麗珠醫藥集團股份有限公司
Livzon Pharmaceutical Group Inc.*

Stock Code 股份代號: 1513

2021
環境、社會及管治報告
Environmental, Social and Governance Report

*For identification purpose only 僅供識別

(A joint stock company incorporated in the People's Republic of China with limited liability)
(在中華人民共和國註冊成立的股份有限公司)

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1 ABOUT THIS REPORT

1 ABOUT THIS REPORT

OVERVIEW

This report is the sixth environmental, social and governance ("ESG") report (the "Report") issued by the Company that serves as an annual ESG report, which covers the period from 1 January 2021 to 31 December 2021 (the "Reporting Period" or the "Year") to disclose the latest ESG performance of the Company for 2021. Some contents of the Report are appropriately extended, thereby increasing the reference value of the Report.

REFERENCE FOR THE REPORT

The Report has complied with all the provisions in the Environmental, Social and Governance Reporting Guide (the "Guide") set out in Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Hong Kong Listing Rules") issued by The Stock Exchange of Hong Kong Limited (the "Hong Kong Stock Exchange"), and reported on all recommended disclosures outlined in the Guide. The content index for the Guide is set out in Chapter 13 "CONTENT INDEX OF "ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE" OF THE HONG KONG STOCK EXCHANGE" of the Report.

The content of the Report is prepared through a systematic process, including identifying important stakeholders, identifying and prioritizing material ESG issues, determining the scope of the Report, collecting the relevant materials and data, reviewing the data and preparing the Report based on materials.

SCOPE AND BOUNDARY OF THE REPORT

The Report discloses the ESG risks and management measures of the Company in accordance with the "materiality principle" in the Guide. The Report covers the Company and its wholly-owned subsidiaries and controlling subsidiaries. The scope of the Report is in line with the scope of consolidated financial statements as set out in the 2021 annual report of the Company.

EXPLANATION FOR ABBREVIATIONS

In order to facilitate presentation and reading, unless otherwise specified and for the purpose of the Report, the "Company" refers to Livzon Pharmaceutical Group Inc.* (麗珠醫藥集團股份有限公司) and each of the "Group", "we" and "Livzon" refers to the Company and its subsidiaries.

1 ABOUT THIS REPORT

Abbreviations of Major Subsidiaries of the Company

Full company name	Abbreviated company name
Sichuan Guangda Pharmaceutical Manufacturing Co., Ltd.* (四川光大製藥有限公司)	Sichuan Guangda
Shanghai Livzon Pharmaceutical Manufacturing Co., Ltd.* (上海麗珠製藥有限公司)	Shanghai Livzon
Shanghai Livzon Biotechnology Co., Ltd., Jiaozuo Branch* (上海麗珠生物科技有限公司焦作分公司)	Shanghai Livzon Biotech
Livzon Group Livzon Pharmaceutical Factory* (麗珠集團麗珠製藥廠)	Pharmaceutical Factory
Livzon Group Limin Pharmaceutical Manufacturing Factory* (麗珠集團利民製藥廠)	Limin Factory
Zhuhai Livzon Diagnostics Inc.* (珠海麗珠試劑股份有限公司)	Livzon Diagnostics
Livzon MABPharm Inc.* (珠海市麗珠單抗生物技術有限公司)	Livzon MAB
LivzonBio, Inc.* (珠海市麗珠生物醫藥科技有限公司)	LivzonBio
Livzon Group Xinbeijiang Pharmaceutical Manufacturing Inc.* (麗珠集團新北江製藥股份有限公司)	Xinbeijiang Pharma
Gutian Fuxing Pharmaceutical Co., Ltd.* (古田福興醫藥有限公司)	Gutian Fuxing
Jiaozuo Livzon Hecheng Pharmaceutical Manufacturing Co., Ltd.* (焦作麗珠合成製藥有限公司)	Jiaozuo Hecheng
Livzon Group (Ningxia) Pharmaceutical Manufacturing Co., Ltd.* (麗珠集團(寧夏)製藥有限公司)	Ningxia Pharma
Zhuhai FTZ Livzon Hecheng Pharmaceutical Manufacturing Co., Ltd.* (珠海保税區麗珠合成製藥有限公司)	Livzon Hecheng
Livzon Group Fuzhou Fuxing Pharmaceutical Co., Ltd.* (麗珠集團福州福興醫藥有限公司)	Fuzhou Fuxing
Zhuhai Livzon Microsphere Technology Co., Ltd.* (珠海市麗珠微球科技有限公司)	Livzon Microsphere

1 ABOUT THIS REPORT

DATA SOURCE AND RELIABILITY STATEMENT

The data and case studies in the Report are mainly derived from the formal documents, statistical reports, relevant public documents and internal reporting documents of the Group. The Company undertakes that the Report contains no false representations or misleading statements and is responsible for the truthfulness, accuracy and completeness of its contents.

CONFIRMATION AND APPROVAL

The board of directors (the "Board"), the environmental, social and governance committee of the Board (the "ESG Committee") and the senior management of the Company have reviewed the Report and guarantee that there are no false representations, misleading statements or material omissions in the Report.

AVAILABILITY OF THE REPORT AND FEEDBACK

The Report is available and can be downloaded from the website of Hong Kong Exchanges and Clearing Limited ("HKEx") (www.hkexnews.hk), the website of the Company (www.livzon.com.cn) and Cninfo (www.cninfo.com.cn).

For further enquiries or any comments or suggestions regarding the Report, please contact the Company by phone at (86) 756-8135888, (86) 756-8135990 or (86) 756-8135992, fax at (86) 756-8891070 or email at LIVZON_GROUP@livzon.com.cn.

The Report is prepared in both Chinese and English. In case of any discrepancies, the Chinese version shall prevail.

* For identification purpose only

2 CHAIRMAN'S MESSAGE

Mr. Zhu Baoguo
Chairman of the Board

Dear stakeholders and all friends who care about Livzon,

2021 was a special year for both the pharmaceutical industry and Livzon. On the one hand, the SARS-CoV-2 virus ("COVID-19 virus") pneumonia pandemic (the "Pandemic") continued to resurge around the globe, and on the other hand, along with the implementation of the 14th Five-Year Plan, China has embarked on a new journey to build a comprehensive socialist modern country, and the reform of the medical and healthcare system has been deepened to comprehensively promote the construction of a healthy China. Looking back to 2021, Livzon was pleased to embrace the opportunities and challenges brought by the market changes, consistently implemented a new development concept, steadily improved the research and development ("R&D") investment and output, continued to deepen the market development and promotion, effectively facilitated the green and high-quality sustainable development of the Group, and delivered a satisfactory answer to all stakeholders with practical actions and new performance.

We continued to uphold the mission of "prioritizing the quality of life of patients" and the vision of "becoming a leader in the pharmaceutical industry", pay close attention to unmet clinical needs, focus on "innovation drugs and high-barrier complex drug preparations", and strive to providing patients with drug choices of more varieties and higher quality. During the Year, Livzon continued to deepen the layout in five areas of gastroenterology, assisted reproduction, tumor and immunity, psychiatry and metabolic diseases, has diverse R&D pipelines, and made breakthrough progress in R&D of a number of key products. Two products in the area of assisted reproduction, where the Company enjoys a competitive edge, were approved for market launch in China, while clinical trials for multiple blockbuster products in the R&D pipelines of other key areas were well underway. In addition, the Recombinant SARS-CoV-2 Fusion Protein Vaccine(重組新型冠狀病毒融合蛋白疫苗)("V-01") jointly developed by the Group and the Institute of Biophysics, Chinese Academy of Sciences(中國科學院生物物理研究所)has launched phase III clinical trials in various countries around the world.

2 CHAIRMAN'S MESSAGE

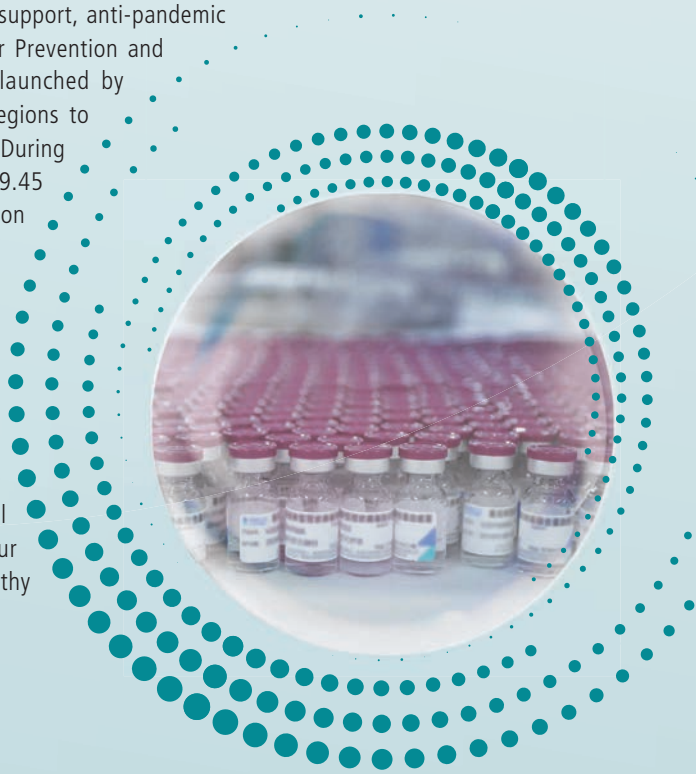
The key data of the phase III clinical trial of sequential booster of V-01 shown that the absolute vaccine efficacy after V-01 sequential booster has met World Health Organization (WHO)'s standards and can produce good protection against COVID-19 caused by Omicron infection. We expect V-01 to contribute to the prevention and control of the pandemic in China and the world. On the other hand, as the Livzon's first product to conduct the phase III global multi-center clinical trials, the smooth progress of V-01's phase III clinical trials has also accumulated richer resources and experience for the internationalization of the Group's innovative drugs and the launch of global multi-center clinical trials for more drugs.

We actively response to the call to "comprehensively promote the construction of a healthy China", and are committed to improving the accessibility and affordability of products. During the Year, a total of 186 products of Livzon were included in the national medical insurance catalogue, among which the price of the patented new drug Ilaprazole Sodium for Injection(注射用艾普拉唑鈉)was reduced by more than 50%, which further reduced the financial burden of patients and saved the country's medical insurance expenditure. When exploring and deploying overseas markets, we take into account the economic development and healthcare level of the country/region, and have adopted equitable pricing policies based on local income levels. In addition, Livzon also continuously pays attention to rare disease groups and increases investment in R&D of relevant drugs, enabling a rapid and high-quality development of rare disease treatment, so that love is widely extended.

We regard employees as valuable resources of the Company, and strive to achieve mutual growth with our elites by creating a diverse, fair and inclusive work environment, providing competitive remuneration and benefits mechanisms and establishing a comprehensive talent development system.

We practice green development and take practical action to help achieve the "double carbon" goal. By establishing the Environmental Management Targets for 2021-2025, we continuously promote energy conservation and emission reduction in our production companies; during the Year, we established the General Targets for Reduction of Carbon Emission, aiming to achieve carbon neutrality by 2055. Meanwhile, Livzon introduced ESG performance indicators in its management appraisal to ensure that the Group is effectively implementing green and low carbon operations.

We have always been committed to social welfare, and have actively assumed social responsibility by continuously investing in areas such as social health, education development, industrial support, anti-pandemic and disaster relief. Since the end of 2018, the "Public Welfare Project for Prevention and Treatment of Chronic Diseases(普惠慢病防治公益項目)", jointly launched by Livzon and the Joincare Group, has been implemented in a number of regions to alleviate the medical burden of families suffering from chronic diseases. During the Reporting Period, the charitable donation of Livzon amounted to RMB19.45 million, contributing to rural revitalization and the achievement of common prosperity.



The successful conclusion of 2021 means that a new journey is about to begin. Livzon will continue to uphold the mission of "prioritizing the quality of life of patients" and the vision of "becoming a leader in the pharmaceutical industry", continue to focus on the unmet clinical needs and integrate the concepts of high-quality development, green and low-carbon operation and social contribution into its corporate development strategy. We will give full play to our role as a pharmaceutical company, actively fulfil our social responsibility, work together with our partners to improve the climate, and make further contributions to a healthy China, rural revitalization and the achievement of common prosperity.

Chairman of the Board
Mr. Zhu Baoguo

3 ABOUT THE COMPANY

3 ABOUT THE COMPANY

3.1 THE COMPANY'S BUSINESS

Founded in January 1985 and headquartered in Zhuhai City, Guangdong Province, the People's Republic of China (the "PRC" or "China"), the Company is a comprehensive group company that is principally engaged in pharmaceutical R&D, production and sales. We are among the top 100 enterprises in Chinese pharmaceutical industry (中國醫藥工業百強企業) and top 100 valuable companies listed on main board (主板上市公司價值100強). The Company was listed on the main board of the Shenzhen Stock Exchange (stock code: 000513.SZ) on 28 October 1993, and listed on the main board of the Hong Kong Stock Exchange (stock code: 01513.HK) on 16 January 2014.

MISSION
Prioritizing the quality of life of patients

VISION
Becoming a leader in the pharmaceutical industry

VALUE
People-oriented, Craftsmanship Spirit, Trustworthy, Truth-seeking and Pragmatism-oriented, Happy Life, Happy Work

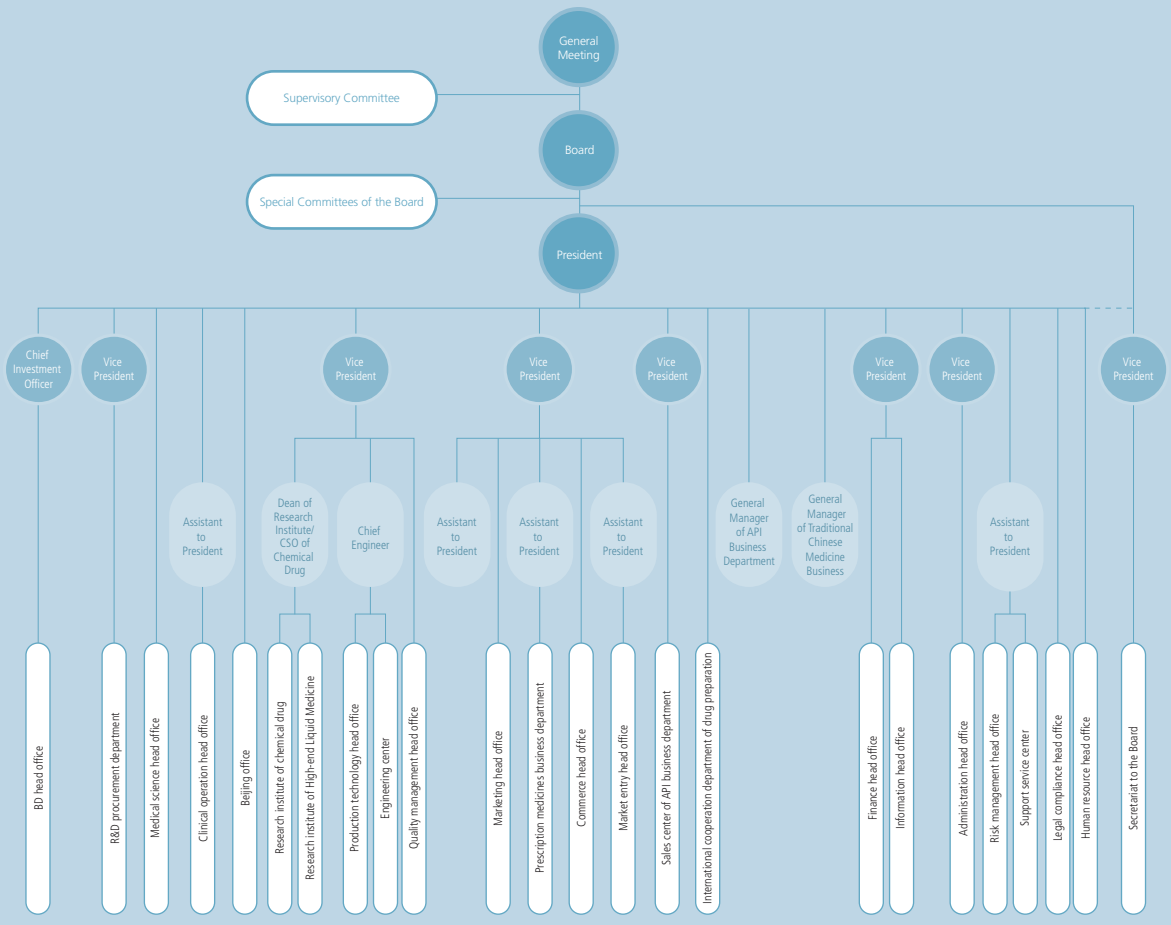
During the Reporting Period, there was no significant changes in the principle business of Livzon. Livzon was primarily engaged in the R&D, production and sales of pharmaceutical products, which covered drug preparation products, active pharmaceutical ingredients ("APIs") and intermediates as well as diagnostic reagents and equipment. Major products include drug preparation products such as Ilaprazole (Ilaprazole Enteric-Coated Tablet and Ilaprazole Sodium for Injection) (壹麗安(艾普拉唑腸溶片及注射用艾普拉唑鈉)), a series of Bismuth Potassium Citrate (麗珠得樂(枸櫞酸鉍鉀)) products, Rabeprazole Sodium Enteric-Coated Capsules (麗倍樂(雷貝拉唑鈉腸溶膠囊)), Weisanlian (Bismuth Potassium Citrate Tablets/Tinidazole Tablets/Clarithromycin Tablets (維三聯(枸櫞酸鉍鉀片／替硝唑片／克拉霉素片)), Leuprorelin Acetate Microspheres for Injection (貝依(注射用醋酸亮丙瑞林微球)), Urofollitropin for Injection (麗申寶(注射用尿促卵泡素)), Menotropins for Injection (樂寶得(注射用尿促性素)), Voriconazole for Injection (麗福康(注射用伏立康唑)), Fluvoxamine Maleate Tablets (瑞必樂(馬來酸氟伏沙明片)), Perospirone Hydrochloride Tablets (康爾汀(鹽酸哌羅匹隆片)), Shenqi Fuzheng Injection (參芪扶正注射液), and Anti-viral Granules (抗病毒顆粒); APIs and intermediates such as Mevastatin (美伐他汀), Acarbose (阿卡波糖), Colistin Sulfate (硫酸粘菌素), Phenylalanine (苯丙氨酸), Vancomycin Hydrochloride (鹽酸萬古霉素), Daptomycin (達托霉素), Milbemycin Oxime (米爾貝肟) and Ceftriaxone Sodium (頭孢曲松鈉); and diagnostic reagents such as Diagnostic Kit for IgM/IgG Antibody to Coronavirus (SARS-CoV-2) (Lateral Flow) (新型冠狀病毒(2019-nCoV) IgM/IgG抗體檢測試劑盒(膠體金法)), Rapid Test for Mycoplasma Pneumoniae IgM Antibody (Lateral Flow) (肺炎支原體IgM抗體檢測試劑(膠體金法)) and Diagnostic Kit for Human Immunodeficiency Virus Antibody (ELISA) (人類免疫缺陷病毒抗體診斷試劑盒(酶聯免疫法)).

3.2 CORPORATE GOVERNANCE

The Company has set up a corporate governance structure, which is composed of the general meeting of the Company (the "General Meeting"), the Board and its special committees, the supervisory committee (the "Supervisory Committee") and the senior management of the Company. The Company carries out its operation in strict compliance with the Company Law of the PRC, the Securities Law of the PRC, the Stock Listing Rules of the Shenzhen Stock Exchange, the Hong Kong Listing Rules, relevant laws and regulations of China Securities Regulatory Commission ("CSRC") and the articles of association of the Company (the "Articles of Association"). The general meetings, meetings of the Board and meetings of the supervisory committee of the Company are convened, and the management decision-making and operation supervision are performed, pursuant to the requirements of the Rules of Procedures for the General Meetings, the Rules of Procedures for the Board of Directors and the Rules of Procedures for the Supervisory Committee of the Company. During the Year, the decision-making and regulatory bodies of the Company, including the general meetings, the Board and the supervisory committee, have strictly followed the requirements of the regulatory operating rules and internal system in performing management decision-making and operation supervision. The operating standards were proven to be effective. The special committees of the Board all performed their respective duties.

As at the disclosure date of the Report, the Board comprises 11 members, including 2 executive directors, namely Mr. Tang Yanggang (唐陽剛先生) (president) and Mr. Xu Guoxiang (徐國祥先生) (vice chairman and vice president); 4 non-executive directors, namely Mr. Zhu Baoguo (朱保國先生) (chairman), Mr. Tao Desheng (陶德勝先生) (vice chairman), Mr. Qiu Qingfeng (邱慶豐先生) and Mr. Yu Xiong (俞雄先生); and 5 independent non-executive directors, namely Mr. Bai Hua (白華先生), Mr. Tian Qiusheng (田秋生先生), Mr. Wong Kam Wa (黃錦華先生), Mr. Luo Huiyuan (羅會遠先生) and Ms. Cui Lijie (崔麗婕女士).

Organizational structure of the Group as at the end of the Year



3.3 2021 KEY PERFORMANCE

In 2021, the Group recorded an operating income of RMB12,063.86 million, representing a year-on-year increase of 14.67%, and a net profit attributable to shareholders of the Company of RMB1,775.68 million, representing a year-on-year increase of 3.54%; excluding gains and losses from extraordinary items, the net profit attributable to shareholders of the Company generated from principal businesses of the Company in 2021 was RMB1,627.05 million, representing a year-on-year increase of 13.66%.

At the same time, Livzon actively undertook social responsibility, paid tax in accordance with the law and supported community philanthropy. During the Reporting Period, Livzon contributed tax revenue of RMB1,360.74 million to the government, the total amount of wages, bonuses, allowances, compensation, welfare, housing funds and social insurance paid to the employees was RMB1,382.17 million, interest paid to creditors such as banks was RMB89.24 million, donation to society was RMB19.45 million, and social contribution per share in 2021 was approximately RMB3.04 per share.

Environment, Health and Safety ("EHS") Management

Management of energy conservation and consumption reduction: Total major greenhouse gas emissions were 535,831.5 tonnes of carbon dioxide equivalent within scope 1 and scope 2, representing a decrease of 6.71% as compared with 2020.

EHS investment: In 2021, Livzon invested RMB106.70 million in EHS management, of which RMB26.95 million was invested in safe production and occupational health, and RMB79.75 million was invested in environmental protection (including RMB65.38 million for maintenance of environmental protection facilities and RMB14.37 million for renovation of environmental protection facilities).

Access to Health Care

As at the end of the Reporting Period, a total of 186 products of the Group were included in the national medical insurance catalogue. The Group has adopted equitable pricing policies based on local income levels in the sales process of 16 products in South Asia, Southeast Asia, South America, and Africa.

R&D Innovation

R&D team: In 2021, the Group had 936 employees in R&D (2020: 911), accounting for 10.91% of the total number of employees (2020: 10.89%), with stable increasing scale of our R&D team.

R&D investment: In 2021, the Group's total expenditure on R&D amounted to RMB1,523.26 million (2020: RMB989.59 million), representing a year-on-year increase of 53.93%. R&D investment accounted for 12.63% (2020: 9.41%) of the Group's operating income for the Year.

