which are essentially defined contribution schemes.

We provide training to all of our employees to have them equipped with the necessary skills to perform their jobs competently and to give them the opportunities to realise their personal career goals and aspirations. We are also committed to providing individuals with management and leadership training that will improve our capability to achieve our vision, mission and growth objectives. We realise the importance of developing individual career paths that will help employees develop their full potential. Development opportunities are provided as a result of on-the-job training and formal training programs.

HEDGING ACTIVITIES

During the year ended 31 December 2021, the Group had not entered into any hedging transaction in relation to foreign exchange risks or interest risks.

FUTURE PLANS FOR MATERIAL INVESTMENTS OR CAPITAL ASSETS

The Group will actively explore investment opportunities in and outside the PRC to diversify its source of income, which may or may not include any acquisition or disposal of assets and/or business by the Group. Any such plans will comply with the applicable requirements under the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "**Listing Rules**") (where appropriate).

CORPORATE GOVERNANCE AND OTHER INFORMATION

Compliance with the Corporate Governance Code

The Company has adopted and applied the principles and provisions of the Corporate Governance Code set out in Appendix 14 to the Listing Rules.

During the Reporting Period, the Company has complied with the mandatory code provisions of the Corporate Governance Code. The Group has always been committed to enhancing its corporate governance level and deems the corporate governance as an integral part of the value created for shareholders of the Company. The Group has, with reference to the code provisions of the Corporate Governance Code set out in Appendix 14 to the Listing Rules, established a modern corporate governance structure effectively balanced and independently operated by the general meeting, the Board, the supervisory committee and senior management of the Company. The Company has also adopted the Corporate Governance Code as the corporate governance practices of the Company.

Compliance with the Model Code for Securities Transactions

The Group has adopted a set of code with the standard no less favorable than that of the Model Code for Securities Transactions by Directors of Listed Issuers as set out in Appendix 10 of the Listing Rules (the “**Customised Code**”) as its own code of conduct regarding securities transaction by all Directors, supervisors and the relevant employees of the Company. Having made specific enquiry by the Directors and supervisors of Company (“**Supervisors**”), all Directors and Supervisors confirmed that they had complied with the required standards as set out in the Customised Code during the Reporting Period. No incident of non-compliance with the Customised Code by the relevant employees was noted by the Company.

Audit and Risk Management Committee

The audit and risk management committee of the Company (the “**Audit and Risk Management Committee**”) consists of two independent non-executive Directors and one non-executive Director, namely Mr. Hui Wan Fai (chairman), Mr. Liu Zhonglin and Mr. Lu Chuang, which terms of reference comply with the Listing Rules.

The Audit and Risk Management Committee has considered and reviewed the accounting principles and practice adopted by the Group and has discussed the relevant internal control and financial reporting matters with the management, including reviewing the consolidated financial results of the Group for the year ended 31 December 2021.

On 30 March 2022, the Audit and Risk Management Committee reviewed and confirmed the unaudited annual results announcement of the Group for the year ended 31 December and the consolidated financial information for the year ended 31 December 2021.

Review of Unaudited Annual Results

The auditing process for the annual results for the year ended 31 December 2021 has not been completed due to restrictions in force in parts of China to combat the COVID-19 coronavirus outbreak. The unaudited annual results contained herein have not been agreed with the Company’s auditors as required under Rule 13.49(2) of the Listing Rules. A further announcement relating to the annual results as agreed with the auditor will be made after the auditing process has been completed. It is expected that the Company will obtain the consent from the auditor on or before 30 April 2022 and will make further announcement as and when appropriate.

The unaudited annual results contained herein have been reviewed by the Audit and Risk Management Committee.

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

Neither the Company nor any of its subsidiaries has purchased, sold or redeemed any of the Company’s listed securities for the year ended 31 December 2021 and up to the date of this announcement.

Following the completion of the auditing process, the Company will issue further announcement(s) in relation to (i) the annual results for the year ended 31 December 2021 as agreed by the Company's auditors and comparing the material differences (if any) for the unaudited annual results contained herein; (ii) the final dividend for 2021 of the Company for the year ended 31 December 2021 (if any); (iii) the payment date of such final dividend for 2021; (iv) the proposed date on which the forthcoming 2021 annual general meeting will be held; (v) the date on closure of register in order to ascertain shareholders' eligibility to attend and vote at the said meeting; and (vi) the date on closure of register in order to determine entitlement to receive the proposed final dividend for 2021. In addition, the Company will issue further announcement(s) as and when necessary if there are other material development in the completion of the auditing process.

Publication of Results Announcement

This announcement has been published on the websites of The Stock Exchange of Hong Kong Limited (www.hkexnews.hk) and the Company (www.circ.com.cn).

The financial information contained herein in respect of the annual results of the Group have not been audited and have not been agreed with the auditors. Shareholders and potential investors are advised not to place undue reliance on such information and to exercise caution when dealing in the securities of the Company. Shareholders and potential investors who are in doubt are advised to seek professional advice from professional or financial advisers.

By order of the Board
China Isotope & Radiation Corporation
Meng Yanbin
Chairman

Beijing, the PRC, 30 March 2022

As at the date of this announcement, the Board comprises Mr. Meng Yanbin, Mr. Wang Suohui and Mr. Du Jin as executive Directors; Mr. Liu Zhonglin, Mr. Chen Shoulei, Ms. Chang Jinyu, and Ms. Liu Xiuhong as non-executive Directors; Mr. Hui Wan Fai, Mr. Tian Jiahe, Ms. Chen Jingshan and Mr. Lu Chuang as independent non-executive Directors.