Public Welfare and Charity

In 2021, the expenditure on charitable donation by the Group amounted to RMB19.45 million, including funds donation of RMB13.50 million and materials donation with a value of RMB5.95 million. As at the end of the Reporting Period, the Group has entered into a total of 16 agreements in relation to the Public Welfare Project for Prevention and Treatment of Chronic Diseases（普惠慢病防治公益項目）, of which 14 were with remote areas in need of assistance and 1 was with natural reserve at state level, and there were more than 5,000 registered people in need.

3.4 LIST OF HONORS

April 2021

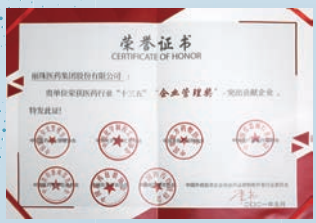
2020 Outstanding Contribution Award of Technology Innovation for Food and Pharmaceutical Devices in Zhuhai

Zhuhai Food Safety Association etc.

April 2021

2020 Humanitarian Award of Zhuhai Red Cross

Zhuhai Red Cross Society



May 2021

Outstanding Contribution Award for Enterprise Management in the 13th Five-Year of the Pharmaceutical Industry

R&D-based Pharmaceutical Association Committee under China Association of Enterprises with Foreign Investment

July 2021

2020 Rank of Social Responsibility of Pharmaceutical Manufacturing Companies – Outstanding Responsible Enterprise of the Year

China CSR Research Centre of Southern Weekly

September 2021

Excellent Practice Case for Listed Companies from 2020 Annual Report Results Presentation

China Listed Companies Association

August 2021

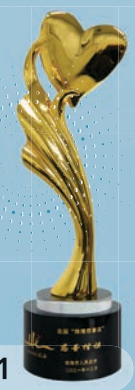
2020 Top 100 Enterprises in China Pharmaceutical Industry: 23rd Place

China National Pharmaceutical Industry Information Center

December 2021

2021 Top 100 Chinese Pharmaceutical Innovative Enterprises

Healthcare Executive



December 2021

The First "Zhuhai Charity Award": Charity Model

The People's Government of Zhuhai Municipality

December 2021

2021 Reputation List of China Listed Companies – Best Socially Responsible Listed Company

National Business Daily

3.4 LIST OF HONORS *(Continued)*

December 2021

The 11th China Securities Golden Bauhinia Award for the Best ESG Practice of Listed Company

Hong Kong Ta Kung Wen Wei Media Group

December 2021

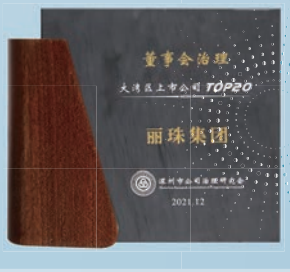
The 11th China Securities Golden Bauhinia Award for Listed Company with Best Investment Value under the 14th Five-Year Plan

Hong Kong Ta Kung Wen Wei Media Group

December 2021

2021 Innovative Pharmaceutical Enterprise in China

China State Institute of Pharmaceutical Industry



December 2021

Governance of the Board – TOP 20 Listed Companies in the Great Bay Area

Shenzhen Research Association of Corporate Governance

December 2021

Best ESG Award

International Roadshow Center

December 2021

Best Information Disclosure Award

International Roadshow Center

December 2021

2021 Reputation List of China Listed Companies: A Listed Bio-pharmaceutical Company with the Largest Growth

National Business Daily

December 2021

The 1st Jinglun Award for China Listed Company with Investor Relation Value: Best Investor Relation Value Award of the Year, Listed Company favored the most by Private Equity of the Year

China Fund News

3.4 LIST OF HONORS *(Continued)*

Part of the Honors of the Company's Subsidiaries

Date of Award	Name of Award	Issuing Authority	Awarded Subsidiary
February 2021	Shanghai "Technologically Advanced" Small and Medium-Sized Enterprise (2021-2022)	Shanghai Municipal Commission of Economy and Informatization	Shanghai Livzon
March 2021	Shenqi Fuzheng Injection-Gold Award at the "International Exhibition of Inventions of Geneva"	World Intellectual Property Organization and the Swiss Federal Government	Limin Factory
March 2021	"Contract-Performing and Credit-Worthy" Enterprise in Guangdong Province in 2020	Zhuhai Municipal Administration for Market Regulation	Livzon Diagnostics
June 2021	"Contract-Performing and Credit-Worthy" Enterprise in Guangdong Province for 5 Year in a Row (2016-2020)	Zhuhai Municipal Administration for Market Regulation	Pharmaceutical Factory
June 2021	2020 Top 10 Pharmaceutical Health Manufacturer in Zhuhai	Zhuhai Municipal Administration for Industry and Informatization	Livzon Diagnostics, Pharmaceutical Factory
July 2021	"Leuprorelin Acetate Microspheres for Injection" and "Pancreatic Kininogenase Enteric-Coated Tablet" were recognized as "Excellent Products of Shanghai Pharmaceutical Industry in 2020	Shanghai Pharmaceutical Industry Association	Shanghai Livzon
August 2021	The 3rd Batch of High-Tech Enterprises in Shanghai in 2021	Shanghai High-Tech Enterprise Accreditation Steering Group	Shanghai Livzon Biotech
October 2021	Harmonious Labor Relations Enterprise in Fuzhou (2020)	Fuzhou Municipal Human Resources and Social Security Bureau, etc.	Fuzhou Fuxing
October 2021	Technologically Advanced Small and Medium-Sized Enterprise in Zhuhai	Zhuhai Municipal Administration for Industry and Informatization	Livzon Diagnostics
November 2021	"Innovative Research on the Technology of Large Volume Injection of Traditional Chinese Medicine and its Application in Adjuvant Therapy of Oncology" was awarded the First Class Innovation Award for Invention and Entrepreneurship	China Association of Inventions	Limin Factory
December 2021	2021 Top 100 Private Enterprises in Ningxia	Ningxia Federation of Industry and Commerce	Ningxia Pharma

3.4 LIST OF HONORS *(Continued)*

Part of the Honors of the Company's Subsidiaries *(Continued)*

Date of Award	Name of Award	Issuing Authority	Awarded Subsidiary
December 2021	The 3rd Batch of Technologically Advanced "Little Giant" Enterprises Selected by the Ministry of Industry and Information Technology in 2021	Fuzhou Municipal Finance Bureau, Fuzhou Municipal Administration of Industry and Informatization	Fuzhou Fuxing
December 2021	2020 Zhuhai Top 100 High-Tech Enterprises for Economical Contribution	Guangdong R&D Center for Technological Economy, Zhuhai Productivity Promotion Centre	Livzon Hecheng
December 2021	Top 50 High-Tech Enterprises in Comprehensive Innovation Strength in Xiangzhou District in 2020	Guangdong R&D Center for Technological Economy, Administration for Technology and Informatization of Xiangzhou District in Zhuhai	Livzon Diagnostics
December 2021	Leuprorelin Acetate Sustained Release Microspheres for Injection was awarded as "2021 Excellent Brand in Bio-Pharmaceuticals"	China Biochemical Pharmaceutical Industry Association	Shanghai Livzon
December 2021	Excellent Partner in Biochemical Biopharmaceutical Companies in 2021	China Biochemical Pharmaceutical Industry Association	Shanghai Livzon
December 2021	"Alzheimer's disease prediction and diagnosis product project" was awarded as Excellent Project in 2021 National Brilliant Technology Innovation Competition	The Torch Center of the Ministry of Science and Technology	Livzon Diagnostics

4 ESG GOVERNANCE

4 ESG GOVERNANCE

4.1 BOARD STATEMENT

The Company attaches great importance to environmental, social and governance work. While ensuring steady growth in business performance, the Company integrates the concepts of green and low-carbon operation, employee care and social contribution with its corporate development strategy, effectively fulfilling its corporate social responsibility and striving to meet the expectations of all relevant parties, so as to join hands to walk the road to sustainable development.

The Group strictly follows the requirements of the Guidelines for Corporate Governance of Listed Companies of the China Securities Regulatory Commission and the Guide of the Hong Kong Stock Exchange to enhance the Board's involvement in and supervision of ESG-related issues, and to continuously improve the ESG governance structure and management mechanism. The Board is the highest decision-making body for Livzon's ESG management and is ultimately responsible for the ESG work of the Group. The Company established the ESG Committee under the Board on 30 June 2020 to formulate and review the Group's ESG vision, goals, strategies, management policies, governance structure, operational management and implementation effectiveness, and to report and provide advice to the Board on related issues. The ESG Committee is accountable to the Board and its proposals and reports are submitted to the Board for consideration of decisions and approval. The ESG Committee shall consist of at least five members, a majority of whom must be independent non-executive directors of the Company, nominated by the chairman, at least one-half of the independent non-executive directors or at least one-third of all directors, and appointed and removed by a majority of all members of the Board.

In 2021, the Board manages the Group's ESG-related issues in three main areas:

ESG management approach and strategy: The Board continuously monitors key global ESG trends, identifies relevant risks and opportunities in the context of current corporate development plans, and updates its management approach and strategy when necessary to ensure that the Group's ESG philosophy is up-to-date;

ESG risk management: The Board actively participates in stakeholder communications, evaluates, analyses and prioritizes the importance of ESG issues, identifies ESG-related issues that have a significant impact on the Group's operations and/or the rights and interests of other important stakeholders, and defines the focus of ESG risk management efforts;

Goal setting and progress review: The Company's ESG working team (consisting of senior management and heads of all departments, business units and subsidiaries) has set ESG-related goals and corresponding implementation initiatives, which are reviewed by the ESG Committee and submitted to the Board for approval, covering key ESG performance indicators such as discharge of pollutants, greenhouse gas emissions, resource consumption, production safety, quality management, etc. The Board regularly reviews the progress of achieving the ESG goals and makes recommendations for action on items that require improvement. In order to achieve each goal, the Company formulated and issued an ESG performance appraisal plan during the Year, effectively linking management remuneration to ESG performance.

4 ESG GOVERNANCE

4.1 BOARD STATEMENT *(Continued)*

Goal setting and progress review: During the Year, the ESG Committee has held three meetings to set the Group's environmental management targets for 2021 to 2025 and the Group's goals for carbon emission reduction and carbon neutrality, to consider and approve the introduction of ESG assessment indicators in the appraisal of all members of the ESG working team, and to review and assess the Group's energy conservation and emission reduction in 2020, the Group's ESG efforts in 2020 and the achievement of the Group's environmental management targets for the first half of 2021. The above ESG-related issues were reported and communicated with the Board three times.

4.2 ESG GOVERNANCE STRUCTURE

In accordance with the current situation of ESG management and business development needs, on 30 June 2020, the Company has established an ESG Committee under the Board and published the terms of reference of the ESG Committee on the Company's website and the website of HKEx. The ESG Committee set up the ESG working team under its jurisdiction as an executive body on the day of its establishment, which is responsible for making preliminary preparations for the ESG Committee's decisions, providing written materials on relevant aspects of the Group for reporting to the ESG Committee and collaborating with each unit and department of the Group to fully implement the ESG work of the Group. Livzon attaches great importance to ESG management and will continue to optimize its ESG governance structure and management mechanism.

The ESG Committee of the tenth session of the Board comprises five directors, the chairman of which is Mr. Zhu Baoguo and the members are Mr. Tang Yanggang, an executive director, and Mr. Bai Hua, Mr. Wong Kam Wa and Mr. Tian Qiusheng, the independent non-executive directors (on 29 July 2021, Mr. Zheng Zhihua retired as an independent non-executive director and a member of the ESG Committee of the Company due to the expiration of his 6-year term of office as a director. On the same day, Mr. Tian Qiusheng was appointed as a member of the ESG Committee of the tenth session of the Board).

Members of the ESG working team include (1) the president, vice president, chief investment officer, secretary to the Board, assistant to the president, dean of the research institute, chief engineer, general manager of API business department, general manager of traditional Chinese medicine business department, and (2) heads of each functional department of the Company and heads of each subsidiary and business unit of the Company.

ESG management level	Key members	Specific duties
ESG governance	ESG Committee	1. Formulating and reviewing the vision, targets, strategies and management policies of ESG 2. Reviewing and monitoring the management structure, policies and operation management of ESG, and reporting and offering recommendations to the Board
ESG leadership	Team leader and deputy leader of the ESG working team: • Team leader: president of the Company • Deputy leader: senior management including vice presidents of the Company	1. In charge of daily management of specific ESG tasks 2. Regularly reviewing the key ESG data of the Company 3. Leading annual information summary and report preparation of ESG
ESG implementation	Members of the ESG working team: Heads of each functional department of the Company, and heads of each subsidiary and business unit of the Company	1. Collecting and reporting ESG information 2. Implementing specific ESG tasks 3. Reporting to the ESG leadership

4.3 COMMUNICATION WITH STAKEHOLDERS

Based on stakeholders' concern, the Company established a normalized communication mechanism for stakeholders. We aimed to maintain good interaction with each stakeholder and actively respond to their expectations through targeted and diverse communication channels, thereby promoting our sustainable development.

Stakeholders	Requests of communication	Communication channels
Government departments	• Comply with relevant laws and regulations • Ensure quality and safety of drugs • Cooperate with the regulatory work of the government in supporting healthy industrial development • Ensure tax compliance and promote local economic development	• Meetings between the government and the corporate sector • Supervision and inspection • Work reports and research
Shareholders and investors	• Protect the legal right of shareholders • Understand the operating results, governance standards and stringent risk control measures of the Company • Ensure steady operation to maximize investment return • Facilitate open, fair and equal information disclosure	• Hold general meetings • Company website • Investor communication conferences and on-site visits • Timely disclosure of material operating information and interim announcement, and regularly publish financial information • Face-to-face interviews, support hotline and e-mail • Easy Interactive Platform of the Shenzhen Stock Exchange
Employees	• Safeguard the basic rights of employees • Care for employees' wellness and safety • Understand employees' needs and their suggestions to the Company • Provide employee training and career development platform	• Staff representative meeting and trade union • Staff satisfaction survey • Occupational health and safety training • Opinion feedback platform • Daily communication
Consumers and customers	• Protect consumer rights • Uphold business ethics • Ensure drug quality and safety, timely recall of defective products • Provide quality after-sales service guarantee	• Product labeling and information disclosure • Client visits • Consumer satisfaction survey • Address complaints and opinions of consumers

4.3 COMMUNICATION WITH STAKEHOLDERS *(Continued)*

Stakeholders	Requests of communication	Communication channels
Partners and suppliers	• Maintain good and stable cooperation relationship • Operate with integrity and ensure pharmaceutical compliance • Timely communication and coordination with upstream and downstream players to achieve mutual benefits	• Regular communication • Working meetings, phone calls and correspondences • Company website
The media	• Maintain open and transparent information disclosure • Keep good interaction with the media	• Phone interviews and correspondences • Featured articles
Industry peers	• Fair competition among peers to promote healthy industrial development • Sharing of technology and experience among enterprises	• Meetings of industry organizations • Experience sharing sessions • On-site visits and exchanges
Local community	• Emphasize the impact of manufacturing and operation activities on the local community • Drive local economic development and provide assistance to the disadvantaged groups • Promote health education and help patients • Enhance recycling of product packaging and waste, etc. to reduce environmental pollution	• Participate in community welfare events • Provide regular assistance to the local community • Organize volunteer service • Disclosure of environmental information

4 ESG GOVERNANCE

4.4 MATERIAL ISSUES

The Company has engaged external professional consultants to review and assess its ESG issues for the Year. From the perspective of stakeholders, the consultants summarized and concluded material ESG issues of the Company as the basis of preparation of the Report.

Materiality assessment process

– **Review and update the pool of ESG issues:** reviewed the results of materiality assessment for 2020, and comprehensively considered and selected the pool of ESG issues for 2021 by taking into account of the overall business development of the Group in 2021 and with reference to the ESG management practices of peer companies.

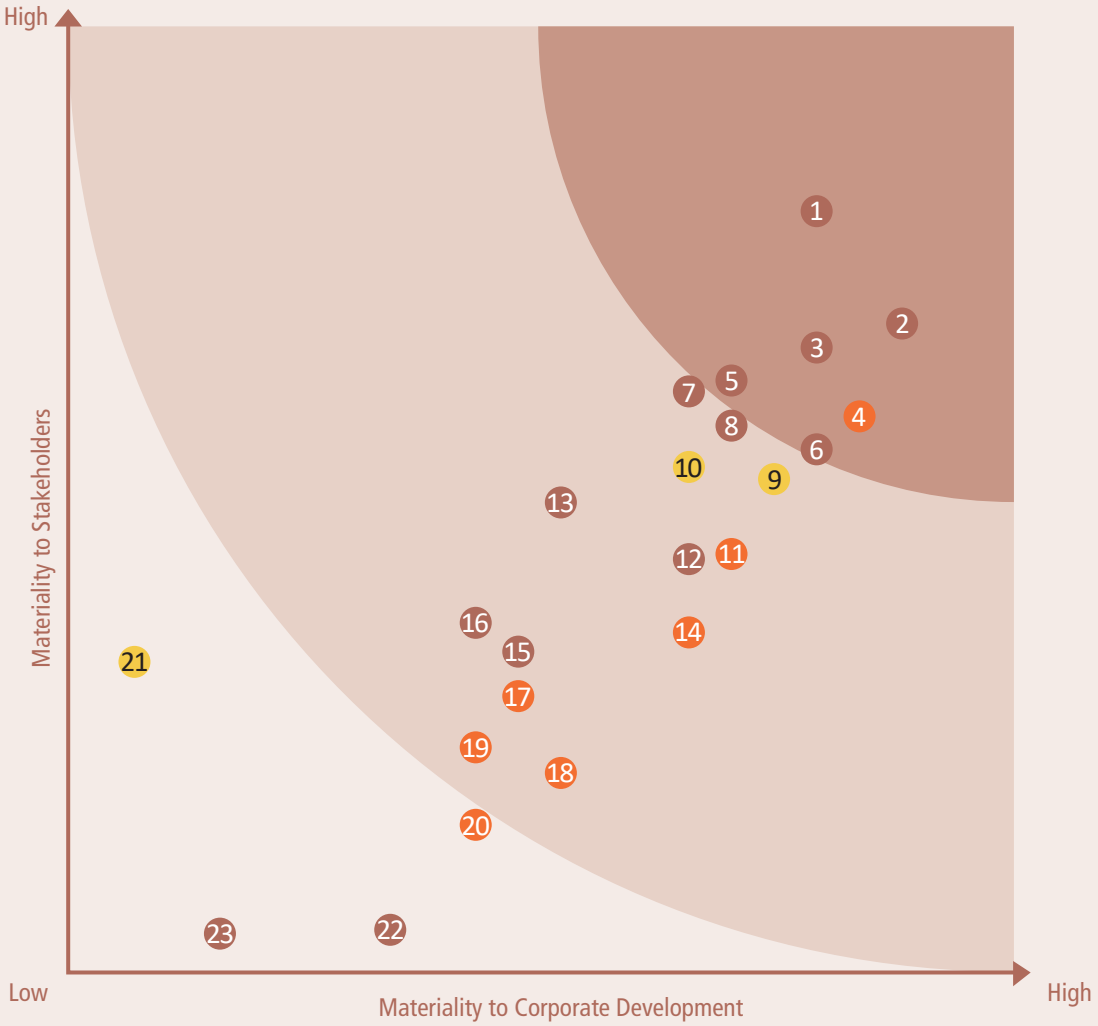
– **Formulate and implement the stakeholder engagement program:** communicating and investigating with important stakeholders to obtain relevant raw data by taking into account of the Company's own situation for the Reporting Period and with reference to the development of pharmaceutical industry and overall economic and social development.

– **Quantify and evaluate from two dimensions:** evaluate each issue from two dimensions of "materiality to corporate development" and "materiality to stakeholders" to obtain a matrix of material issues. The Company conducted an online survey in December 2021 to ask stakeholders in each category to rate the materiality of ESG issues in 2021 for Livzon, on a scale of 1 to 5, in ascending order of materiality. After the survey, the Company analyzed the feedbacks of all participants and evaluated the materiality of each issue from two dimensions of "materiality to corporate development" and "materiality to stakeholders" to obtain a materiality matrix of ESG issues in 2021 for Livzon and prioritize the issues. The survey covered a wide range of stakeholders including directors, senior management, middle management, employees, investors, suppliers, distributors and government regulators;

– **Submit the report to, and obtain approval from, the management:** submit the assessment report on stakeholder engagement and material issues to, and obtain approval from, the management.

4.4 MATERIAL ISSUES *(Continued)*

2021 ESG Material Issues Matrix of Livzon



4.4 MATERIAL ISSUES *(Continued)*

List of ESG Issues in 2021 of Livzon

	No.	Content
Issues of high materiality	1	Product quality & safety
	2	Product R&D and innovation
	3	Intellectual property rights protection
	4	Pollutants control
	5	Occupational health and safety
	6	Talent attraction and retention
Issues of medium materiality	7	Employee rights and benefits
	8	Information and data security
	9	Corporate governance
	10	Business ethics
	11	Water resource management
	12	Supply chain management
	13	Employee training and development
	14	Management of raw-materials use
	15	Responsible marketing
	16	Access to health care
	17	Energy management
	18	Management of greenhouse gas emissions
	19	Protection of biodiversity
Issues of low materiality	20	Addressing climate change
	21	Management of investor relations
	22	Diversity and equality
	23	Public welfare and charity

5 OPERATION COMPLIANCE

5 OPERATION COMPLIANCE

5.1 BUSINESS ETHICS

The Group attaches great importance to management of business ethics, and has developed a complete and effective internal risk management system and established internal control systems and internal audit procedures covering all operations of the Group, achieving effective supervision on business ethics matters such as anti-corruption and anti-bribery, whistleblowing and complaints, clinical ethics, responsible marketing, etc. We prevent the occurrence of misconduct, violations, and fraud behaviors in various forms and achieved effective prevention and control over internal risks of the Company.

We keep strengthening system establishment and building internal audit system in alignment with the development of the Company by establishing internal audit systems such as the Corporate Internal Control Guidelines, the Code of Professional Ethics for Internal Auditors, and the Internal Audit Work System. We have revised and improved relevant regulations on the code of conduct for auditors, audit standards, audit business guidelines, audit file management, risk management procedures and guidelines for different positions, etc.

We conduct audits of business ethics on all operations on a continuous basis to prevent corporate risks and avoid corruptions. The Company has established the audit and integrity department, which is responsible for internal audits and integrity building of each subsidiary of the Group and is directly accountable to the audit committee of the Board (the "Audit Committee"). According to the audit plan, the audit and integrity department carries out audit on the risk management, internal control and financial position of each subsidiary of the Company on an annual basis, and proposes remedies for problems identified in the audit. The department makes continuous improvement of corporate internal control through audits and inspections such as comprehensive internal control audit, economic responsibility audit and special audit, and regularly provides management reports to the Audit Committee (Board-level) on the achievements and improvement proposals of business ethics and anti-corruption and anti-bribery management.

We keep enhancing internal risk control audit and conduct audits on the business standard management of each subsidiary of the Company, such as implementation of sales process and execution of sales contracts, which ensures that our sales is in strict compliance with the regulations and systems of compliant operation. We also actively carry out responsible marketing activities.

As at the end of the Reporting Period, the audit and integrity department has completed 30 comprehensive internal control audits and 14 special audits on each subsidiary of the Company, and has urged them to develop and carefully take corrective actions specific to each correction suggestion.

Case: Sichuan Guangda received comprehensive audit on business links over the last two years

In May 2021, the audit team led by the Company's Assistant to President and comprised of staff from risk management head office, finance head office, production technology head office, legal compliance head office, engineering center, and other relevant departments, conducted a week-long internal control audit on Sichuan Guangda, a subsidiary of the Company. The audit focused on the compliance of material and engineering equipment procurement business and supplier quality management. It also inspected the effectiveness of the internal control procedures in various business links and the compliance of internal control management.

5 OPERATION COMPLIANCE

5.1 BUSINESS ETHICS *(Continued)*

5.1.1 Anti-corruption

We always promote operating with honesty and integrity and strengthen the construction of anti-corruption system. During the Year, we conducted trainings on ethical standards covering all employees of the Group and all individuals who have business relationship with the Group. While clearing channels for whistleblowing and complaints, we offered effective protection for the legal rights and interests of whistleblowers. During the Year, we did not identify nor are aware of any concluded legal cases regarding corrupt practices brought against the Group or its employees.

Improving anti-corruption system

The Group strictly abides by the Criminal Law of the PRC, the Anti-Unfair Competition Law of the PRC, the Interim Provisions on Banning Commercial Bribery, the Notice on Serious Investigation and Punishment and Proactive Prevention of Duty Crime in Food and Drug Supervision, the Corporate Accounting Standards and Application Guideline, and other national policies, regulations and guidelines. The Group formulated and keeps improving internal anti-corruption regulations such as the Anti-Corruption and Anti-Commercial Bribery Regulations and the Interim Provisions on Anti-Fraud.

During the Reporting Period, the Company revised the Anti-Corruption and Anti-Commercial Bribery Regulations and published the Staff Commitment for Anti-Corruption and Anti-Commercial Bribery and the Supplier Commitment for Operating with Integrity. All interested parties (including all suppliers, service providers, contractors, and clients) that have business relationship with the Group are required to comply with the Anti-Corruption and Anti-Commercial Bribery Regulations and sign the Supplier Commitment for Operating with Integrity. At the same time, we have added an integrity commitment clause to all our sample commercial contracts, requiring the counterparties such as suppliers to commit to operating with integrity and take active part in integrity trainings organized by the Group. If there is any violation, the Group has the right to terminate the contract. This has comprehensively strengthened the requirements of anti-corruption management for all employees of the Group and all parties that have business relationship with the Group.

For any corruption and commercial bribery proved to be true, the Company shall, depending on the seriousness of the circumstances, impose a penalty in accordance with the Labor Employment Management System of the Company. If the circumstances are serious, the labor relationship shall be terminated, and the loss caused to the Group shall be recovered in accordance with the law. Any suspected criminal offence shall be transferred to judicial organs.

5 OPERATION COMPLIANCE

5.1 BUSINESS ETHICS *(Continued)*

5.1.1 Anti-corruption *(Continued)*

Improving anti-corruption system *(Continued)*

Summary of the Anti-Corruption and Anti-Commercial Bribery Regulations

All clients, suppliers, service providers and contractors that have business relationship with the Group are required to comply with this regulation and sign the Supplier Commitment for Operating with Integrity with the Group in the signed contracts or submitted tenders. They are not allowed to give or receive cash or in-kind benefits directly or indirectly in the name of rebates, promotion fees, publicity fees, labor fees, etc., in addition to normal transactions for the purpose of obtaining business opportunities or improper benefits, and they should conduct regular self-inspections to ensure compliance.

If there is any breach of commitment, those suppliers, service providers, agents and distributors shall be disqualified, their bidding qualification shall be cancelled, and their contracts shall be terminated. Any suspected criminal offence shall be transferred to judicial authorities.

For staff involved in important positions and important links of the Group, the Staff Commitment for Anti-Corruption and Anti-Commercial Bribery shall be signed, and its performance shall be followed up and inspected. The performance of the commitment will be regarded as a key indicator of appraisal and an important basis for appointment and dismissal.

For reports and complaints proved to be true, the whistleblower or complainant shall be given certain material reward in accordance with regulations of Labor Employment Management System of the Company, and such reports and complaints will be regarded as a basis for promotion and salary raise.

In addition, the Company formulated the Administrative Regulations on Staff Integrity and published it on the Company website during the Reporting Period, in order to further regulate behaviors of the staff. The Company emphasized internal and external promotion of anti-corruption awareness and the concept of operating with integrity through multiple channels, providing regular promotion and education of integrity and anti-corruption, raising staff's awareness of operating with integrity, and thus promoting an atmosphere of operating with integrity within the Group.

5 OPERATION COMPLIANCE

5.1 BUSINESS ETHICS *(Continued)*

5.1.1 Anti-corruption *(Continued)*

Building a culture of integrity

We are always dedicated to building a culture of operating with integrity and honesty. We regularly carry out promotions and trainings on awareness of anti-corruption and concept of operating with integrity through various channels such as staff handbooks, company rules and regulations or staff training, etc., so as to improve the integrity awareness of all employees. The Company training platform has launched trainings on business ethics which cover the requirements of the Company's anti-corruption policy, staff integrity regulations, and whistleblowing and complaint. The trainings require the participation of all employees of the Group and all individuals and organizations that have business relationship with the Group, and we further plan to verify implementation of the trainings via appraisal or other means. The themed trainings have been included in the induction training of new employees, allowing new staff to set a business ethics orientation towards operation with integrity, honesty and impartiality, and adherence to professional ethics from the day of induction.

In addition, the Company arranged from time to time professional trainings hosted by China Securities Regulatory Commission and the Shenzhen Stock Exchange for directors, by which the directors can obtain training certificates or qualification recognized by relevant institutions. The Company provides all directors with relevant materials on regulatory updates, industry news and director responsibility on a regular basis, and encourages directors to take part in courses and lectures from professional organizations, to promote their continuous professional development and further education, and update their knowledge and skills. During the Year, the directors of the Company have taken part in relevant trainings from professional organizations and/or studied relevant materials on director's duties and responsibilities as required.

Case: Anti-corruption trainings of all employees and directors

In November 2021, the human resource head office of the Company engaged all employees of the Group in an online training to carefully study the Administrative Measures for Whistleblowing and Complaint, the Anti-Corruption and Anti-Commercial Bribery Regulations, the Administrative Regulations on Staff Integrity, and other relevant company regulations. This training aimed to enhance the awareness of anti-corruption and cultivate the excellent character of integrity and self-discipline.

In December 2021, the Company engaged the directors, supervisors and senior management in the training hosted by the Listed Companies Association of Guangdong. This training included legal analysis and explanation specifically for financial fraud, corruption and other typical cases in violation of laws and regulations in listed companies, which effectively improved the anti-corruption and integrity awareness of the Company's directors, supervisors and senior management.

5 OPERATION COMPLIANCE

5.1 BUSINESS ETHICS *(Continued)*

5.1.1 Anti-corruption *(Continued)*

Building a culture of integrity *(Continued)*

In addition, we listed the code of business ethics for staff in the Administrative Regulations on Staff Integrity. The leaders of the Company at all levels are the primary persons responsible for anti-fraud issues, and the Company requires management and staff in important positions to sign the Staff Commitment for Anti-Corruption and Anti-Commercial Bribery as a commitment to not misappropriating and impairing the interests of the Company or seeking improper benefits in the performance of duties. Meanwhile, the Company conducts appraisals or audits on moral quality and integrity of the management at all levels and staff in key positions from time to time, and regards their performance of operating with integrity as an important basis for their performance appraisal, promotion, and appointment and dismissal. We use the integrity supervision platform to expand the internal and external channels of supervision and whistleblowing, and actively establish an all-round and multi-dimensional risk prevention and control system.

5.1.2 Whistleblower protection

During the Reporting Period, the Company revised the Administrative Measures for Whistleblowing and Complaint. The Company accept both anonymous whistleblowing and real-name whistleblowing, improved the whistleblower protection provisions and refined the handling process of whistleblowing and complaints. We maintain the clear channels of supervision and whistleblowing and complaints within the Company, encourage the Company's staff, customers, suppliers and other partners to report and complain about any behavior suspected of violation against laws and regulations, provide continued supervision on various misconduct, violations, and fraud behaviors, and secure full protection for the legal rights and interests of whistleblowers.

Channels of whistleblowing and complaints

- Tel.: 0756-8135383, 0756-7238615
- Mobile Phone: 13926901091
- E-mail(internal): wangwei@livzon.cn, liyan@livzon.com.cn
- E-mail(external): 13926901091@163.com
- Address: Risk Management Head office of Livzon Pharmaceutical Group Inc., Chuangye North Road No.38, Zhuhai City, Guangdong Province

Serving as the dedicated department to accept whistleblowing and complaints, the risk management head office of the Company directly reports to the Audit Committee and the Board, to ensure the independence and subjectivity in the handling and inspection of whistleblowing. The department is responsible for documenting and reporting any reported behaviors in violation of laws and regulations, while keeping the personal information and whistleblowing content strictly confidential in the process of acceptance, registration, custody and investigation. The department shall complete the investigation and provide written investigation report in 30 working days, and continue to follow up subsequent handling.

5.1 BUSINESS ETHICS *(Continued)*

5.1.2 Whistleblower protection *(Continued)*

We firmly protect the legal rights and interests of whistleblowers and complainants, and clearly specify that any form of anonymous whistleblowing is accepted. At the same time, we require the department responsible for handling whistleblowing to keep the information of whistleblowers strictly confidential without disclosure of personal information of whistleblowers and the handling of whistleblowing to the person being reported or personnel not relevant to the whistleblowing work.

For any violation of the regulation by disclosing information of whistleblower, the Company shall impose penalties such as position transfer, salary deduction and demotion, transfer to judicial authorities, etc., in accordance with the seriousness of the circumstances. We strictly prohibit retaliation against whistleblowers and complainants and will hold relevant personnel and immediate leaders responsible if such violation occurs. We will also provide necessary legal assistance to whistleblowers, and for behaviors that seriously jeopardize the rights and interests of whistleblowers and complainants, we will immediately report to judicial authorities for investigating their criminal responsibilities according to the law.

Summary of the Administrative Measures for Whistleblowing and Complaint

The Administrative Measures for Whistleblowing and Complaint specifies that the staff, external customers and suppliers of the Group and other relevant personnel shall be entitled to report and complain any violation of discipline and law, fraud behavior or misconduct within the Group. The Administrative Measures for Whistleblowing and Complaint provides full protection for the rights and interests of whistleblowers and specifies that no entity or individual shall retaliate against whistleblowers and complainants in any form, which, once verified, shall be seriously dealt with in accordance with relevant provisions, and shall be transferred to judicial authorities for investigating criminal responsibilities according to the law if such behaviors constitute crimes.

The whistleblowing management department shall complete investigations in 30 working days, and inform the whistleblower of the handling results in written form in 5 working days after it is handled, ensuring the whistleblower's right to know.

Both anonymous and real-name whistleblowing are accepted. Whistleblowing and complaint can be made by letters, telephone, WeChat message, intranet mailbox, e-mail, visits, and other means. The whistleblowers' legal rights and interests are fully protected. The Company has set up a supervision and whistleblowing column on its official website (https://www.livzon.com.cn/news/191.html), which published the name of the contact person, telephone number, mobile phone number, internal and external emails, and address for whistleblowing and complaint.

5.1 BUSINESS ETHICS *(Continued)*

5.1.3 Clinical ethics

We abide by the principles and related ethics requirements of the World Medical Association Declaration of Helsinki, the Civil Code of the PRC, the Drug Administration Law of the PRC, the Administrative Measures for Drug Registration, and the Good Clinical Practice. We implement the responsibilities as a sponsor (i.e. the Group), putting first the interests and safety of subjects in drug clinical trials. We have established Clinical Quality Management System (cQMS) covering the full process of clinical trials. The clinical operation head office and the quality management head office of the Company and third-party institutions perform continuous monitoring, audits and feedbacks on the risks of clinical trials.

Ethics review and informed consent are crucial measures to ensure the subject's rights and interests. We require all drug clinical trials to obtain Study May Proceed letters or implied permission, develop clear, detailed, and practical clinical trial protocols and work plans, including but not limited to project management plan, inspection plan, data management plan and risk control plan, and set clear provisions for tracing original data, frequency and requirements of inspections, accompanied inspections, third-party audits, etc. Clinical trials shall ensure all subjects sign the informed consent forms through examination by the Institutional Review Board, Independent Ethics Committee and Data Privacy Committee.

We have established the Workflow for Protection of Drug Clinical Trial Data to strictly secure personal information of subjects and prevent harms and risks from disclosure of subject's private information. We guarantee the confidentiality of research project data through security measures such as anonymization or coding, ensuring that the subjects' data, such as identity information, disease information and biological sample information, is masked before it is provided to trial participants who have a need to acquire corresponding information. All clinical trial data are managed by dedicated personnel and stored in locked file cabinets with labels. Any clinical trial data that leaves the data storage facilities of the research site or clinical trial results published shall not contain personal information of the subjects.

5.1.4 Responsible marketing

We strictly abide by relevant laws of places where each business operates in the process of marketing and promotions, including but not limited to the Drug Administration Law of the PRC, the Anti-Unfair Competition Law of the PRC, the Advertising Law of the PRC, the Personal Information Protection Law of the PRC, the Administrative Measures for Medical Advertisements, the Measures for Drug Advertisement Review, and the Notice on the Standard Use of Drug Names in Drug Advertisements.

At the same time, the Group has established internal management systems of responsible marketing, including the Code of Conduct for Sales Personnel of Livzon Group, the Responsible Marketing Policy of the Sales Center of API Business Department, the Code of Conduct for Interaction with Healthcare Professionals, and the Administrative Regulations on Meetings Related to Healthcare Professionals. These regulations are intended to manage marketing behaviors of all employees of the Group, including staff at overseas offices and temporary staff, ensuring that the marketing activities comply with the laws and regulations. During the Reporting Period, the Group received no complaints or legal proceedings on misleading or deceptive promotion information.

5 OPERATION COMPLIANCE

5.1 BUSINESS ETHICS *(Continued)*

5.1.4 Responsible marketing *(Continued)*

Summary of the Code of Conduct for Sales Personnel of Livzon Group

01 Strict compliance with national laws and regulations is required. Any form of marketing activities by sales personnel, including marketing content and methods, shall follow national laws and regulations.

02 Any form of marketing activities, including marketing content, methods, and related marketing materials, shall be truthful and compliant. Exaggerated, deceptive, and false content is strictly prohibited; all marketing materials shall be reviewed and approved by the authorized management of the Company.

03 Accurate disclosure of information is required during business activities by laws and regulations as well as industry standards and guidelines; false and exaggerated statements about information such as product efficacy, concealment of information on known adverse reactions of drugs, and misleading doctors to use drugs are strictly prohibited; false and misleading statements regarding information about the Company's competitors are not allowed.

04 Business activities shall be conducted under proper procedures. No academic promotion activities are allowed without filing or obtaining consent from medical institutions, and no commercial bribery to business-related personnel is permitted.

05 Business activities shall be conducted in an honest and trustworthy manner and by fair participation in competition without impairing the interests of enterprises and others.

06 Interfering with or influencing the rational clinical medication to the detriment of the interests of others is not allowed.

07 Timely, honest, and accurate feedback on clinical adverse reactions of drugs is required. No concealment or delay is allowed.

08 Customer privacy must be protected. No arbitrary disclosure of customer privacy is allowed without their awareness and consent.

09 Commercial bribery and other unlawful means of sales activities are not allowed.

5 OPERATION COMPLIANCE

5.1 BUSINESS ETHICS *(Continued)*

5.1.4 Responsible marketing *(Continued)*

We conduct regular trainings on responsible marketing for all employees in marketing related positions (such as after-sales, market, and operation quality), which cover rules and regulations of the Company, product knowledge, laws and regulations, sales techniques, etc. We use a mix of online and offline trainings, where internal trainers offer in-depth coaching to staff on the one hand and immediate supervisors guide staff at work on the other. These allow every employee to understand and strictly abide by the Company's regulations on marketing, advertisement and sales, including no exaggerated, deceptive or false information in any marketing activities, using no commercial bribery or other unlawful means in sales activities, reporting no false information on products, services and prices, making no false or misleading statements on the products or services of the Company's competitors, and protecting the Group's business secrets and customers' privacy.

During the Year, the Group's trainings on responsible marketing covered all (100%) of the Group's employees in marketing-related positions.

We have established strict review mechanisms, requiring any form of marketing activities (including marketing content, methods and related marketing materials) to be reviewed and approved by authorized management of the Company and promotions on relevant clinical efficacy to be based on data from published journal articles, ensuring true and compliant content and prohibiting exaggerated, deceptive and false information. All publicity activities shall follow national regulations for advertisement approval and filing, and shall not be conducted until the approval is obtained.

To effectively monitor the compliance of the Group's marketing activities, we continue to strengthen internal control audits of risks. While our subsidiaries conduct regular self-inspections, the risk management head office of the Company performs audits on the standardized management of business of each subsidiary, such as the implementation of responsible marketing policies, sales processes, and signing of sales contracts. This ensures the strict compliance of sales business with all regulations and systems of compliant operation, and prevents illegal or unethical business practices.

Case: The marketing head office carried out trainings on responsible marketing – anti-commercial bribery

In December 2021, the Company's marketing head office conducted lecture trainings for all employees from the functional head offices of the Company's prescription medicines business department and the promotion staff and back office staff of the Group's companies in different provinces. The trainings focused on three aspects, namely anti-corruption and anti-commercial bribery, standards of sales behaviors, and administrative measures for whistleblowing and complaint. Through the methods of introducing and explaining negative cases and interactive questions, the training allowed the trainees to gradually understand the characteristic definition and behaviors of corruption and commercial bribery, as well as code of conduct for sales personnel, channels for reporting and complaining, etc. After training, all trainees passed the test on determining and identifying behaviors of commercial bribery.

5.1 BUSINESS ETHICS *(Continued)*

5.1.4 Responsible marketing *(Continued)*

Case: Livzon Diagnostics carried out trainings on responsible marketing policy to all employees

In December 2021, Livzon Diagnostics engaged all employees in trainings on code of conduct for marketing system, covering the Administrative Regulations on Meetings Related to Healthcare Professionals, the Code of Conduct for Interaction with Healthcare Professionals, and the Code of Conduct on Anti-corruption Behaviors in the Marketing System. These trainings emphasized the principles of responsible marketing: all promotion data should be based on the latest and scientifically valid evidence, contain no untrue or misleading information, and must be reviewed by relevant department of the company beforehand, and any provision of business services or complimentary items exceeding general value in the process of interaction to acquire illegitimate interests is prohibited.

Case: Sales center of API business department organized all employees to study internal policy of responsible marketing

In June 2021, all employees of the sales center of API business department of the Company participated in studying the Responsible Marketing Policy of the Sales Center of API Business Department. Through explanations of policy and case sharing, the employees had a comprehensive understanding of laws and regulations and internal regulation requirements to comply with in the marketing process, and improved their awareness of responsible marketing.

5.2 INFORMATION AND DATA SECURITY

Livzon regards protection of information and data security as an important corporate responsibility. The information head office of the Company conducts relevant work and reports regularly to the ESG Committee on work progress and management performance. We have established internal information and data security regulations, such as the Provisions of Document Encryption, the Standards of Vulnerability Management, the Standards of Password Management, the Standards of Special Account Management, and the Standards of Internet Security Management, etc. These regulations are aimed to standardize daily office and daily operation and maintenance work of the Group and protect information and private data of staff, customers and subjects.

At the same time, we entrust third-party independent authorities every year to conduct annual audit of the Company's internal information system and management system, and make corrective actions against risks according to audit advice, so as to achieve comprehensive identification and assessment of relevant risks. In addition, according to the Company's management requirements, every year the information head office should collate and compile the performance on information security management into an annual information risk assessment report and submit it to the ESG Committee of the Board for review.

Case: Improving the management standards of the information system and enhancing the management of redundant accounts

Based on the improvement suggestions as described in the Information Security Audit Report 2021 issued by an independent third-party institution, the Group will focus on improving management standards, developing a mechanism for separation of duties and a mechanism of permission control and review, and setting a review process to regularly review the operations of privileged users to ensure no violations. Meanwhile, we review the user accounts in the system on a regular basis to identify and delete redundant accounts promptly to reduce the risk of unauthorized access to data.

We take proactive measures to continuously carry out information security maintenance and improvement in four dimensions, namely computer security, network security, data security and hardware equipment; while deploying situational awareness platform, firewall, and intrusion prevention system. We proactively conduct vulnerability detection for the business system on a regular basis to ensure the implementation of appropriate proactive protection strategies against every new hazard incidents identified, enhance defense measures against external attacks, and lower the risks of security incidents such as data breach. During the Reporting Period, the Group had no incidents of data breach and was not involved in any lawsuits on information and data security against the Company or its employees.

5.2 INFORMATION AND DATA SECURITY *(Continued)*

Computer Security

Unified deployment of enterprise-level anti-virus software, terminal security management system and automatic update service (WSUS) patch server.

Network Security

Provision of firewall, intrusion prevention system, situational awareness platform, F5 load balancer, Internet behavior management, mail gateway, and other security equipment.

Data Security

Deployment of encryption management system on data terminals, implementation of security measures such as storage snapshots and remote disaster recovery for data centers, and regular system recovery tests to guarantee the availability, reliability and recoverability of data.

Hardware Equipment

Regular inspection, and prompt reporting and follow-up resolutions of problems found. Establishment of power supply and environment monitoring system to detect in real time the status of physical environment such as UPS power supply, indoor temperature and humidity, lighting, fire-fighting equipment, and new air conditioner.

We require all employees of the Group and technical service contractors to organize and participate in information security trainings on a regular basis, and include network security trainings in the induction training system of new employees, so as to enhance the awareness and ability of data security and privacy protection of all employees and contractors' service personnel. In addition, we also push messages on high risks of information security and protection measures and safety protection knowledge in daily work through our internal website, to reduce information security risks caused by staff's lack of safety awareness.

As at 31 December 2021, all employees of the Group have completed trainings on data security and privacy protection, reaching a training coverage of 100%.

Case: Trainings on information system security awareness

In October 2021, the Company engaged all employees in information security trainings in both online and offline forms. The trainings covered identification and disposal of phishing emails and spam emails, protection of personal privacy and improvement of confidentiality awareness, etc. to enhance awareness of information security and privacy confidentiality of corporate internal staff and achieve overall improvement in data security protection level of the Company.

5 OPERATION COMPLIANCE

5.3 INTELLECTUAL PROPERTY RIGHTS PROTECTION

Regarding intellectual property protection as a priority, Livzon extensively explored the innovative technologies for various key products, actively carried out patent application and maintenance, planned to build a patent network, and always prevented the risk of patent infringement. We strictly abided by the Patent Law of the PRC, the Trademark Law of the PRC, the Implementation Measures for Early Settlement Mechanism of Drug Patent Disputes (Interim), Provisions of the Supreme People's Court on Several Issues Concerning the Application of Law in the Trial of Civil Cases Involving Patent Disputes Related to Drugs of Which Applications for Registration are Filed and the latest provisions of other related laws and regulations. We formulated and strictly implemented the Patent Workflow Guidelines, which regulates the work in the aspects of patent risk assessment before product project establishment, patent transformation of R&D achievements, patent risk response for listed products, and review of articles before publication, and provide in detail the workflow of new patent application, maintenance, transfer, purchase, technology financing, technology patent retrieval, infringement litigation, invalidity response, etc., to make the management of patent acquisition, maintenance and application more scientific, planned and standardized.

The Group was actively engaged in patent mining, applications drafting and filing to promptly transform the Group's scientific research achievements into intellectual property rights; at the same time, the Group promptly conducted maintenance work for applied patents such as payment of annual fees, registration of grants, and response to review opinions, etc. In order to build a patent network for Livzon's key products, the legal compliance head office of the Company kept close communication with our research team and appointed experienced patent attorneys to extensively explore the innovative technologies for various key products and planned to build a patent network.

As at 31 December 2021, the Group applied for 697 patents and 478 granted patents in accumulation and owned 551 granted trademarks at home and abroad. During the Reporting Period, the Group completed daily maintenance of 483 valid patents and 216 pending patents, filed application for 85 domestic patents and 5 foreign patents with 64 granted domestic patents and 1 granted foreign patent acquired, processed 19 international trademark affairs among which 6 new grants were received, and processed 112 domestic trademark affairs among which 13 new grants were received.

5.3 INTELLECTUAL PROPERTY RIGHTS PROTECTION *(Continued)*

The Number of Patents Applied and Approved of the Group in 2021

Type of Patent	China		Overseas	
	Applied Patents	Approved Patents	Applied Patents	Approved Patents
Invention Patent	53	35		
Utility Model Patent	26	24		
Design Patent	6	5		
Total	**85**	**64**	**5**	**1**

Case: "A Method for Manufacturing Leuprorelin Acetate Sustained Release Microspheres" won the 22nd China Patent Excellence Award

5.3 INTELLECTUAL PROPERTY RIGHTS PROTECTION *(Continued)*

To prevent the risk of patent infringement, the Company actively followed up the development of the projects under research and cooperated with the R&D department, business development ("BD") department and other departments to conduct patent risk evaluation in a timely manner, provide reference for assessment of patent infringement risk, take relevant measures such as patent evasion or invalidation according to the evaluation results, and resolve patent-related risks. During the Reporting Period, the Company completed a total of 118 patent research and analysis reports, including 92 product patent research and search reports, 11 patent grant prospect analysis reports, 4 patent invalidation feasibility analysis reports and 11 patent infringement analysis reports.

We conducted intellectual property training and exchange activities regularly, including self-study, explanation, sharing of R&D personnel on related cases of pharmaceutical patent invalidation as well as guidance and case reviews of intellectual property experts on laws and regulations of intellectual property. A series of exchange activities and trainings including "explanation and discussion of invalidation cases" not only deepened R&D personnel's understanding of patent knowledge and improved their ability of writing patent files, but also deepened their awareness of intellectual property, enhancing the overall level of intellectual property management of the Group.

Case: Presentation on the Implementation Measures for Early Settlement Mechanism of Drug Patent Disputes and its supporting provisions

In July 2021, in view of the establishment of the Implementation Measures for Early Settlement Mechanism of Drug Patent Disputes, the Company's legal compliance head office conducted a special training for each R&D unit on this regulation and its supporting provisions, introducing in detail patent dispute resolution mechanisms relating to protecting pharmaceutical patentees' legitimate rights and interests and lowering patent infringement risks after the launch of generic drugs. Through the presentation, R&D personnel had a more thorough understanding of patent declaration, waiting period, classified approval, objections and encouragement policies of the provision, so as to fully mitigate and control pharmaceutical patent risks in the process of researching and developing new and generic drugs.

5.4 SHAREHOLDERS' INTERESTS

Communication with investors

Based on the Securities Law of the PRC, the Opinions of the General Office of the State Council on Further Strengthening the Protection of Legal Rights and Interests of Medium and Small-sized Investors in the Capital Market, the Work Guidelines for Relation Management between Listed Companies and Investors, and the Information Disclosure Management Measures of Listed Companies, the Company formulated and improved its Articles of Association and Work System of Handling Investor Complaints, fully practicing the information disclosure responsibilities as a listing company and ensuring that the information are disclosed to investors in a correct, accurate, complete and timely manner. At the same time, through multiple channels such as official website, general meetings, media platforms, telephone, e-mail and investor relations interactive platform, and by a variety of approaches such as reception of investors, visits to investors and seminar talks, the Company keeps long-term, stable and sufficient communication with its investors, answers questions raised by investors promptly, and establishes an investor complaint handling account to ensure effective feedback to investors' opinions. Livzon has received an "A" class rating, which is the highest rating class, in Shenzhen Stock Exchange Information Disclosure Assessment for two consecutive years.

The Company's website

The Company discloses all important information related to the Group to all who are interested in obtaining the Company's information in the most comprehensive and timely manner. The Company's official website (www.livzon.com.cn) provides investors and other stakeholders with access to important data related to the Group's key activities, operating condition and corporate issues (such as annual reports and interim reports to shareholders, announcements, ESG reports, data about business development and operation, corporate governance practice, etc.). In addition, announcements issued through the Hong Kong Stock Exchange are also available on the Company's website.

WeChat public account

The WeChat Public Account "Livzon Pharma" opened by the Company serves as a micro window for investors to follow the Company. By subscribing to the Company's WeChat public account, investors can receive articles published on it at any time, which enable them to follow the daily operation conditions of the Company more conveniently and swiftly, as well as to know the Company's activities such as activities of corporate culture promotion, team-building and the party union, etc.

Telephone number and email address for consultation

The Company provides telephone number ((86) 756-8135888, (86) 756-8135990, (86) 756-8135992) and email address (LIVZON_GROUP@livzon.com.cn) to investors for communication with the Company.

5.4 SHAREHOLDERS' INTERESTS *(Continued)*

General meetings

General meetings serve as a useful platform for the Company's direct communication with shareholders. The Company shall submit separate resolutions at the general meetings on substantially different topics for discussion, reserve sufficient time for direct communication and exchange between senior management of the Company and attending shareholders, and answer various inquiries made by investors.

Shenzhen Stock Exchange Easy Interaction Platform

The Company collects valuable suggestions from investors to the Company through the easy interaction platform for investor relations of the Shenzhen Stock Exchange (irm.cninfo.com.cn), and answers in detail the questions raised by the investors to the Company on the platform.

Investor relations activities

The Company has established a good communication mechanism with investors. Investors can understand the Company's operations and maintain sufficient communication with the management and key technical staff of the Company by means of specific object research, performance presentation, on-site visits, roadshows and media interviews. For all content of the aforesaid investor relations activities, the Company compiles written research summaries and makes public disclosure through the information disclosure websites designated by the CSRC and stock exchanges.

Shareholders' return plan

Pursuant to the relevant laws and regulations such as the Notice Regarding Further Implementation of Cash Dividends Distribution of Listed Companies and the Regulatory Guidelines of Listed Companies No.3–Cash Dividends of Listed Companies issued by CSRC and the relevant requirements of profit distribution policy under the Articles of Association of the Company, the Company convened a general meeting on 11 February 2020 to consider and approve the Shareholders' Return Plan for the Three Years (2019-2021) of the Company to establish a sustainable, stable and scientific return plan and mechanism for investors.

The Company promised that during the term of the plan, in the case where the conditions for distribution of cash dividends and the capital requirements for its normal production and operation are met, the Company shall actively distribute profits in the form of cash, and the profits to be distributed in cash each year shall not be less than 80% of the distributable profit achieved in the year. The accumulated cash dividends of the Company in the past 6 years (2015-2020) amounted to nearly RMB4,623.69 million.

Based on the operating results and overall financial position of the Group for 2021, the Board proposed a profit distribution plan of the Company for 2021 as follows: to distribute cash dividend of RMB13.00 (tax inclusive) for every 10 shares to all shareholders of the Company, based on the Company's total share capital (excluding the shares of the Company which were repurchased but not yet cancelled) as at the registration date of shareholding as determined by implementation of the 2021 annual profit distribution plan. There will be no bonus shares, nor will the capital reserves be capitalized. The profit distribution plan for 2021 was considered and approved at the 2021 annual general meeting of the Company.

5 OPERATION COMPLIANCE

5.5 PARTY BUILDING ACTIVITIES

As at the end of the Reporting Period, Livzon had a total of 615 party members, including 383 party members in Zhuhai headquarters, 232 party members in the Company's subsidiaries outside Zhuhai City, 9 party branches directly under the Zhuhai Party Committee, and 7 party organizations of the Company's subsidiaries outside Zhuhai City.

During the Reporting Period, with the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, the Company's party committee organized in-depth study of the spirits of Resolution of the Central Committee of the Communist Party of China (the "Party") on the Major Achievements and Historical Experience of the Party Over the Past Century and other important documents. Party members were motivated to study and educated to advance with the times and work hard for the Company's development through a series of party-building activities such as expert lectures, honoring outstanding party members and exemplary Party workers, and advanced community-level party organizations, competition of credits earned on the Study and Strengthen Nation app, and conducting party-building activities together with the sixth party branch of the united front work department of Zhuhai City, etc.

During the Reporting Period, the party committee of the Company was recognized as "the demonstration site of the party-building works of Two-new Organizations in Guangdong Province" and "the demonstration site of non-public party organizations in Zhuhai City".

Case: Conducting party-building activities

On 26 May 2021, the Company's party committee conducted party-building activities together with the sixth party branch of the united front work department of Zhuhai City, communicating experiences of practices of party affairs and jointly promoting the transformation of party-building advantages into development advantages.

5.5 PARTY BUILDING ACTIVITIES *(Continued)*

Case: Series of activities for celebrating the 100th anniversary of the founding of the Party

On 1 July 2021, the birthday of the Communist Party of China, the Company's party committee organized and conducted the ceremony of honoring outstanding Party members, exemplary Party workers, and advanced community-level Party organizations in celebration of the 100th anniversary of the founding of the Party.

On 3 July 2021, the Company's Communist Youth League committee carried out the themed activity of "celebrating the 100th anniversary of the founding of the Party by watching movies to learn about the Party's history".

6 ACCESS TO HEALTH CARE

6 ACCESS TO HEALTH CARE

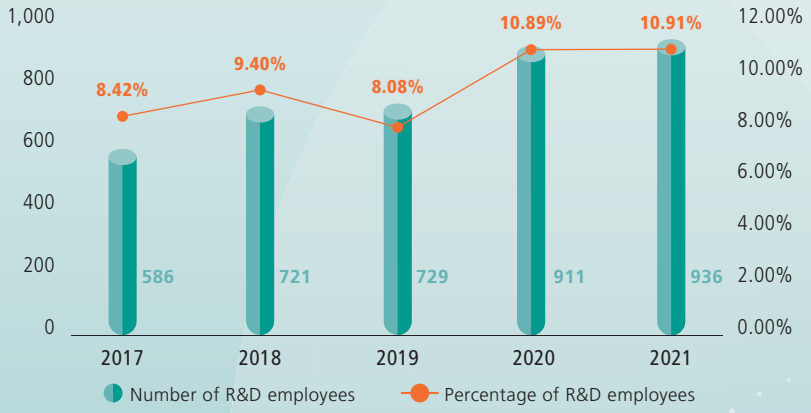
Livzon always focuses on unmet clinical needs and regards R&D innovation as the foundation for sustainable development. Upon taking full account of medical needs in Chinese and overseas pharmaceutical markets, Livzon establishes clear and abundant product R&D pipelines and develops differentiated global deployment strategy. Under the support of the Board and the ESG Committee, we will continue to improve access to health care and thrive to provide products and services of higher quality to doctors and patients around the world.

6.1 R&D INNOVATION

Livzon continues to focus on cutting-edge technologies, promotes product innovation and upgrade, places emphasis on innovative drugs and high-barrier complex preparations, and continues to strengthen innovative R&D and business layout of psychiatry and tumor immunology products, on the basis of original fields of strength such as assisted reproduction and gastroenterology.

In 2021, Livzon had 936 R&D employees (2020: 911), representing a year-on-year increase of 2.74%, accounting for 10.91% of the total number of employees (2020: 10.89%), which indicates that the scale of our R&D team continued to grow.

Number and Percentage of Livzon's R&D Employees from 2017 to 2021

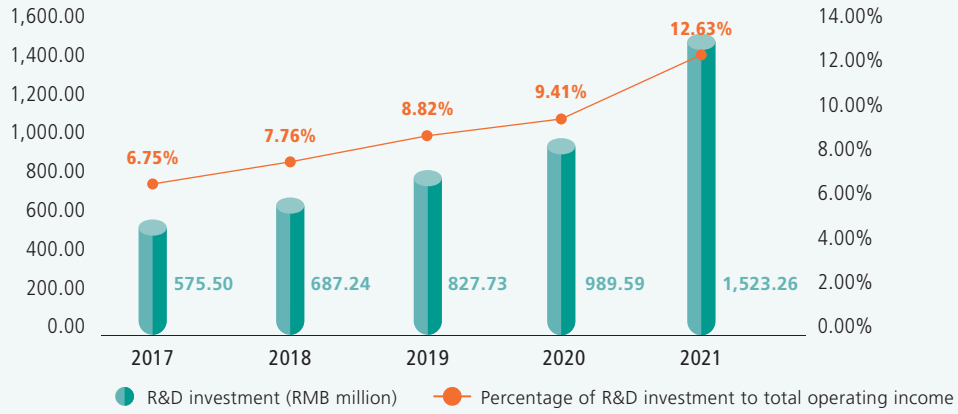


6 ACCESS TO HEALTH CARE

6.1 R&D INNOVATION *(Continued)*

During the Year, Livzon's total expenditure relating to R&D amounted to RMB1,523.26 million (2020: RMB989.59 million), representing a year-on-year increase of 53.93%, among which capitalized R&D investment accounted for 24.79% (2020: 10.66%) of total R&D investment, and R&D investment accounted for 12.63% (2020: 9.41%) of the Group's total operating income for the Year.

Livzon's R&D Investment and Percentage to Total Operating Income from 2017 to 2021



In order to better promote R&D strategy, Livzon actively implemented corporate strategic cooperation, achieving mutual benefit and win-win situation by virtue of resource integration and complementary advantages. Meanwhile, focused on key R&D projects in the areas of gastroenterology, psychiatry and oncology and immunity, the Group established long-term and intimate cooperation with renowned universities in China such as Zhejiang University, Jinan University and Guangzhou University on aspects of academic research and communication, technology exchange and drug R&D, jointly promoting scientific research innovation and industrialization of technological achievements through deepening cooperation between universities and enterprises.

Case: Strategic cooperation projects between corporates

To better serve for the development and upgrade of the pharmaceutical health industry in China, Livzon continues to explore forms of strategic cooperation between corporates, including technology transfer, joint development, and joint research, etc., to achieve mutual benefit and win-win situation.

In February 2021, Joincare Research Institute* signed a strategic cooperation contract with Tencent Quantum Lab. The parties will jointly promote the application of quantum computing + artificial intelligence in the field of microbial synthetic biology research and related pharmaceutical research.

In addition, the Company conducted in-depth cooperation with Nanjing King-friend Biochemical Pharmaceutical Co., Ltd.(南京健友生化製藥股份有限公司), TYK Medicines, Inc.(浙江同源康醫藥股份有限公司)and other corporates respectively on related projects in the area of reproduction, the area of anti-oncology, and the area of cardiovascular and cerebrovascular diseases, etc..

* Joincare Research Institute, whose full name is Henan Province Joincare Biopharmaceutical Research Institute Co., Ltd. (河南省健康元生物醫藥研究院有限公司), is established by joint investment of a subsidiary of Joincare Pharmaceutical Industry Group Co., Ltd. (健康元藥業集團股份有限公司) (the Company's controlling shareholder) and a subsidiary of the Company, and focuses on the concentrated R&D of biological fermentation products.

6 ACCESS TO HEALTH CARE

6.1 R&D INNOVATION *(Continued)*

6.1.1 Biopharmaceutical research

LivzonBio has solid footprints in the area of biopharmaceutical research, has built up mature platforms of R&D technology and production technology for antibody drugs, fusion protein drugs and cell therapy drugs, and has developed multiple projects for antibody drugs, recombinant proteins and CAR-T with the focus on areas of oncology, reproduction and autoimmunity, etc. As at the end of the Reporting Period, 1 variety was launched on the market and 1 variety completed production application, while many other varieties were in different R&D stages of clinical trials and preclinical development, respectively. Meanwhile, Livzon MAB, a wholly-owned subsidiary of LivzonBio, joined hands with the Institute of Biophysics, Chinese Academy of Sciences（中國科學院生物物理研究所）to develop the Recombinant SARS-CoV-2 Fusion Protein Vaccine（重組新型冠狀病毒融合蛋白疫苗）("V-01") with proprietary intellectual property rights, constructed a mature and innovative vaccine R&D technology platform, and developed the first-generation prototype COVID-19 vaccine and a series of mutant strains vaccine, laying a foundation for the future expansion of LivzonBio's R&D project pipelines.

Partial Key Pipelines under Research of LivzonBio in 2021

Category	Drug name	Target	Molecular category	Product category	Mono-therapy/ combination therapy	Indication	Preclinical	IND		Clinical trials			Production application and market launch	Region where clinical trials are conducted	Commercialization rights
								Filed	Approved	Phase I	Phase II	Phase III/ Key phase II			
Vaccine	Recombinant SARS-CoV-2 Fusion Protein Vaccine	SARS-CoV-2	New molecular	Fusion protein	Monotherapy	COVID-19								PRC/ overseas	Global
	SARS-CoV-2 2nd Generation Indian Mutant Strain Vaccine	SARS-CoV-2	New molecular	Fusion protein	Monotherapy	COVID-19								To be determined	Global
	Recombinant SARS-CoV-2 South African Mutant Strain Fusion Protein	SARS-CoV-2	New molecular	Fusion protein	Monotherapy	COVID-19								To be determined	Global
	Vaccines for other mutant strains	SARS-CoV-2	New molecular	Fusion protein	Monotherapy	COVID-19								To be determined	Global
Tumor	Recombinant Tumor Enzyme Specific Interferon α -2b Fc Fusion for Injection	Pro-IFN	New molecular	Fusion protein	Combination	Solid tumor								PRC	Global
	Recombinant Humanized Anti-PD-1 Monoclonal Antibody for Injection	PD-1	New molecular	Recombinant humanized monoclonal antibody	Monotherapy	Solid tumor								PRC/U.S.	Global
					Monotherapy	Thymic carcinoma and various								PRC	Global
Reproduction	Recombinant Human Choriogonadotropin alfa for Injection	r-HCG	Biosimilar drug (Ovidrel)	Recombinant protein	Monotherapy	Infertility								PRC	Global
	Recombinant Human Follitropin Alfa Solution for Injection	r-FSH	Biosimilar drug (GONAL-F)	Recombinant protein	Monotherapy	Infertility								PRC	Global
Immune disease	Tocilizumab Solution for Injection (Recombinant Humanized Anti-human IL-6R Monoclonal Antibody Solution for Injection)	IL-6R	Biosimilar drug (Actemra)	Recombinant humanized monoclonal antibody	Monotherapy	Rheumatoid arthritis								PRC	Global
	Recombinant Anti-human IL-17A/F Humanized Monoclonal Antibody Injection	IL-17A/F	New molecular	Recombinant humanized monoclonal antibody	Monotherapy	Psoriasis and ankylosing spondylitis								PRC	PRC

6 ACCESS TO HEALTH CARE

6.1 R&D INNOVATION *(Continued)*

6.1.1 Biopharmaceutical research *(Continued)*

Sequential booster of Recombinant SARS-CoV-2 Fusion Protein Vaccine ("V-01") presented excellent data

Sequential booster immunization is regarded as one of the important exploring perspectives of defeating Omicron, a mutant strain of SARS-CoV-2. If two doses of inactivated vaccines have been completed beforehand and the follow-up booster shot is switched to other non-inactivated route vaccines, this is sequential booster immunization.

Compared with other existing vaccines, V-01 has innovative molecular structure design, which consists of biological adjuvant, equipping V-01 with better safety and enabling it to induce higher levels of neutralizing antibodies. The results of the phase I/II clinical trials of V-01 indicated that it had excellent safety and immunogenicity. In February 2022, V-01 completed main data analysis of the phase III clinical trials of sequential booster and acquired key data, indicating that the absolute vaccine efficacy after V-01 sequential booster has met World Health Organization's standards, reaching 61.35%, and V-01 sequential booster can produce good protection against COVID-19 caused by Omicron infection. At the same time, no safety issues of concerns were found.

Currently, the COVID-19 pandemic is still in a serious stage of prevention and control in China, and promoting immunization enhancement, especially immunization enhancement of the elderly group, is of crucial importance to the goal of improving the ability of pandemic prevention and control. Through analysis of population subgroups, V-01 has an absolute vaccine efficacy of 71.83% on people with basic diseases, and has a vaccine efficacy of 61.19% on high-risk groups (people above 60 years old or with basic diseases). The trial results further indicated that V-01 has a relatively high vaccine efficacy on high-risk groups.

As a sequential booster vaccine, V-01 has a comprehensive advantage in terms of efficacy and safety. Up to now, we have applied for the conditional market launch of V-01 in China, with the hope of being able to provide more flexible, scientific and effective schemes options for continuous enhancement of immunization in the future.

Meanwhile, in response to the global trend of COVID-19 pandemic and the prevalence of COVID-19 mutant strains, the Group has developed various mutant strains vaccines and conducted relevant studies on animal and clinical trials of booster/sequential immunization, so as to contribute to the fight against COVID-19 pandemic.

6.1 R&D INNOVATION *(Continued)*

6.1.1 Biopharmaceutical research *(Continued)*

Key product—Recombinant Human Choriogonadotropin alfa for Injection（注射用重組人絨促性素）

Recombinant Human Choriogonadotropin alfa for Injection is an assisted reproduction drug, which plays an important role in female infertility treatment and in-vitro assisted reproductive technology. Recombinant Human Choriogonadotropin alfa for Injection was approved for market launch in China in April 2021, making it the first domestically-produced recombinant human choriogonadotropin alfa product to launch on the market in China.

Recombinant human choriogonadotropin alfa has seized the market of assisted reproduction drugs, while the only recombinant human choriogonadotropin alfa (r-hCG) product in China market is Ovidrel® from Merck Serono, with the rest being urinary-derived products. As compared to urinary-derived human choriogonadotropin alfa, recombinant human choriogonadotropin alfa has a higher level of purity and safety, whereas its price is ten times higher than domestically-produced urinary-derived human choriogonadotropin alfa. Livzon hopes to provide a more cost-effective product option for patients through domestic substitution, relieving their economic pressures. Meanwhile, we hope that this product could further benefit couples with infertility and fulfill patient family's desire to fertilize through drug treatment, contributing to mitigate the trend of aging population and declining birth rate nationally.

Key product under research—Recombinant Anti-human IL-17A/F Humanized Monoclonal Antibody Injection（重組抗人IL-17A/F人源化單克隆抗體注射液）

Recombinant Anti-human IL-17A/F Humanized Monoclonal Antibody Injection ("LZM012") is a new drug of monoclonal antibody, with antibody target binding IL-17A/F, achieving results of treating autoimmune related diseases through blocking the passage of IL-17. The IL-17A/F passage has a clear mechanism of action, and the IL-17A/F dual target design drug, Bimzelx®, has been proved to have a better treatment efficacy than TNF α and IL-17A target antibodies that have already been launched on the market, and was approved for market launch for the first time at the European Union in August 2021.

LZM012 is the first biological preparation in China that targets both IL-17A and IL-17F, while the project's main indications are autoimmune diseases such as psoriasis and ankylosing spondylitis. As at the end of the Reporting Period, LZM012 was under the phase Ib/II clinical trials.

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6.1 R&D INNOVATION *(Continued)*

6.1.1 Biopharmaceutical research *(Continued)*

Key product under research—Recombinant Humanized Anti-human IL-6R Monoclonal Antibody Solution for Injection (Tocilizumab Solution for Injection)(重組人源化抗人IL-6R單克隆抗體注射液(托珠單抗注射液))

Recombinant Humanized Anti-human IL-6R Monoclonal Antibody Solution for Injection ("LZM008") is a biological immunosuppressive drug used to treat adult patients with moderately to severely active rheumatoid arthritis (RA) who have not responded sufficiently to treatment of disease-modifying antirheumatic drugs (DMARDs). Original product Actemra® is the first anti-human IL-6R receptor humanized monoclonal antibody to launch on the global markets, and was officially included in China national medical insurance catalogue in August 2019. LZM008 adopts a monoclonal antibody platform technique for production, and presented a high level of similarity between LZM008 and Actemra® through a comprehensive similarity research with Actemra® on aspects of pharmacy, non-clinical and clinical.

As at the end of the Reporting Period, LZM008 has officially completed production application with application accepted, whose R&D progress is in the first tier in China, and it can further benefit the vast number of autoimmune disease patients in China after it is approved for market launch in the future.

Focusing on the area of relatively rare diseases

Thymic epithelial tumors are tumors derived from thymic epithelial cells, including thymoma and thymic carcinoma, which are rare primary mediastinal tumors. Thymic epithelial tumors accounted for approximately 0.2% to 1.5% of all malignant tumors, among which thymoma has an annual incidence rate of about 1.5 per 1 million while thymic carcinoma is much rarer with an annual incidence rate of about 0.3-0.6 per 1 million.

Because of the rarity of thymic carcinoma, currently, there are no large prospective randomized clinical trials providing definitive evidence-based treatment for this tumor. Most patients with thymic carcinoma are already presenting with invasive or metastatic manifestations at the time of first detection, and are usually at an intermediate to advanced stage at the time of diagnosis.

LivzonBio's Recombinant Humanized Anti-PD-1 Monoclonal Antibody for Injection ("LZM009") can inhibit or activate the receptor by targeting regulatory proteins, thus exhibiting enhanced immune response and improving the effect of cancer prognosis. As at the end of the Reporting Period, LZM009 was under the phase Ib/II clinical trials. In addition, in November 2021, LivzonBio granted a non-exclusive, royalty-bearing license to Bright Peak Therapeutics, Inc. for LZM009 with proprietary intellectual property rights, for its development of novel PD-1 targeted immune cytokines (PD-1 ICs), providing more possibilities for further commercialization in the future.

LivzonBio will continue its efforts in accelerating new product development through multiple channels such as independent R&D, external introduction and strategic alliances, focus on promoting projects on which it has advantages based on the existing varieties in the pipeline, continue innovative drug development across the globe, expand innovative product mix of differentiated treatment and combination therapy, improve the technical platforms of antibodies and protein drugs, and enhance its capability of product commercialization. Based on established vaccine technology platform, LivzonBio can also lay a foundation for R&D of products in the area of vaccine in the future.

6.1 R&D INNOVATION *(Continued)*

6.1.2 Deployment of sustained-release microspheres

Sustained-release microspheres can release drug at a certain speed in a fixed time to sustain valid plasma concentration, so as to mitigate fluctuations of plasma concentration, with multiple advantages such as fewer doses and lower drug toxicity. Due to substantial decrease in dosing frequency, patients' pain and burden of medical treatment can be mitigated and patient's drug compliance can be better improved, which improves the treatment results.

Given the superior characteristics of prolonged-action and sustained-release of microsphere preparation, Livzon's efforts in R&D mainly focused on three major areas, i.e. anti-tumor, regulation of endocrine system and anti-psychosis, while deploying prolonged-action ophthalmic drugs. Meanwhile, we conducted research on in situ gel liquid crystal technology and novel sustained-release of auxiliary material technology, constructed other prolonged-action preparation platforms, and developed prolonged-action preparation technology with proprietary intellectual property rights. In addition, we made full use of domestic and overseas resources, pursued more cooperation opportunities with external parties, and continuously enhanced innovation capability and explored varieties with market potential.

As at the end of the Reporting Period, the Group had 7 microsphere projects under research, of which 1 project has completed the phase III clinical trial and received the acceptance notice for production application, 1 project conducted the phase I clinical trial, 2 projects conducted BE (pre) trials and 2 projects were approved for clinical trial. In 2021, Leuprorelin Acetate Microspheres for Injection(注射用醋酸亮丙瑞林微球(貝依)), a product on sale, continued high growth and became one of the powerful engines for the Group's fast development.

6.1 R&D INNOVATION *(Continued)*

6.1.2 Deployment of sustained-release microspheres *(Continued)*

R&D Progress of Major Products under Research of Livzon Microsphere

Project name	Indication	Status							
		Application Region	Preclinical	Application for clinical trial	Phase I	Phase II	Phase III	BE trial	NDA*/ANDA*
Triptorelin Acetate Microspheres for Injection (1-month sustained release)	Prostate cancer; precocious puberty; endometriosis (Phase I to IV); female infertility; pre-treatment of uterine fibroids prior to surgery	China							●
Aripiprazole Microspheres for Injection	Schizophrenia, bipolar disorder	China			●				
Leuprorelin Acetate Microspheres for Injection (3-month sustained release)	Prostate cancer, premenopausal breast cancer	China						●	
Octreotide Acetate Microspheres for Injection	Acromegaly; gastro-entero-pancreatic endocrine tumor	China						●	
Triptorelin Pamoate Microspheres for Injection (3-month sustained release)	Treatment for locally advanced or metastatic prostate cancer	China			●				
Alarelin Microspheres for Injection (1-month sustained release)	Prostate cancer	China			●				

* NDA refers to New Drug Application; ANDA refers to Abbreviated New Drug Application.

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6.1 R&D INNOVATION *(Continued)*

6.1.2 Deployment of sustained-release microspheres *(Continued)*

Key product under research — Aripiprazole Microspheres for Injection（注射用阿立哌唑微球）

Aripiprazole is a new atypical anti-schizophrenia drug for treatment of adult schizophrenia and bipolar disorder. The aripiprazole already launched in Chinese market is an oral preparation which needs to be taken every day, without prolonged-action preparation. The project develops aripiprazole as a sustained-release microspheres for injection with one dose a month to achieve prolonged-action and stable release of drugs, which can enhance treatment effects and reduce toxicity of the drug, as well as reduce patients' inconvenience of taking the drug every day and improve patients' compliance, offering significant clinical advantages. As at the end of the Reporting Period, the product was under the phase I clinical trial.

Key product under research—Triptorelin Acetate Microspheres for Injection（注射用醋酸曲普瑞林微球）(1-month sustained release)

Triptorelin is an analogue of natural gonadotropin-releasing hormone (GnRH) for treatment of prostate cancer, precocious puberty, female infertility and endometriosis (Phase I to IV), etc. Triptorelin Acetate Microspheres for Injection (1-month sustained release) developed by us is a chemical drug of Class 2.2, which can significantly reduce the immediate-release effect and have a lower occurrence of adverse reactions compared with imported microsphere preparations that were already launched in the market. The product has filed the application for production registration after completing the phase III clinical trial, and received the acceptance notice for production application in September 2021, making it the first prolonged-action microsphere preparation to apply for production in China.

6.1 R&D INNOVATION *(Continued)*

6.1.3 Development of diagnostic reagents

Livzon Diagnostics focused on areas of infectious diseases, autoimmune diseases, respiratory diseases and blood safety, with the R&D direction mainly targeting on technology upgrade and iteration and complementary improvement of product combination. Based on major R&D platform resources such as the established seven preparation technology platforms, automated supporting equipment and upstream raw materials, Livzon Diagnostics established and developed projects with differentiated mindsets with the needs of disease clinical treatment as a starting point. Livzon Diagnostics has established mature teams of sales, market and after sales for new products in autoimmune diseases, tuberculosis and molecular diagnosis, accelerating the market launch and sales for relevant new products. Under the premise of consolidating the foundation, Livzon Diagnostics tried to explore new disease categories, so as to deploy by driving features with tradition.

In 2021, the key R&D direction of Livzon Diagnostics was to continue consolidating R&D results outputted in previous years, refine product deployment on autoimmune diseases, tuberculosis and respiratory diseases, take disease categories as a core, and adhere to the product development idea of providing featured solutions for clinical through appropriate technology platform.

- **Autoimmune diseases product pipeline:** With Livzon Autoimmune Hepatitis Antibody Test Kit (Magnetic Barcode Immunofluorescence)（自身免疫性肝病相關自身抗體7項檢測試劑盒（磁條碼免疫螢光發光法）) being successfully approved in July 2021, the basic projects of Digital Liquid Chip Method (DLCM) were all launched on the market. Meanwhile, we strengthened the development of autoimmune quantitative products on the chemiluminescence immunoassay technology platform.

- **Tuberculosis product pipeline:** We replenished the adaptation of high-throughput chemiluminescence immunoassay models, and improved R&D on molecular identification and PCR inspection project of Rifampicin's drug resistance.

- **Respiratory diseases product pipeline:** On the original lateral flow technology platform, we replenished and refined the projects on the technology platforms of fluorescence immunochromatographic assay and chemiluminescence immunoassay. Compared with lateral flow, the former two methods featured better sensitivity to replenish clinical application requirements on different circumstances.

6.1 R&D INNOVATION *(Continued)*

6.1.3 Development of diagnostic reagents *(Continued)*

As at the end of the Reporting Period, Livzon Diagnostics had 49 projects under research and 7 projects under the stage of clinical trial.

In regard to the R&D platform of diagnostic reagents, 4 products including Diagnostic Kit for IgM Antibody to SARS-CoV-2 (ELISA)(新型冠狀病毒(2019-nCoV)IgM抗體檢測試劑盒(酶聯免疫法)) (Class III), Autoimmune Hepatitis Antibody Test Kit (Magnetic Barcode Immunofluorescence)(自身免疫性肝病相關自身抗體7項檢測試劑盒(磁條碼免疫螢光發光法)(Class II), Diagnostic Kit for IgM Antibody to Mycoplasma Pneumonia (Chemiluminescence Immunoassay)(肺炎支原體IgM抗體檢測試劑盒(化學發光法)) (Class III) and Dry Method Immunofluorescence Analyzer(乾式免疫熒分析儀)completed registration in the PRC; 7 projects including 4 diabetes projects, IgG4, Diagnostic Kit for IgM Antibody to Mycoplasma Pneumoniae (Chemiluminescence Immunoassay)(肺炎支原體IgM(化學發光)), Rapid Test for Influenza A/B Antigen (Lateral Flow)(甲型乙型流感抗原膠體金)entered clinical trials, of which IgG4 and Diagnostic Kit for IgM Antibody to Mycoplasma Pneumoniae (Chemiluminescence Immunoassay)(肺炎支原體IgM(化學發光)) completed clinical trials and were in the process of registration submission. In regard to the equipment R&D platform, the Multi-channel Dry Method Immunofluorescence Analyzer(多通道干式熒光免疫分析儀)completed registration in the PRC, and second generation model of X-ray blood irradiator(輻照儀)and Molecular all-in-one Machine(分子一體機)entered the stage of trial production.

Livzon Autoimmune Hepatitis Antibody Test Kit (Magnetic Barcode Immunofluorescence)(自身免疫性肝病相關自身抗體7項檢測試劑盒(磁條碼免疫螢光發光法))

With the supporting use of DLCM analysis system, this product can provide blood typology basis for diagnosis of autoimmune hepatitis, primary biliary cholangitis, primary sclerosing cholangitis and other autoimmune hepatic diseases. The product can achieve full-automation and original serum tube on machine, supports random and emergent tests, and has the advantages of high throughput and being fast and convenient, which can significantly improve test efficiency. In addition, the test results are reported numerically, directly indicating the intensity of negativity or positivity, facilitating clinical judgment. The product was successfully approved in July 2021 and obtained the registration certificate of National Medical Products Administration.

Up to now, the DLCM analysis system of Livzon Diagnostics can fulfill mainstream testing demands of autoimmune diseases. In the future, Livzon Diagnostics will further improve the project deployment of DLCM and continue to expand its advantages.

6.1 R&D INNOVATION *(Continued)*

6.1.3 Development of diagnostic reagents *(Continued)*

COVID-19 diagnostic products

In regard to fighting against the COVID-19 pandemic, Livzon Diagnostics actively deployed the full line of COVID-19 diagnostic products, and its Livzon Rapid Test for SARS-CoV-2 Antigen (Lateral Flow)(新型冠狀病毒(SARS-CoV-2)抗原檢測試劑盒(乳膠免疫層析法)), Livzon Nucleic Acid Test Kit for 2019-nCoV (Real-Time PCR)(新型冠狀病毒(2019-nCoV)核酸檢測試劑盒(PCR-螢光探針法)) and 2019-nCoV Neutralizing Antibody Test (Lateral Flow)(新型冠狀病毒(2019-nCoV)中和抗體檢測試劑(乳膠免疫層析法)) consecutively obtained CE certification and other overseas access as well as registration in Germany, the United Kingdom, Austria, Thailand, Indonesia and other countries, continuing to engage in the frontier of fighting against the global pandemic.

Livzon Diagnostics's professional rapid test for SARS-CoV-2 antigen has received relevant certification from EU, Indonesia, Thailand, etc. In addition, Livzon Rapid Test for SARS-CoV-2 Antigen (Lateral Flow)(新型冠狀病毒(SARS-CoV-2)抗原檢測試劑盒(乳膠免疫層析法)) self-developed by Livzon Diagnostics has obtained certification from Thailand Food and Drug Administration (TFDA) for professional use and citizen self-inspection at home.

The rapid test for SARS-CoV-2 antigen obtained registration certificate for medical device

In April 2022, Livzon Rapid Test for 2019-nCoV Antigen (Lateral Flow)(新型冠狀病毒(2019-nCoV)抗原檢測試劑盒(乳膠法)) self-developed by Livzon Diagnostics was approved for registration and market launch by National Medical Products Administration. The product is applicable to three sample types: nasopharyngeal swab, oropharyngeal swab and nasal swab with the detection time of 15 minutes. The operation is simple, the results are clear and easy to interpret, so it can be used for self-detection. The approval for market launch of this product in China enriches the product lines of Livzon Diagnostics and provides more diverse solutions for COVID-19 prevention, so as to support the pandemic prevention and control.

6 ACCESS TO HEALTH CARE

6.2 INVESTMENT IN TREATMENT FOR RARE DISEASES

Under the guidance of relevant policies such as the "Healthy China 2030" Planning Outline and the Guidelines for Diagnosis and Treatment of Rare Diseases, Livzon has leveraged on its scientific research system and capabilities to increase the investment in R&D on orphan drugs for rare diseases and cooperated with the state to establish a two-way mechanism for R&D of orphan drugs for rare diseases, in an effort to improve the clinical status of rare diseases in China, and bring benefits to the patients suffering from rare diseases.

Malignant hyperthermia

Malignant hyperthermia, a rare disease, is an inheritable muscle disease, with extremely high mortality rates once developed, while dantrolene sodium is the only specialized drug for treatment. Undertaking social responsibilities, Livzon spent 10 years on self-development of Dantrolene Sodium for Injection(注射用丹曲林鈉), which is indicated for the prevention and treatment of malignant hyperthermia. As an exclusive product, Dantrolene Sodium for Injection* was approved for market launch in October 2020, saving Chinese patients with malignant hyperthermia from a condition of no drug available for use. In 2021, Dantrolene Sodium for Injection was awarded the 2020 Zhuhai Technology Innovation Product by Zhuhai Technology Development Promotion Board.

The Group called for the inclusion of Dantrolene Sodium for Injection as a mandatory drug for clinical resuscitation, actively promoted hospitals with clinical needs to store Dantrolene Sodium for Injection, in order to raise clinical response efficiency as much as possible, gain effective control of malignant hyperthermia, and save the lives of patients with malignant hyperthermia.

In 2021, the Company co-hosted a total of 21 academic activities related to malignant hyperthermia, further standardizing the clinical use of Dantrolene Sodium for Injection through mutual communication and discussion with the industry.

As at the end of the Reporting Period, dozens of hospitals in China have included Dantrolene Sodium for Injection of the Company in their drug stockpile, covering approximately 41% of provincial districts in China.

Case: Livzon co-hosted academic promotions relating to malignant hyperthermia

In 2021, Livzon co-hosted 21 academic promotions (1 national conference and 20 provincial conferences) focused on malignant hyperthermia. The main content of the promotion and education are: the pathogenesis, hereditary characteristics and differential diagnosis of malignant hyperthermia, the system construction and resuscitation process of malignant hyperthermia, how to raise the success rate of resuscitation and reduce death rate and complication rate, explanation for consensus among experts of malignant hyperthermia prevention and treatment, norms of clinical application of Dantrolene Sodium for Injection, and the feasibility of storage and drug's emergency purchase process, etc.

* Dantrolene Sodium for Injection is the first generic drug in mainland China, whose patent medicine is Dantrium® by Par Sterile Products LLC, an American Company.

6.2 INVESTMENT IN TREATMENT FOR RARE DISEASES *(Continued)*

Malignant hyperthermia *(Continued)*

Case: Livzon co-hosted a seminar on the clinical use of Dantrolene Sodium for Injection

In January 2021, the "Seminar of explanation for consensus among experts of malignant hyperthermia prevention and treatment in China and clinical use of domestic Dantrolene Sodium for Injection", which was hosted by Anesthesia Medical Quality Control Center of Hunan province, undertaken by Xiangya Hospital of Central South University and co-hosted by the Group, was livestreamed to the whole nation, providing explanation on consensus among experts of malignant hyperthermia treatment, with experts in various areas such as anesthesia, pharmacy and pharmaceutical regulatory participating in online discussion and communication, sorting out the whole process from regular storage of first aid drugs, emergency use, to scale drills. The seminar raised awareness of malignant hyperthermia among medical personnel, while making the treatment for malignant hyperthermia more standardized and more accurate.

Acromegaly

Acromegaly is a rare chronic progressive endocrine metabolic disease with covert clinical performances, which leads to common occurrence of delayed diagnosis and significant increase in complication rate and treatment difficulty. Octreotide acetate is a synthetic octapeptide compound, which is currently clinically used on acromegaly and gastrointestinal tract secretory tumor. The drug is poorly absorbed orally but can be quickly and completely absorbed using subcutaneous and intravenous doses. Octreotide Acetate Microspheres for Injection（注射用醋酸奥曲肽微球）developed by Livzon can achieve the sustained release effect of 1 month, and has started BE pre-test as at the end of the Reporting Period.

This product is the world's first generic drug of Sandostatin® developed by Novartis. Although Sandostatin® is covered by the national medical insurance catalogue of China, the price is still relatively high, exerting a great financial pressure and burden to patients and the national medical insurance system. Therefore, given the actual clinical demand and social responsibility, we started to develop the generic version of Sandostatin®, hoping to provide a quality assured generic product as soon as possible to mitigate the current situation of medication for patients and improve the affordability of medication for patients. Based on the preclinical data available, the pharmacokinetic characteristics and safety profile of Octreotide Acetate Microspheres for Injection are largely consistent with that of Sandostatin®. In the future, it is expected to provide patients with a clinical treatment option that is not inferior to the original product of Sandostatin® in both quality and treatment results.

6.3 ACCESS TO HEALTH CARE

6.3.1 Enhancement of product accessibility

Livzon's products include drug preparation products, active pharmaceutical ingredients ("APIs") and intermediates, and diagnostic reagents and equipment. We deepened the layout in five disease areas of gastroenterology, assisted reproduction, tumor and immunity, psychiatry and metabolic diseases, and focused on "innovative drugs and high-barrier complex drug preparations", forming a relatively complete product profile with business covering major global pharmaceutical markets and emerging markets such as China, Europe and America, South America, Southeast Asia, Central Asia, South Asia and Africa.

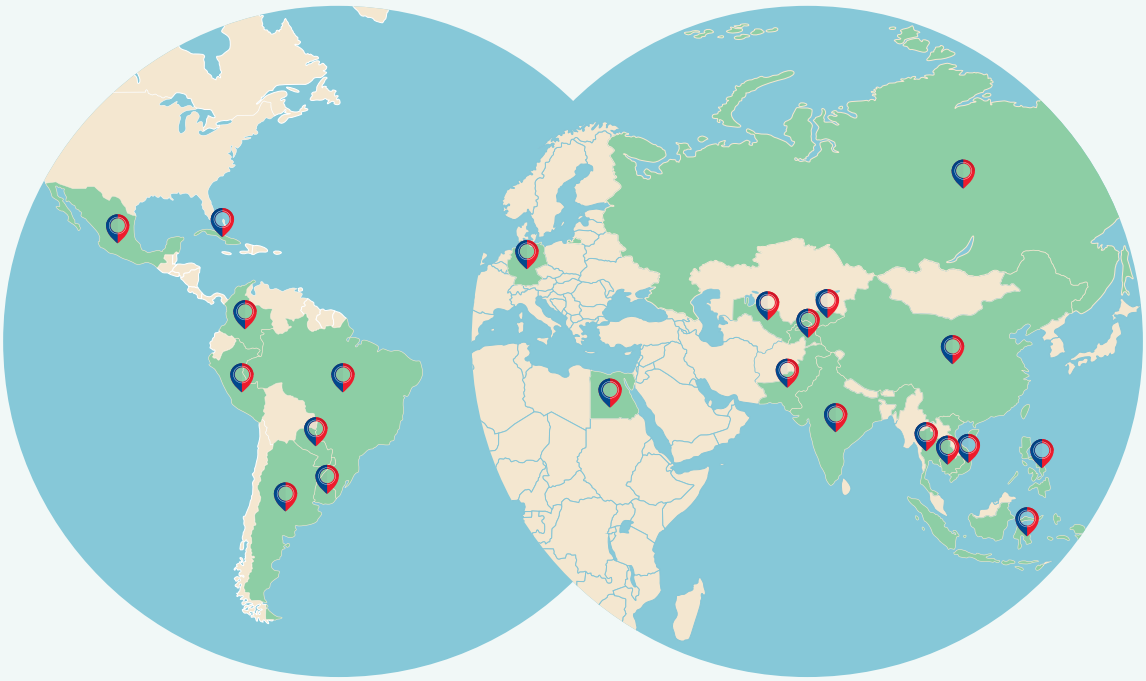
Scope of Livzon's products		Major key products
Chemical drug preparation products	Gastroenterology	Ilaprazole Enteric-Coated Tablet and Ilaprazole Sodium for Injection, a series of Bismuth Potassium Citrate products, Rabeprazole Sodium Enteric-Coated Capsules, Weisanlian (Bismuth Potassium Citrate Tablets/Tinidazole Tablets/Clarithromycin Tablets)
	Gonadotropic hormone	Leuprorelin Acetate Microspheres for Injection, Urofollitropin for Injection
	Psychiatry	Fluvoxamine Maleate Tablets, Perospirone Hydrochloride Tablets
	Anti-infection	Voriconazole for Injection
APIs and interme-diate products	APIs – human use	Phenylalanine, Acarbose, Vancomycin Hydrochloride, Daptomycin
	APIs – veterinary drugs	Milbemycin Oxime, Lincomycin, Moxidectin, Doramectin
	intermediate	Mevastatin, Lovastatin
Traditional Chinese medicine preparation products	Anti-tumor	Shenqi Fuzheng Injection
	Anti-infection	Anti-viral Granules
Diagnostic reagents and equipment products	Respiratory tract infection	Livzon Rapid Test for 2019-nCoV Antigen (Lateral Flow), Diagnostic Kit for IgM/IgG Antibody to Coronavirus (SARS-CoV-2) (Lateral Flow), Livzon Rapid Test for Mycoplasma Pneumoniae IgM Antibody (Lateral Flow)
	Autoimmune disease	Livzon Antinuclear Antibody Test Kit (17) (Magnetic Barcode Immunofluorescence), Livzon Autoimmune Hepatitis Antibody Test Kit (Magnetic Barcode Immunofluorescence), Anti-double-stranded DNA Antibody IgG Test Kit (Chemiluminescence Immunoassay)
	Severe infectious disease	Nucleic Acid Test kit for HBV DNA/HCV RNA/HIV (1/2) RNA (Real-Time PCR), Nucleic Acid Test Kit for Human Immunodeficiency Virus Type 1 (Real-Time PCR)
	Tuberculosis	Livzon Interferon-Gamma Release Assays (IGRA) Test Kit (Chemiluminescence Immunoassay)

6.3 ACCESS TO HEALTH CARE *(Continued)*

6.3.1 Enhancement of product accessibility *(Continued)*

In order to improve accessibility of pharmaceutical products and benefit patients worldwide with more safe and effective products, the Group has accelerated the international industrial layout by active pursuit of overseas registration and sale of our products, facilitated our extended development in overseas markets by license cooperation and equity investment, etc., further promoted the development of emerging markets, and continued to market our high-quality products to the world. The Group's income from overseas principal businesses has amounted to RMB1,538.55 million in 2021, accounting for 12.90% of income from principal businesses, with a compound growth rate of nearly 15.48% in the past five years. We continuously provide high-quality pharmaceutical products and services to many countries and regions.

Countries Covered by Livzon's Product Sales in 2021



6.3 ACCESS TO HEALTH CARE *(Continued)*

6.3.1 Enhancement of product accessibility *(Continued)*

API business

As a major global supplier of APIs, the Group continuously develops and operates in standardized markets such as the United States and Europe, while deepening and maintaining business in Asian markets such as India, Pakistan and Vietnam, South American markets such as Argentina and Brazil and Middle East markets. Since the beginning of the COVID-19 pandemic, high-end antibiotic products such as Vancomycin (萬古霉素) and Teicoplanin (替考拉寧) has played an important role in anti-pandemic treatments.

In 2021, the Group strengthened market development efforts on high-end antibiotic API products and high-end pet drugs, enhanced registration in European and American and other overseas markets, gaining strong growth of high-end antibiotic products in overseas markets. High-end pet drug products have strengthened cooperation with major animal healthcare companies globally, with significant growth in sales volume in many regions around the world, and the market development of new products was progressing smoothly.

We strengthened cooperation with local pharmaceutical enterprises and expanded our business through the sales network of their drug preparations. In addition, we set overseas offices in four countries, namely Brazil, India, Spanish and Vietnam, hiring locals to take advantage of their language and permanent residence strength to develop the market for our products and to maintain and communicate with our customers, which can enhance the communication and negotiation of new projects and promotion of new products, as well as improve the Company's brand awareness and product market share.

As at 31 December 2021, a total of 28 API products of the Group had completed 104 registrations in 56 overseas countries/regions. As at 31 December 2021, 17 of the Group's API varieties have passed on-site inspections for international certification, and the Group's APIs have obtained 49 certificates of international certification within the validity period (of which 4 varieties have passed FDA on-site inspections and 12 varieties have obtained CEP certificates) and 2 qualification certificates.

Livzon made contributions to charitable projects on treating river blindness

River blindness is a parasitic infection caused by the bite of the black fly, which is most prevalent in Africa and a few Latin American countries. Once infected by parasites in the river, patients will suffer from inflammation of the cornea, which can lead to vision loss or unrecoverable blindness if not treated promptly. The Company had signed a long-term strategic cooperation agreement with Medicines Development for Global Health (MDGH), a non-profit biopharmaceutical company, and will provide moxidectin APIs for the charitable project "Moxidectin for human project" under the Bill Gates Foundation for consecutive years in the future, at a favorable price far lower than the market price. Moxidectin product is mainly used for treatment of patients with river blindness in Africa and certain Latin American countries, with the medication target covering the whole population (including healthy people). Currently, there are 200 million people globally exposed to the risk of getting river blindness, thus the product can make significant contributions to improvement of medical level in developing regions and the treatment of diseases.

6.3 ACCESS TO HEALTH CARE *(Continued)*

6.3.1 Enhancement of product accessibility *(Continued)*

Drug preparation business

For the drug preparation business, Livzon has continuously explored markets outside the PRC, comprehensively streamlined and developed a new international team, recruited talents in international registration regulations for drug preparation in China.

In emerging markets (mainly including Southeast Asia, South Asia, Middle East and North Africa, Latin America, the Commonwealth of Independent States and other regions), we rely on our existing products that meet the requirements of local registration regulations to initiate local GMP inspection work and obtain market approval. We continue to advance the market access and sales of products in areas of assisted reproduction, gastroenterology, psychiatry, immune and anti-infection in the countries and regions including South Asia, Southeast Asia, Central Asia, East Asia such as Pakistan, the Philippines, Indonesia, Uzbekistan. Meanwhile, we have evaluated and selected products with higher market potential overseas and strengthened their registration to continuously cater for the needs of international markets.

In the standardized markets (mainly including Europe and America, Japan, South Korea and Australia, etc.), in light of the stringent requirements of these market regulations and the high cost of preliminary development, we promote the existing featured high-barrier complex drug preparations to obtain certification of high-end drug preparation in Europe and America based on international multi-center clinical trial and application, so as to enter into the standardized markets should any opportunities arise. Obtaining the European and American high-end drug preparation certification will greatly facilitate the promotion and registration of the Group in developing countries and improve the local popularity and coverage of the Group's products.

In 2021, with respect to international business layout, the Group strengthened the market access and promotion of products in areas of assisted reproduction, antifungal, anti-viral and gastroenterology in the countries and regions including Pakistan, Indonesia and the Philippines. Meanwhile, the Group carried out innovative business cooperation models in core markets around the world and signed seven business cooperation agreements involving products which have been launched in the market or were in the process of R&D during the Reporting Period. Kanamycin Solution for Injection (卡那霉素注射液) passed international certification and obtained the WHO pre-qualification certificate. Ilaprazole Sodium for Injection (注射用艾普拉唑鈉), a patented new drug of the Company, was conducting overseas registration and application for market launch in Indonesia and the Philippines. In 2021, the Group obtained 5 registration approval, submitted 5 new registrations and applied for 1 overseas GMP official audit for its drug preparation products in overseas markets.

6.3 ACCESS TO HEALTH CARE *(Continued)*

6.3.1 Enhancement of product accessibility *(Continued)*

Drug preparation business *(Continued)*

We recruit local employees in countries including the Philippines, Pakistan, Indonesia, Russia and Malaysia to establish overseas representative offices. In addition, we have built partnerships with local pharmaceutical manufacturers and carried out technology transfer and local production of our major products. Meanwhile, Livzon was working hard to develop large-molecule and small-molecule preparation technology transfer projects to developing countries. By exporting technology transfer scheme and analytical testing scheme, we helped local pharmaceutical enterprises upgrade and improve their production process management, quality control and other links to a certain degree, which can improve the local pharmaceutical industry level and increase the local accessibility of our products.

Looking forward, Livzon plans to obtain new registration for 41 drug preparation products in 15 countries/regions by 2025 to benefit more patients around the world. With regard to diagnostic reagents, we will proactively deploy the full line of SARS-CoV-2 test products, and will further facilitate the registration and certification and marketing scope in the world for products including Livzon Rapid Test for SARS-CoV-2 Antigen (Lateral Flow)(新型冠狀病毒(SARS-CoV-2)抗原檢測試劑盒(乳膠免疫層析法)), Livzon Nucleic Acid Test Kit for 2019-nCoV (Real-Time PCR)(新型冠狀病毒(2019-nCoV)核酸檢測試劑盒(PCR-螢光探針法)), 2019-nCoV Neutralizing Antibody Test (Lateral Flow)(新型冠狀病毒(2019-nCoV)中和抗體檢測試劑(乳膠免疫層析法)).

Livzon's COVID-19 vaccines explored local production overseas

Livzon is expected to achieve local production of COVID-19 vaccines by supporting overseas cooperative parties to carry out sub-package of Livzon's COVID-19 vaccine V-01 (Recombinant SARS-CoV-2 Fusion Protein Vaccine (重組新型冠狀病毒融合蛋白疫苗)) in advance. During the Reporting Period, Livzon carried out in-depth communication with cooperative parties and authorities in multiple countries, in hopes of achieving local production and cooperation of V-01 overseas.

The overseas deployment of Livzon's COVID-19 vaccines

The phase III clinical trials of Livzon's COVID-19 vaccine V-01(Recombinant SARS-CoV-2 Fusion Protein Vaccine (重組新型冠狀病毒融合蛋白疫苗)) covered multiple regions including Southeast Asia, South Asia and Europe, etc., and has obtained clinical trial approval in 5 countries. The global multi-center clinical trials of V-01 is progressing smoothly: The phase III clinical trial for primary vaccination of V-01 was carrying out in the Philippines, Indonesia and Russia. In addition, the phase III clinical trial for sequential booster of V-01 as inactivated vaccine was carrying out in Pakistan and Malaysia. As at the disclosure date of the Report, the interim master data analysis of the phase III clinical trial for sequential booster has been completed and its key data has been obtained, and LivzonBio has filed the application for conditional market launch to China National Medical Products Administration. The phase III clinical trial for primary vaccination has completed enrollment of all subjects, reaching the clinical primary endpoint target of the program, and was currently undergoing data cleaning and preparing for relevant work on key data analysis.

We actively communicated with regulatory agencies of multiple countries, and are actively preparing for emergency use authorization (EUA) or the application for market launch. Meanwhile, we also cooperated with certain renowned local pharmaceutical enterprises, made introductions to local regulatory medical authorities, striving to improve the accessibility of COVID-19 vaccines as soon as possible.

6.3 ACCESS TO HEALTH CARE *(Continued)*

6.3.2 Improvement of product affordability

Livzon is dedicated to providing high quality drugs with reasonable prices to patients. We take into account the level of economic development in each region and adopt different product structure and pricing strategies for different markets, thriving to improve the accessibility and affordability of drugs.

Domestic market

At the end of 2021, the National Healthcare Security Administration and the Ministry of Human Resources and Social Security published the Catalogue of Drugs for National Basic Medical Insurance, Work-related Injury Insurance and Maternity Insurance (2021) (the "Medical Insurance Catalogue"). As at the end of the Reporting Period, a total of 186 products of the Group are included in the Medical Insurance Catalogue, with 90 drugs in the class A list and 96 drugs in the class B list.

Ilaprazole Sodium for Injection(注射用艾普拉唑鈉)(brand name: Yilian(壹麗安)), an original patented innovative new drug of the Company, has been included in the Medical Insurance Catalogue at the end of 2019. In 2021, Ilaprazole Sodium for Injection continued to be included in the Medical Insurance Catalogue, with a decrease of the product price from RMB156 per unit to RMB71 per unit or over 50%, further reducing the financial burden of patients, benefiting more patients, as well as saving medical insurance expenditures for the country. Moreover, as the payment limit of Ilaprazole Sodium for Injection was cancelled in this national medical insurance negotiation, the suffix remarks of the Medical Insurance Catalogue were changed from "limited to patients diagnosed with diseases indicated in the insert sheets and subject to fasting or have dysphagia" to "Peptic Ulcer and Bleeding" as set out in the insert sheets, which expands the beneficiary population and is expected to benefit more patients.

In addition, Livzon proactively participates in the national centralized drug procurement. During the Reporting Period, Livzon's Tinidazole Tablets(替硝唑片)(0.5g; 8 tablets/box) is selected for the fifth round of national centralized drug procurement in a number of 6.1188 million tablets. Tinidazole Tablets passed the consistency evaluation of generics' quality and efficacy in April 2020, and being selected for this round of centralized procurement will further benefit more patients with genitourinary diseases and anaerobic bacteria infection by virtue of the scale advantage, in a manner of "high quality with low price", thus enhancing the clinical accessibility of the drug.

Overseas Market

While exploring and establishing our presence in overseas markets, Livzon sets equitable prices for products by taking into consideration the level of local economic development and medical health, providing differentiated pricing strategy for different markets, as well as taking into account factors including local condition of drug production and supply, gross domestic product(GDP), level of income per capita, patient affordability, local medical system condition, product pricing of peers and other social and economic conditions.

Considering the lower standard of living of people and relatively high cost of drugs in emerging market/developing countries, in the process of product promotion in overseas underdeveloped countries and regions, the Group sets reasonable and favorable prices based on local development status and market conditions, and actively takes part in local government biddings, providing affordable drugs to the local communities.

As at the end of the Reporting Period, a total of 16 APIs and drug preparation products of the Group have adopted equitable pricing policies based on local income levels in the sales process in South Asia, Southeast Asia, South America and Africa.

6.3 ACCESS TO HEALTH CARE *(Continued)*

6.3.2 Improvement of product affordability *(Continued)*

Overseas Market *(Continued)*

Business Segment	Improvement of drug affordability and equitable pricing policies in developing countries	Progress
APIs	• Considering the lower standard of living of people and relatively high cost of drugs in emerging market /developing countries as compared with developed countries, Livzon thrives to provide APIs of high quality and favorable prices in emerging market/developing countries, so as to lower the drug cost of the target country's market; • In the market promotion of emerging and developing markets, set relatively favorable prices based on local living standard and medical level; • Adhere to a relatively transparent and consistent pricing policy for inter-country and intra-country markets on the same level; • Adhere to the equitable principle in sales pricing for domestic markets. Provide certain price discounts to our domestic strategic cooperation partners according to the purchase volume by signing year-round supply agreements; • Although the COVID-19 pandemic has caused demand increase in certain markets, Livzon basically maintained the original price in the face of rising production costs, freight costs and various other costs, in order to ensure the affordability of its products.	• Livzon has conducted business cooperation with approximately over 50 customers in India, providing 13 kinds of APIs and intermediates. Among which, the prices of intermediates are 5%-10% lower than those of the developed countries, while the prices of APIs are 15%-40% lower than those of the developed countries; • Certain high-end antibiotic products (including Vancomycin Hydrochloride, Teicoplanin, and Daptomycin, etc.) have a relatively large demand in emerging markets and developing markets, set an average selling price in these developing countries, such as India, Argentina, Pakistan and Thailand, lower than that in developed countries by 30%~40%; • Certain veterinary drug products (such as Doramectin, Moxidectin, etc.) in major countries of South America (such as Colombia, Brazil, Uruguay, Argentina, etc.) and in certain Asian countries (such as Pakistan and Vietnam, etc.) have an average selling price lower than that in developed countries by 15%~20%.

6.3 ACCESS TO HEALTH CARE *(Continued)*

6.3.2 Improvement of product affordability *(Continued)*

Overseas Market *(Continued)*

Business Segment	Improvement of drug affordability and equitable pricing policies in developing countries	Progress
Drug preparations	• In developing countries, by supplying chemical generics or biosimilar drugs, Livzon provides the Asian, Africa and Latin America markets with drug preparation products that have lower prices than and achieve similar treatment effects with the patented drug preparations; • As part of the access strategy, Livzon adopts innovative pricing structure to gradually expand its product coverage; • Livzon waives the market licensing fee of its products in underdeveloped countries and low-income countries due to social responsibilities.	• For Recombinant Human Choriogonadotropin alfa for Injection, Livzon waived the market licensing fee for its customers in 2 countries located in West Africa and South Asia; • For Ilaprazole Sodium for Injection, its patented new drug, Livzon waived the market licensing fee for its customers in 1 country located in Southeast Asia; • For Recombinant Humanized Anti-human IL-6R Monoclonal Antibody Solution for Injection, Livzon waived the market licensing fee for its customers in 1 country located in Southeast Asia, accelerated local EUA registration of this product, in order to adopt it for defeating the COVID-19 pandemic more quickly.

Business segment	Pricing transparency in developed and developing markets
APIs	• Adhere to a relatively transparent and consistent pricing policy for inter-country and intra-country markets on the same level; • Overall market prices are relatively transparent, and customers are familiar with and understand the price level; • Sell directly to end preparation factories as far as possible, reduce intermediate channels, clarify prices on both sides of supply and sales, and accurately understand the purchasing price of end users.
Drug preparations	• In regard to developing markets, comply with the medical pricing policy of developing countries: generic's price is usually 60%-70% of patented drug's price; • Take the overseas end route as far as possible, reduce intermediate links, improve price transparency, understand accurately the purchasing price of end users, and reduce the cost of local drug supplies.

6.3 ACCESS TO HEALTH CARE *(Continued)*

6.3.3 Promotion of rational use of drugs

Drug-resistant bacteria has become a major challenge for current global public health, and Livzon understands deeply and acknowledges that resistance to antibiotics is one of the major public health risk. Drug-resistant bacteria pose a growing threat to human health, especially hospital infections caused by certain multi-drug resistance bacteria and pan-drug resistance bacteria, which brings more difficulty to clinical treatments. Livzon promotes prudent and rational use of antimicrobial drug such as antibiotics, and conducts R&D and makes investments in the area of antibiotics to address drug-resistance.

Livzon has a series of anti-infection products, and we attach great importance to reasonable clinical use of antibiotics. With regard to the Company's anti-infection series of products such as Voriconazole for Injection（注射用伏立康唑）and Cefodizime Sodium for Injection（注射用頭孢地嗪鈉）, we strictly abided by administrative measure such as the Administrative Measures for the Clinical Application of Anti-bacterial Drugs (《抗菌藥物臨床應用管理辦法》) and Notice on Further Strengthening the Management of Anti-Microbial Drugs to Suppress Drug Resistance (《關於進一步加强抗微生物药物管理遏制耐藥工作的通知》), and in combination with the Directories for the Hierarchical Management of Clinical Application of Antibacterial Drugs (《抗菌藥物臨床應用分級管理目錄》) consecutively printed out by various provincial and autonomous regions, we continuously strengthened the management on prescription drugs in the process of drug operation, and cooperated with medical institutions in implementing management of hierarchical anti-bacterial drugs and doctor's prescription authorities. According to the requirements of diagnosis related groups (DRG), we streamlined evidence-based evidence related to products (guidelines, pathways, consensus, literature, etc.), providing reference information with higher value for accurate treatment of anti-infection and assisting to reduce the indiscriminate use of antibiotics.

In addition to strict compliance with the classification management system of the clinical application of anti-bacterial drugs, implementation of the regulations of non-restricted application class, restricted application class and specialized application class, Livzon also actively cooperates with hospitals to control the indiscriminate use of antibiotics, assists hospitals in the control of drug-resistant bacteria, carries out training and lectures on optimization of the treatment plan of drug-resistant bacteria, and devotes to improving the level of clinical use of anti-bacterial drugs and reducing the incidence of indiscriminate use of antibiotics.

We proactively promote industry communication and contribute to improving the development of anti-infection disciplines. In 2021, we sponsored a number of national academic conferences in the area of anti-infection, such as the national academic conference on invasive fungal infection in March, the first academic conference on bacterial and fungal infection by Chinese Medical Association in April, the third intensive care medicine Pujiang forum in May, the respiratory physician annual conference of Chinese Medical Association in June, the oriental intensive care medicine academic annual conference in July, and the intensive care medicine annual conference and the respiratory annual conference in December. We have in-depth communications and exchanges with clinical experts in fields of infection, respiratory, blood, ICU, organ transplantation, skin, obstetrics and gynecology, and scholars engaged in microbiological basic research, so as to jointly promote the development of medical technology.

In addition, to address antibiotic resistance and other antimicrobial resistance, the Group is actively engaged in R&D of new drugs for drug-resistant bacteria in the hope of providing new solutions to the increasingly serious problem of drug resistance in China.

6.3 ACCESS TO HEALTH CARE *(Continued)*

6.3.3 Promotion of rational use of drugs *(Continued)*

R&D conducted to address antibiotic resistance and other antimicrobial resistance

- **R&D on drug resistance of gram-negative bacteria**

  Currently, drug resistance of gram-negative bacteria is a rather serious issue. According to research, the top five common strains of domestic clinical infections are all gram-negative bacteria. Polymyxin（多黏菌素）is an important drug for treating gram-negative bacteria infections with multidrug resistance (MDR). Polymyxin has low drug resistance rate and strong antibacterial activity, and is effective to various kinds of gram-negative bacteria such as escherichia coli, klebsiella and enterobacter. Polymyxin is the last defending line of gram-negative bacteria with multidrug resistance where treatments of antibiotics such as beta-lactam, aminoglycosides or Quinolone are ineffective.

  As of the end of the Reporting Period, the Group was carrying out the R&D on Polymyxin products. Among which, Polymyxin E Methanesulfonate（多黏菌素E甲磺酸鈉）, our self-developed chemical generic API, has received the European CEP certificate and passed the review of FDA, and was going to carry out registration and application in China. At the same time, Polymyxin preparations was conducting the research on prescription technique. We will promote the market launch of this variety as soon as possible, so as to provide new solutions for the drug resistance problem which becomes more and more serious in China.

- **R&D on fungal drug resistance**

  During the past few years, as the number of people with immunodeficiency and tumor chemotherapy increased, the cases of invasive fungal infection also increased gradually. Currently, there are mainly only 3 types of antifungal drugs on the market, namely polyenes, azoles and echinocandins. After years of clinical application, antifungal resistance has become more and more serious, leading to a very limited number of clinical applicable drugs.

  The Group was currently conducting the R&D on a class 1 new drug with brand new mechanism of action and target, targeting fungal-specific enzymes, which is not expected to cause adverse reaction by combining with human cells, and is hopeful for tackling fungal drug resistance with a brand new mechanism of action. As at the end of the Reporting Period, the project was at the stage of new drug discovery.

6.3 ACCESS TO HEALTH CARE *(Continued)*

6.3.4 Enhancement of healthcare

Livzon always adheres to the mission of "prioritizing the quality of life of the patients", is dedicated to working diligently with domestic and overseas pharmaceutical peers and medical staff, continuing to improve the level of global healthcare. While proactively deploying its global business, the Group also pays sufficient attention to local healthcare level, actively communicates with local healthcare workers according to practical conditions, contributing "Livzon power" to advancing capacity of regional medical level and increasing public health.

Livzon invited domestic medical specialist to visit certain cities in Pakistan (such as Islamabad, Peshawar, Karachi, Lahore, Faisalabad), provided medical knowledge and product trainings to Pakistani medical specialists and local healthcare workers, introduced researches in the area of reproductive health in China to local obstetrics and gynecology doctors, communicated successful experiences in regard of technology applications, demonstrated technology innovation on the front tier of the industry, and promoted new ideas and new technologies in the field of reproductive health in Pakistan, in order to improve professional medical technologies and advance the level of drug application.

In addition, in order to improve the pharmaceutical supply chains in developing countries, in regard to sales of the Group's APIs in developing countries, we will try to achieve direct supply to end drug manufacturers, reduce intermediaries/ distributor channels, so as to reduce the purchasing cost of customers, improve the timeliness of delivery and enhance attention on downstream customers. At the same time, under the impact of COVID-19 pandemic, APIs are in shortage and freight costs are increasing on a daily basis. Through providing real-time product information and storage information to customers promptly, the Group guarantees the timeliness of delivery and saves transportation costs, thus further optimizing the cost and quality of the pharmaceutical supply chains.

Regarding promotion of public health interests as an important operation mission, Livzon supports provisions in The Doha Declaration on the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement and Public Health and the Patent Law of the PRC related to granting compulsory licensing on relevant drug patents for public interest purposes or in emergency situations. Livzon supports generic competition in a reasonable manner.

With regard to least developed countries and low-income countries with actual needs, we will consider selecting appropriate third-parties on appropriate terms and conditions, reaching voluntary licensing agreements, to produce relevant drugs and import them to these regions, so as to promote drug accessibility. In addition, in light of the current operation environment, lobbying on compulsory licensing and trade imports is not applicable to Livzon for now.

7 PRODUCT RESPONSIBILITY

7 PRODUCT RESPONSIBILITY

7.1 QUALITY MANAGEMENT SYSTEM

Livzon strictly follows the laws and regulations, rules and standard requirements such as the Drug Administration Law of the PRC, the Administrative Measures for Drug Registration, the Administrative Measures for the Supervision on Pharmaceutical Production, the Provisions for the Change Management of Post-approval Drugs (Interim), the Good Laboratory Practice, the Good Clinical Practice, the Good Manufacturing Practice, the Good Supply Practice, the Good Pharmacovigilance Practice, the Regulations on the Supervision and Administration of Medical Devices, the Regulations on the Administration of Veterinary Drugs, and the Good Manufacturing Practice for Veterinary Drugs, and formulated internal systems such as the Quality Management System, the Administrative Procedures for Quality Internal Audit, and the Management System for Marketing Authorization Holder to continuously implement the responsibility as an enterprise and establish a quality management system covering the full life cycle of product R&D, production and sales.

The Group actively implements the responsibility as a manufacturing enterprise to ensure that the quality and safety of the product throughout the life cycle is controllable, and meets all the requirements of quality management systems (GLP, GCP, GMP, GSP and GVP) in the industry as well as relevant laws and regulations. In 2021, we have established a more comprehensive quality management system, which will be gradually revised and optimized in the course of implementation, including the quality systems and pharmacovigilance ("PV") systems throughout the product life cycle (product R&D, product manufacturing and product operation).

7 PRODUCT RESPONSIBILITY

7.2 QUALITY RISK MANAGEMENT

Livzon attaches great importance to the medication safety. Adhering to the quality concept of "scientific risk assessment and control as the basis of quality management", Livzon conducted quality risk management (QRM) throughout the product life cycle such as product R&D, technology transfer, commercial production, product circulation and termination in accordance with external quality management standards and internal management systems such as the Administrative Procedures for Quality Risks.

QRM Policy

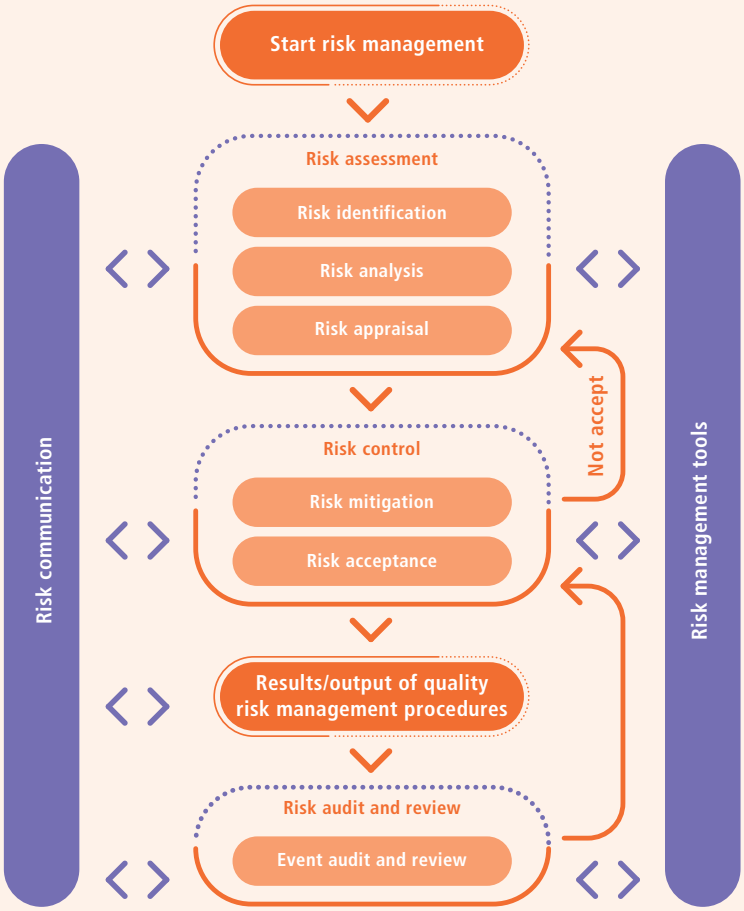
Identify and control the risks of factors involved in the product life cycle from the perspective of patient safety and based on scientific knowledge, implementing dynamic risk management and rationally allocating resources to achieve continuous control and continuous improvement.

7 PRODUCT RESPONSIBILITY

7.2 QUALITY RISK MANAGEMENT *(Continued)*

Quality risk management of the Group is divided into risk assessment, risk control, risk communication and risk audit and review and other processes. Among them, risk communication runs through the entire risk management process. Please see the process chart as below:

Quality Risk Management Process of Livzon



The sources of quality risk identification include deviation reports, change control, quality complaints, adverse reaction information, trend analysis for product quality review, inspections on continuous product stability, etc. Quality risk identification and assessment tools include potential failure mode effects analysis (FMEA), preliminary hazard analysis (PHA), risk ranking and filtering (RRF), fault tree analysis (FAT), fishbone diagram, flow chart, histogram, checklist, process capability index and other methods.

We analyze and estimate the identified risks and their problems, confirm the possible consequences of the problems and the possibility of the occurrence, and issue a quality risk assessment report based on the system risk assessment form. We then determine the control measures to reduce the quality risk according to the risk level, and take corrective actions and preventive actions (CAPA) when necessary; after implementation of the risk mitigation measures and reassessment, the quality risk management team makes a decision on whether to accept the residual risk.

7 PRODUCT RESPONSIBILITY

7.3 R&D QUALITY MANAGEMENT

The Company keeps deepening its quality management by extending the scope of quality management from post-approval to the R&D stage to realize quality control throughout the product life cycle.

7.3.1 Quality management of pharmaceutical R&D

The pharmaceutical R&D centers of the Group have established and operated an implementable quality management system for pharmaceutical R&D in accordance with the guiding principles and relevant registration regulations of the GXP* and ICH (The International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use). The Company's quality management head office conducts simulated on-site registration verification (simulated on-site inspection of pharmacological R&D and production) at key points of drug preparation projects under R&D to assist marketing authorization holders ("MAHs") to fully identify the risks before product approval, promote the establishment and effective operation of the R&D quality system in a problem-oriented approach, and take risk control measures to ensure the smooth application of the projects as scheduled. During the Reporting Period, the quality management head office of the Company conducted 14 audits on drug preparation projects under R&D, including 9 inspections (including on-site inspections of R&D and production) of the R&D project of Recombinant SARS-CoV-2 Fusion Protein Vaccine(重組新型冠狀病毒融合蛋白疫苗), and 3 inspections of Triptorelin Acetate Microspheres for Injection(注射用醋酸曲普瑞林微球).

At the same time, to control the extended risks of drug R&D and strengthen the quality management of commissioned research and entrusted inspection during drug R&D, the quality management head office of the Company formulated the Administrative Measures for Joint Audit on Commissioned Research Institution to clarify the organizational principles and standardized procedures for joint audit on commissioned research institutions and organized the Group's R&D centers to conduct 9 joint audits on the commissioned research institutions.

In addition, the Company has conducted quality control on the whole process of medical device product R&D, established control procedures for the design and development of medical device products, clarified the requirements, interfaces and evaluation activities for different stages of product project establishment, design planning, design input, design output, design conversion, design verification and design validation, and applied the requirements of risk management for medical devices (ISO 14971) to the whole process of product R&D to reduce the quality and safety risks of products. During the Reporting Period, the Company conducted audits on the compliance requirements of the R&D process of medical device products by stages according to the project progress, and conducted a total of 6 audits in 2021.

* GXP represents Good X (Agriculture, Laboratory, Clinical, Manufacturing, Supply) Practices, collective name for the Good Agricultural Practice, the Good Laboratory Practice, the Good Clinical Practice, the Good Manufacturing Practice, and the Good Supply Practice.

7.3 R&D QUALITY MANAGEMENT *(Continued)*

7.3.1 Quality management of pharmaceutical R&D *(Continued)*

Case: R&D System Audit

Based on the concept of quality by design, in 2021, the Company further shifted the focus of its quality management forward by conducting frequent quality audits on new products under R&D, with an emphasis on change management, deviations, technology transfer and process validation.

On-site audit of LivzonBio's R&D Project

Case: Audit on the commissioned research institutes for pharmaceutical research and development

In 2021, the quality management head office of the Company organized the Group's R&D centers to conduct on-site audits on the commissioned research institutes for pharmaceutical research and development.

On-site audit on a commissioned research institute

7.3 R&D QUALITY MANAGEMENT *(Continued)*

7.3.2 Quality management of clinical trial

The Company has established a clinical trial quality management system covering the whole process of clinical trials. During the Reporting Period, all R&D units of the Group conducted clinical trials properly in strict compliance with the documents of the clinical trial quality management system and ensured that the Group's clinical trials complied with the requirements of the Good Clinical Practice (GCP), the Good Clinical Practice for Medical Devices and relevant regulations.

The Group applies the ICH Q10 pharmaceutical quality system (industrial guidelines) to the management of clinical research, and, combining clinical quality management practices, creates a cQMS (Clinical Quality Management System) in line with the Company's management process, which provides a comprehensive quality management system for clinical R&D, aligning the cQMS of the clinical departments with the strategic goals of the Company. Based on the cQMS, the Group fully implements its clinical research quality policies, objectives and responsibilities through quality management, quality assurance, quality control, monitoring and auditing, and other major means.

In addition, the Company continuously improves the cQMS documents in accordance with the requirements of the new regulations related to clinical trials. During the Reporting Period, the cQMS documents have been optimized, evaluated and revised, and all R&D units started clinical trials in compliance with the new regulatory requirements and system documents.

To improve the process management and quality control of clinical trial projects, the clinical research quality management department supervises the formulation of quality risk management plans for each R&D project and implements quality management in diversified forms, including inspection plans, joint inspection plans, quality control plans, audit plans, third-party audit plans and medical inspection plans, and determines the times and frequency of performing audits according to the characteristics of projects. The clinical research quality management department requires completion of corrections for the risks found in the audits within 60 days, so as to ensure that the clinical research fully meets the legal requirements and industry standards.

For drug clinical trials, the quality management head office of the Company formulates audit plans and procedures based on the type and complexity of clinical trials, and the level of risks that affect subjects. According to the progress of the clinical trial projects, it organizes clinical audits at different stages, supervises the trial quality throughout the entire process, and evaluates the implementation of clinical trials and compliance with laws and regulations, so as to proactively identify potential project problems and prevent recurrence of problems, protect the rights and interests and safety of subjects, and ensure the truthfulness and reliability of clinical trial results.

The Company conducts at least one quality audit for each clinical research project undertaken by all the R&D centers of the Group.

As at the end of the Reporting Period, in accordance with the existing annual audit plan, the quality management head office of the Company conducted audits on 10 clinical trial projects of the Group, 14 clinical trial institutions and 12 biological sample analysis units, with a total of 26 audits. As a sponsor, the Group achieved quality supervision and management throughout the process of clinical trials by audits, thereby ensuring the overall quality of clinical trials and continuously preventing and controlling compliance risks.

7.3 R&D QUALITY MANAGEMENT *(Continued)*

7.3.3 External regulation

Livzon has 2 API R&D centers, 7 drug preparation R&D centers, 1 in vitro diagnostic reagent R&D center and 1 veterinary drug R&D center. In 2021, the R&D centers accepted 5 inspections from external regulatory agencies, mainly focusing on the drug preparation R&D centers and in vitro diagnostic reagent R&D center, and there were no major or serious defects.

Type of product	Summary of inspections by external regulatory agencies accepted in 2021
Drug preparation	1 variety passed the registration verification, 1 variety passed the clinical on-site verification, 1 variety passed on-site verification of generic drug conformance evaluation, 3 varieties confirmed exemption from pharmacological on-site verification, 2 varieties exempted from IND* on-site verification
In vitro diagnostic reagent	2 on-site registration verifications of medical devices

7.4 QUALITY MANAGEMENT OF PRODUCT MANUFACTURING

For quality management of drug manufacturing after market launch, the Group has established a quality management system for the Group's manufacturing in accordance with the requirements of the Chinese GMP, aligning continuous improvement with international standards. All (100%) of the Group's manufacturing enterprises have fully implemented this management system to strictly control product quality. In addition, the Group's API manufacturing enterprises have also implemented the quality management system in accordance with the requirements of ICH Q7, US cGMP and EU-GMP.

* IND stands for Investigational New Drug, which refers to the request for approval of new drugs for clinical research.

7.4 QUALITY MANAGEMENT OF PRODUCT MANUFACTURING *(Continued)*

7.4.1 Registration and certification

The product registration, national certification and GMP compliance status of the Group as at 31 December 2021 are as follows:

Product registration, national certification and GMP compliance status of Livzon

Program		Work of drug preparations in 2021
International registration		13 registration projects were completed in 194 countries/regions for 12 products
Domestic registration		440 products were registered domestically
International certification	Internationally certified varieties	1 product obtained international certification
	Internationally recognized certificates	2 internationally recognized certificates within the validity period were obtained
GMP compliance status of production lines		A total of 39 production lines were GMP compliant

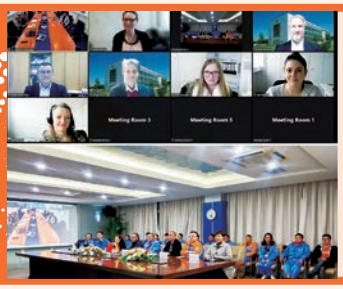
Program		Work of APIs in 2021
International registration		104 registration projects were completed in 56 countries/regions for 28 products
Domestic registration		59 products were registered domestically
International certification	Internationally certified varieties	17 products obtained international certification for on-site inspections
	Internationally recognized certificates	49 internationally recognized certificates within the validity period were obtained (of which: 4 products passed FDA on-site inspections and 12 products obtained CEP certificates)
GMP compliance status of production lines		A total of 42 production lines were GMP compliant
ISO quality management system certification		• 2 enterprises were certified to GB/T 19001-2016/ISO 9001:2015 Quality Management System Certification • 1 enterprise was certified to ISO 22000:2018 Food Safety Management System Certification

7.4 QUALITY MANAGEMENT OF PRODUCT MANUFACTURING *(Continued)*

7.4.1 Registration and certification *(Continued)*

Program		Work of in vitro diagnostic reagents in 2021
International registration		37 registration projects were completed in 44 countries/regions for 37 products
Domestic registration		98 products were registered domestically (7 drugs with 8 certificates, 90 medical devices)
International certification	Internationally certified varieties	6 products obtained international certification
	Internationally recognized certificates	1 internationally recognized certificate within the validity period was obtained
GMP compliance status of production lines		A total of 2 production lines were GMP compliant
ISO quality management system certification		1 enterprise was certified to ISO 13485:2016 Quality Management System Certification for Medical Devices

In addition, during the Reporting Period, for the drug preparation workshops of three of the Group's drug preparation product lines, submissions were made to PIC/S GMP member countries for certification (PIC/S GMP is one of the most stringent GMP regulations in the world to date).



Case: Fuzhou Fuxing completed EU audit

In December 2021, Germany's Federal Institute for Drugs and Medical Devices conducted an EU-GMP video audit on Fuzhou Fuxing and Fuzhou Fuxing successfully completed the EU audit.

Case: Limin Factory was awarded Shaoguan Municipal Government Quality Award

In March 2022, Limin Factory was awarded the second Shaoguan Municipal Government Quality Award. Shaoguan Municipal Government Quality Award is the highest quality award established by the People's Government of Shaoguan City, Guangdong Province, which adopts the Criteria for Performance Excellence as the evaluation standard, aiming to set a number of benchmarks for enterprises to achieve success through quality. The award marks the high recognition of the quality management model, quality control ability and product quality level of Limin Factory.

7.4 QUALITY MANAGEMENT OF PRODUCT MANUFACTURING *(Continued)*

7.4.2 External regulation and inspection

Livzon has 5 drug preparation enterprises, 5 API enterprises and 1 in vitro diagnostic reagent enterprise. In 2021, Livzon accepted a total of 58 inspections from external regulatory agencies and there were no major or serious defects.

Type of enterprise	Inspections by external regulatory agencies accepted by the Group in 2021
Drug preparation manufacturing enterprises	Drug preparation enterprises accepted a total of 23 inspections from drug regulatory agencies. All inspections were passed smoothly. • 8 license inspections (mainly new manufacturing sites, new commissioned manufacturers, and changes in production scope of license, etc.) • 12 routine inspections (mainly GMP compliance inspections and daily supervision inspections on marketing authorization holders ("MAHs") and drug manufacturing enterprises, and flight inspections on the centralized bulk-buying varieties and daily supervision inspections on relevant standards by drug regulatory agencies) • 3 other inspections (mainly special inspections of biological products, special inspections of psychiatric drugs, and on-site inspections of product registration for extension of validity, etc.)
API manufacturing enterprises	APIs enterprises accepted a total of 26 inspections from drug regulatory agencies. All inspections were passed smoothly. • 8 license inspections (changes in production scope of license, etc.) • 16 routine inspections (mainly GMP compliance inspections and daily supervision inspections, etc.) • 2 other inspections (EU export certification inspections, etc.)
In vitro diagnostic reagent enterprise	In vitro diagnostic reagents (drugs) accepted a total of 5 inspections from drug regulatory agencies. All inspections were passed smoothly. • 1 follow-up inspection of drugs • 1 daily inspection of drugs • 3 flight inspections of drugs In vitro diagnostic reagents (medical devices) accepted a total of 4 inspections from medical device regulatory agencies. All inspections were passed smoothly. • 1 flight inspection of medical devices • 3 daily inspections of medical devices

7.4 QUALITY MANAGEMENT OF PRODUCT MANUFACTURING *(Continued)*

7.4.3 Quality control on production process

All of the Group's manufacturing enterprises conduct regular certification on key production facilities and perform intermediate product quality control and finished product control on all of our existing products, mainly in the following principles:

- Certification on key production facilities: for facilities with clear regulations, such as sterilization cabinets and air-conditioning systems, the recertification cycle strictly follows the regulations; for facilities without clear regulations, such as labelling machines and packaging machines, recertification assessments are conducted annually to determine whether recertification is necessary for the current year; if changes to the facilities occur, the results of the change risk assessment are used to determine whether to conduct recertification. Facilities recertification is included in the annual certification master plan for management. The quality management officer is responsible for the final approval of the certification master plan, certification plan and reports.

  In 2021, 100% of the Group's key production facilities were certified to an internally developed standard.

- Quality control of intermediate products and finished products: Based on the production process, internal quality control standards for finished products and the requirements of registration standards for finished products, the scope of inspection items and standards to be controlled are determined and quality standards for intermediate products are formulated to meet the requirements of registration standards.

- Finished product inspection: In accordance with the Pharmacopoeia of the PRC, national pharmaceutical standards and relevant regulatory requirements, the Company has developed internal quality control standards for finished products, some of which are even stricter than national statutory standards. The inspectors inspect the materials and products based on the Company's internal control standards in accordance with the corresponding quality standards and inspection procedures, and then issue a compliance certificate for the quality authorizers to release or put them into use.

7.4 QUALITY MANAGEMENT OF PRODUCT MANUFACTURING *(Continued)*

7.4.4 Quality audit

Based on the six systems of GMP (quality system, facilities and equipment system, material system, production system, packaging and labelling system and laboratory system) and internal production quality management system standards, the Company has established detailed inspection rules and defect evaluation standards, and accordingly conducts a comprehensive quality audit at least once a year for each of the Group's manufacturing enterprises to assist each of them in conducting a comprehensive risk management of the quality system throughout the product lifecycle, so as to prevent blind spots in quality management, avoid regional and systematic risks, and further promote the healthy operation of the quality management system of each manufacturing enterprise.

The Company conducts a comprehensive quality audit at least once a year, covering all (100%) of the Group's manufacturing enterprises and MAHs.

During the Reporting Period, the Company conducted 13 quality audits on all of the Group's drug preparation enterprises, including 10 production follow-up inspections, 1 flight inspection and 2 special inspections; conducted 3 quality audits on the Group's in vitro diagnostic reagent enterprise, including 1 follow-up inspection, 1 special inspection of warehouse and 1 special inspection of laboratory; and conducted 12 quality audits on all of the Group's API enterprises. The above quality audits conducted during the Reporting Period covered all of the Group’s manufacturing enterprises and MAHs.

For problems or defects found in the audit, the quality management head office of the Company requires MAHs to identify product or system risks with reference to the defects found in the inspection, and to make corrections for prevention following the "Plan-Do-Check-Act" (PDCA) model. The PDCA model emphasizes the application of brainstorming and a variety of quality risk management tools, which can help enterprises draw inferences. The Company mandates the adoption of the PDCA model to urge all MAHs to further investigate the risks of products and systems comprehensively and systematically, to output the risk list and risk control measures list covering the six major factors of man, machine, material, method, environment, and measurement, and to implement carefully against the checklist and to continuously improve. This will truly fulfill the Group’s basic requirements of "daily settlement and precise GMP" for production quality work.

7.4 QUALITY MANAGEMENT OF PRODUCT MANUFACTURING *(Continued)*

7.4.4 Quality audit *(Continued)*

Case: On-site audit of a drug manufacturing system

In August 2021, the quality management head office of the Company conducted an on-site audit of the manufacturing system at Limin Factory, focusing on deviation and change management, annual review and medium filling simulation.

7 PRODUCT RESPONSIBILITY

7.5 QUALITY MANAGEMENT OF PRODUCT DISTRIBUTION

In strict compliance with the Good Supply Practice (GSP), Livzon has established a compliant drug distribution system based on the regulatory requirements and the latest regulations of the drug regulatory agencies, and conducts compliance trainings on drug distribution on a regular basis. In addition, the Company conducts routine audits on all of the pharmaceutical distributors of the Group at least once a year in order to implement quality control over the whole process of drug distribution and to enhance the quality assurance of pharmaceuticals in circulation.

In 2021, based on the annual audit plan, the quality management head office of the Company conducted quality audits on all of the pharmaceutical distributors of the Group in accordance with the GSP system. The scope of audit included the key links in the drug distribution management including drug traceability system, integrity distribution, and quality system implementation in the drug distribution process. No major non-compliance was found, management suggestions were given to relevant enterprises, and timely corrections were required to be implemented to improve the level of quality management. In 2021, a pharmaceutical distributor of the Group accepted GSP special follow-up inspection by a drug regulatory agency, and no major defects and material defects were found, hence the quality management risk of our drug distribution is controllable.

7.5.1 Management of product package inserts and labels

Product labels and package inserts are important means to guide the correct selection and use of drugs, and are related to the health and life safety of the public. Livzon strictly complies with the Drug Administration Law of the PRC, the Provisions for Drug Package Inserts and Labels, the Administrative Regulations on the Package Inserts and Labels of Medical Devices, the Administrative Measures for Veterinary Drug Package Inserts and Labels, and other laws and regulations. Livzon always pays close attention to updates on the regulatory documents of the National Medical Products Administration (NMPA) on package inserts, labels and packaging, such as the new Technical Guideline for the Revision of Safety Information Items in Package Inserts of Marketed Traditional Chinese Medicines (Interim) and the Technical Guidelines for the Compilation of Information Related to Children's Drug Use in the Instructions of Chemical Drugs and Therapeutic Biological Products (Interim), and conducts ongoing internal cross-checks to ensure that our drug package inserts and product labels continuously comply with regulatory requirements.

Each of the Group's manufacturing enterprises has established a management system of labels and package inserts, formulated a series of internal management systems including the Management Procedures for Design, Audit, Purchasing and Use of Package Inserts and Labels and the Standard Management Procedures for Packaging, Labels and Package Inserts, etc., and revised and improved relevant regulations such as the Management Procedures for Design, Review and Printing of Product Packaging and the Procedures for Revising Pharmacovigilance Package Inserts and Labels during the Reporting Period.

The Group conducts standardized management of package inserts and labels for design, audit, purchasing, printing, acceptance, storage, distribution and use, and sets clear requirements on audit of relevant packaging material suppliers. The Group conducts internal audits of the package inserts and labels on a regular basis each year or when regulations change, and revises and improves the product package inserts and labels in a timely manner. In 2021, each of the Group's manufacturing enterprises conducted internal audits on the product package inserts and labels.

7.5 QUALITY MANAGEMENT OF PRODUCT DISTRIBUTION *(Continued)*

7.5.1 Management of product package inserts and labels *(Continued)*

Case: Audit on drug package inserts

In June 2021, the relevant person in charge of the quality management department of Livzon Diagnostics conducted a compliance audit on the drug package inserts and labels drawings in accordance with the Management Process of Internal Change Control. After audit, the drug labels and package inserts were consistent with the approval letter, the drug names and use of registered trademark met the requirements, all items on package inserts were written according to requirements and in the standard format, and the audit results conformed to the Provisions for Drug Package Inserts and Labels and other relevant regulatory requirements.

Case: Review and revision of drug package inserts

In 2021, Sichuan Guangda initiated the revision of the safety content on the package inserts for Anti-viral Granules (抗病毒顆粒), Anti-viral Syrup (抗病毒糖漿) and other related products according to the Announcement on Revising the Package Insert of Antiviral Syrup, Capsules, Soft Capsules, Pills (Concentrated Pills), Dropping Pills, Tablets, Effervescent Tablets, Chewable Tablet, Oral Liquid, and Granules (No. 117 of 2021) issued by NMPA. After several rounds of discussion and review by the internal quality department, it was approved and submitted to the Sichuan Provincial Drug Administration for filing and was printed and used after approval. The new versions of the package inserts were filed for public notice in November 2021 and are now in use.

In 2021, according to the Drug Administration Law of the PRC, Limin Factory conducted audits and collation of package inserts/labels of products in production such as Notoginseng, Ginseng and Amino Acid Capsules (田參氨基酸膠囊), Ligustrazine Phosphate Tablets (磷酸川芎嗪片), Andrographolide Capsules (穿心蓮內酯膠囊), Midecamycin Tablets (麥迪霉素片), Shenqi Fuzheng Injection (參芪扶正注射液) and Xueshuantong Injection (血栓通注射液). According to the audit results, the information of "MAH" was added to the label or colored box, and the name of the holder was unanimously described as "Marketing Authorization Holder".

In 2021, according to relevant documents published by NMPA, Pharmaceutical Factory initiated management procedures of internal change control, revised safety content on package inserts and package labels of products such as Fluoroquinolones for the whole body (全身用氟喹諾酮類), Cefuroxime Preparation (頭孢呋辛製劑), Mouse Nerve Growth Factor for Injection (注射用鼠神經生長因子) and Amikacin Injection (阿米卡星注射劑), completed the revision of the executive standard for Ilaprazole Enteric-Coated Tablet (艾普拉唑腸溶片) and Penciclovir cream (噴昔洛韋乳膏), and revised the package labels and package inserts of Fluvoxamine Maleate Tablets (馬來酸氟伏沙明) and Omeprazole Sodium for Injection (注射用奧美拉唑鈉) according to the approval of generics consistency evaluation.

7.5 QUALITY MANAGEMENT OF PRODUCT DISTRIBUTION *(Continued)*

7.5.1 Management of product package inserts and labels *(Continued)*

Case: Interpretation of and training on the Provisions for Drug Package Inserts and Labels (Revision)

- In March 2021, Limin Factory conducted a training on the Provisions for Drug Package Inserts and Labels (Revision) for staff from quality assurance department and pharmacovigilance department. The training covered the management of formulation, revision and maintenance of drug package inserts and labels.

- In July 2021, Xinbeijiang Pharma organized relevant staff from production workshop, quality department and procurement department to study the Provisions for Drug Package Inserts and Labels (Revision). After examination, trainees understood from the provisions that the MAH is accountable for drug package inserts and labels and responsible for the formulation, revision and maintenance of drug package inserts and labels, and learned new contents such as "counterfeit drug" penalty, further strengthening the enterprises' management of drug package inserts and labels.

7 PRODUCT RESPONSIBILITY

7.5 QUALITY MANAGEMENT OF PRODUCT DISTRIBUTION *(Continued)*

7.5.2 Product tracing

The Group established a product information traceability system, to strengthen the sharing of traceability information, achieve traceability in all varieties and full process, promote comprehensive management of the quality and safety of products, and enhance the level of product quality and safety assurance. The Drug Traceability Management System was formulated to achieve "One Code for One Thing, One Code All Traceable" through traceability platforms such as "Ma Shang Fang Xin (碼上放心)" and the "National Veterinary Drug Tracing System", making the smallest packaging unit of drugs, class III medical devices and veterinary drugs traceable, giving unique traceability ID to the smallest sales package unit to achieve information traceability.

7.5.3 Product recall and safety emergency management

In order to enhance the ability to respond to product safety emergencies, improve related work management practices, and ensure the safety of drug/device use, the Company has formulated the Operating Procedures for Product Recalls, the Unqualified Product Management System, the Returned Product Management System, the Contingency Plans for Material Product Safety Incident and other management systems, established and kept complete purchase records, ensuring the traceability of products sold, and regularly conducted simulated product recalls and emergency drills for product safety emergencies.

During the Year, the Group had no recalls of products sold or shipped for safety and health reasons.

Product recall procedures

- For products to be recalled, the quality management department of the Company organizes members of the risk assessment team to classify the product recall into three levels based on the severity of potential product safety hazards.
- After the recall is approved, the quality management department will issue a "recall notice" to all relevant departments, and the sales department will formulate a recall plan and specific measures and submit a copy of the recall plan to the drug regulatory agencies.
- In the course of the recall, the sales department has to report the recall progress as required by the documents, conduct statistics and acceptance of the products to be recalled and return them to the Group's manufacturing enterprises according to the return procedures. The sales department should actively cooperate with the Group's manufacturing enterprises or drug regulatory agencies to carry out relevant investigations.

7.5 QUALITY MANAGEMENT OF PRODUCT DISTRIBUTION *(Continued)*

7.5.3 Product recall and safety emergency management *(Continued)*

In 2021, a total of 7 subsidiaries of the Company (Pharmaceutical Factory, Sichuan Guangda, Livzon MAB, Shanghai Livzon, Ningxia Pharma, Xinbeijiang Pharma and Livzon Hecheng) conducted simulated product recalls and emergency drills for product safety emergencies. Verified by the emergency drills, relevant systems established by each subsidiary could help them quickly, orderly and effectively implement product recall in the event of product safety emergencies. The emergency drills were great success.

Case: Emergency drill trainings for product safety emergencies

In January 2021, Xinbeijiang Pharma completed a secondary drug recall simulation drill. The drug in the simulated recall was Tobramycin (妥布霉素) and the recall involved both domestic and overseas customers. The drill process was completed in 36 hours, 12 hours earlier than 48 hours required for a secondary recall, indicating that the product recall mechanism was operating effectively.

In July 2021, Livzon Hecheng conducted a recall simulation drill. The drill was initiated according to the established plan to simulate a recall incident. The departments simulated investigations and assessments and carried out the drill according to the recall procedures, fully verifying the feasibility and effectiveness of the recall process, thus reaching the expected targets.

In November 2021, Ningxia Pharma organized a simulated recall for reason of occurrence of anomaly peaks in the residual solvent profile of a product. After recalling the batch was confirmed, customers were immediately notified through the sales personnel, and after receiving the notice for simulated recall, customers immediately carried out simulated measures, strictly controlling the batch and conducting return of products. The returned products met the quality standard and there were no abnormalities after full inspection. This simulated recall proved that the Product Recall Management Procedure of Ningxia Pharma is able to effectively guide the completion of work on emergency management, ensuring to minimize the risks in the event of a product safety emergency.

7.5 QUALITY MANAGEMENT OF PRODUCT DISTRIBUTION *(Continued)*

7.5.4 Protection of customer rights and interests

Enhancement of customer satisfaction

To fully protect the rights and interests of customers, Livzon conducts product and service quality satisfaction surveys regularly every year and distributes questionnaires to customers in various regions. Livzon conducts multiple-dimensional surveys to fully understand the opinions and feedbacks of customers on the Group's products and services, and improves the service standard and quality according to their feedbacks, trying to build high-quality customer service to attract and retain the customers.

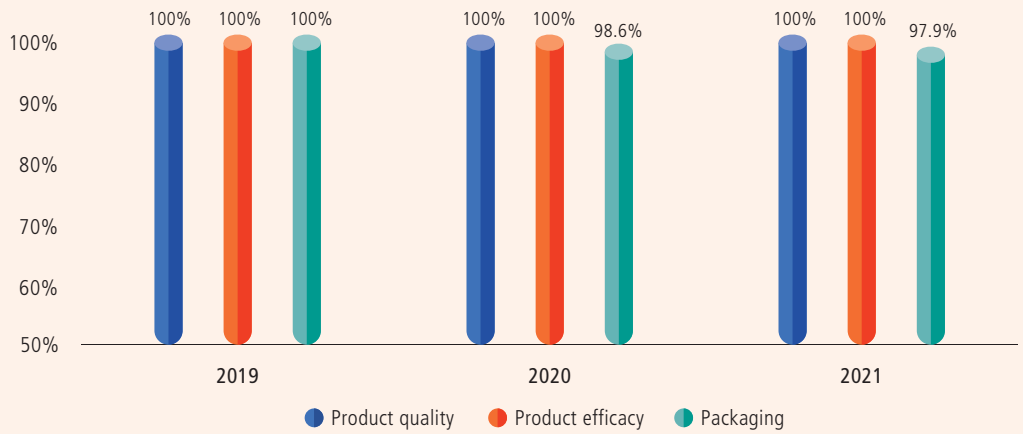
7.5 QUALITY MANAGEMENT OF PRODUCT DISTRIBUTION *(Continued)*

7.5.4 Protection of customer rights and interests *(Continued)*

Enhancement of customer satisfaction *(Continued)*

In 2021, the Company received 282 feedbacks in written forms from customers. The results showed that customers were highly satisfied with the quality and efficacy of Livzon's products. The questionnaires were sent to the corresponding business departments. Relevant departments analyzed the problems and suggestions from customers' feedbacks and solved existing problems in a timely manner, to provide customers with better products and better services.

Customer Satisfaction Survey Results from 2019 to 2021



Meanwhile, the Group conducts customer satisfaction surveys to end customers regularly every year in forms of service feedback letters, satisfaction survey questionnaires and phone calls, allowing customers to comprehensively rate product quality, efficacy, packaging, transportation, delivery timeliness and product service, etc. The customer satisfaction ratings maintained at above 95% in recent years. In addition, the Group entrusts commercial customers to survey doctors and patients via phone calls from time to time, conduct conversations on the safety, stability, clinical efficacy of, and satisfaction and feedback of doctors and patients on our major products, and regularly summarize the survey results to make appropriate assessment on the safety and efficacy of the products.

Case: Survey on Andrographolide Capsules (穿心蓮內酯膠囊)

In August 2021, the Company carried out a questionnaire survey on Andrographolide Capsules (穿心蓮內酯膠囊). The survey covered hospitals in 4 regions (Shandong Province, Jiangsu Province, Tianjin City and Shanghai City), including 29 responses from tertiary hospitals, 24 responses from secondary hospitals and 2 responses from primary hospitals. The survey results demonstrated that on the clinical application of treating respiratory infections, Andrographolide Capsules (穿心蓮內酯膠囊) received relatively high recognition and acceptance from doctors with advantages of good treatment results, quick effect and high safety.

7.5 QUALITY MANAGEMENT OF PRODUCT DISTRIBUTION *(Continued)*

7.5.4 Protection of customer rights and interests *(Continued)*

Enhancement of customer satisfaction *(Continued)*

Case: Customer satisfaction survey by Livzon Diagnostics

In 2021, to further understand the market user experience, Livzon Diagnostics carried out customer satisfaction survey on multiple dimensions such as product quality, business skills, product packaging, ease of operation and service attitude. A total of 77 customer satisfaction responses were received, and the overall customer evaluations were relatively good with the overall satisfaction reaching over 98%.

If any problem occurs during use that cannot be self-resolved, customers can always consult the free technical service hotline of Livzon Diagnostics or relevant technical service personnel. Personnel from the after-sales department and quality department of Livzon Diagnostics have followed up and dealt with all the feedbacks or suggestions from customers.

Protection of customer privacy

As its principal businesses are manufacturing and distribution of drugs, APIs and intermediates, diagnostic reagents and equipment and veterinary drugs, Livzon has little direct contact with end customers and access to their private information. For limited risks of privacy and security management, Livzon also fully complies with the relevant legal provisions on personal information protection under the Constitution of the PRC and the Civil Code of the PRC to guarantee customer privacy, protect business secrets, and safeguard customer interests.

During the Year, Livzon had no incidents of infringement of customer privacy or loss of customer data.

Customer feedbacks and complaints

The Company formulated management systems such as the Administrative Procedures for Quality Complaints, the Administrative System of Quality Enquiry and the Administrative System of After-sale Quality Complaints, to clarify the work process of handling the Group's quality complaints and to manage the Group's quality complaint affairs by coordinated guidance and supervision. The headquarters of the Company should be responsible for promptly and properly handling the quality complaints about the products of the subsidiaries of the Company and taking effective measures to ensure the quality of products. The Company's subsidiaries have established or improved their own quality complaint management systems in accordance with relevant regulations and the headquarters' complaint management system, and organized staff in study of and training on the relevant systems to standardize staff's daily work.

In 2021, Livzon received 151 product-related feedbacks, including 9 medication queries and 142 product-related complaints. The complaints mainly included: adverse reactions, dissolution issues, bottle caps falling off, packaging quality, color issues, etc. In accordance with relevant systems, the Group promptly followed up and dealt with relevant product queries and complaints received from customers, reaching a response rate of 100%.

7 PRODUCT RESPONSIBILITY

7.6 PHARMACOVIGILANCE

7.6.1 Pharmacovigilance management

Livzon actively responds to and supports the requirements for the establishment of a comprehensive pharmacovigilance system to guarantee pharmacovigilance throughout the process of drug R&D to post-approval use, thereby ensuring the safe, reasonable and effective use of drugs by the public and preventing and educating on drug-related safety issues.

Following the implementation of the Good Pharmacovigilance Practice, Livzon has been constantly enhancing its pharmacovigilance ("PV") management system. All MAHs of the Group have established the system and policies that covers the current PV-related regulatory requirements, and will gradually revise and improve the system and policies according to the latest regulatory requirements during the implementation process. Meanwhile, all MAHs of the Group have established an independent PV department and set up a drug safety committee to ensure the balance of drug risks and benefits, and the healthy and safe use of drugs by the public.

During the Reporting Period, to extend post-approval PV management to clinical research, the Company established a pre-approval PV team consisting of specialists with professional knowledge in medical and pharmaceutical disciplines, formulated a set of PV system documents for clinical research stage, set up effective and uninterrupted channels for collecting information on drug-related serious adverse events, and conducted drug safety inspection and reporting, risk identification, assessment and control.

In addition, to meet the requirement of regulations such as the Good Pharmacovigilance Practice and the Good Clinical Practice, the Company newly published 12 standard operating procedures (SOP) and management system documents related to pre-approval PV activities during the Reporting Period and performed pre-approval and post-approval PV activities according to the requirements.

Currently, the Group has set up standardized and uninterrupted channels for collecting information on drug-related serious adverse events and achieved monitoring and control of drug safety. We purchased a PV system and a MedDRA dictionary for auxiliary data alignment and implemented functions such as submission of various reports within a time limit, automatic document retrieval, automatic risk warning, and connection with the system of the Center for Drug Evaluation (CDE) of NMPA, which made relevant work more efficient and scientific.

Key tasks of pre-approval PV

- Preclinical stage: identify toxicity target organs; confirm product safety content and risks; conduct risk-related epidemiology study and research; screen potential risks that may occur during the clinical stage;
- IND stage: prepare the Risk Control Plan according to the safety data from the preclinical stage and similar drugs; prepare and review safety information in the protocol and investigator's brochure; develop a plan of consistency verification for safety database and clinical trial electronic data collection (EDC) systems; establish a safety management plan (SMP);
- Enrollment stage: set up and manage PV database; collect, assess and submit safety report of individual cases; conduct serious adverse event (SAE) consistency verification on a regular basis; prepare and submit development safety update report (DSUR); assist with investigator's brochure update; monitor and report, identify risks of, assess and control the drug safety during clinical trials; manage PV suppliers, etc.;
- New Drug Application (NDA) stage: analyze serious adverse events and deaths; assist with the preparation of safety information in the clinical study report (CSR); prepare the Risk Management Plan (RMP); assist with the preparation of drug package inserts, etc.

7.6 PHARMACOVIGILANCE *(Continued)*

7.6.1 Pharmacovigilance management *(Continued)*

All MAHs of the Group conduct PV trainings and examination for all employees from relevant departments at least once a year, covering content such as relevant law and regulation updates, basic PV requirements, channels for reporting adverse reactions, etc., to emphasize the importance and necessity of PV activities, raise the PV awareness of the staff and fulfill the primary responsibility for drug safety.

Case: PV risk training

In February and August 2021, the quality management head office of the Company conducted trainings on regulations such as the Good Pharmacovigilance Practice and the Administrative Measures for Drug Inspection (Interim) for all employees from relevant departments of all MAHs of the Group and conducted an online examination after the trainings.

In June 2021, Pharmaceutical Factory conducted PV trainings

In June 2021, Limin Factory conducted PV trainings

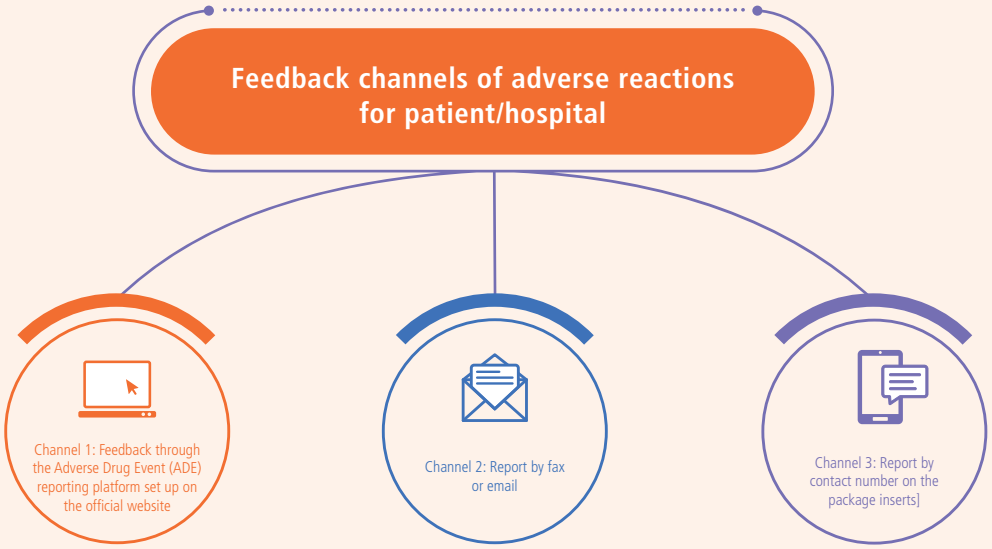
In November 2021, Sichuan Guangda conducted PV training

7.6 PHARMACOVIGILANCE *(Continued)*

7.6.2 Report of adverse drug reaction

Based on the pharmacovigilance system and its related activities, the Group has established internal systems, such as the Adverse Drug Reaction Reporting and Monitoring Management System and the Procedures for Adverse Event Monitoring and Control. The Group collects product safety information (including adverse reactions/events of products) in multiple ways throughout the product life cycle, collates and analyzes it, and carries out management measures such as product safety monitoring, risk signal management, regular safety update reports, and post-approval safety studies.

Livzon has established standardized and uninterrupted channels for collecting information on serious adverse events of products, and makes three channels available to patients and hospitals, including an ADE reporting platform, to achieve monitoring and control of product safety.



Note: To safeguard drug safety for the public, the Company established an Adverse Drug Event (ADE) reporting platform on its official website, and provided feedback hotline and email as feedback channels for patients or clinical trial subjects with adverse conditions that occur after drug administration, to understand and evaluate ADE events and product characteristics in a timely manner, and safeguard public drug safety.

7.6 PHARMACOVIGILANCE *(Continued)*

7.6.2 Report of adverse drug reaction *(Continued)*

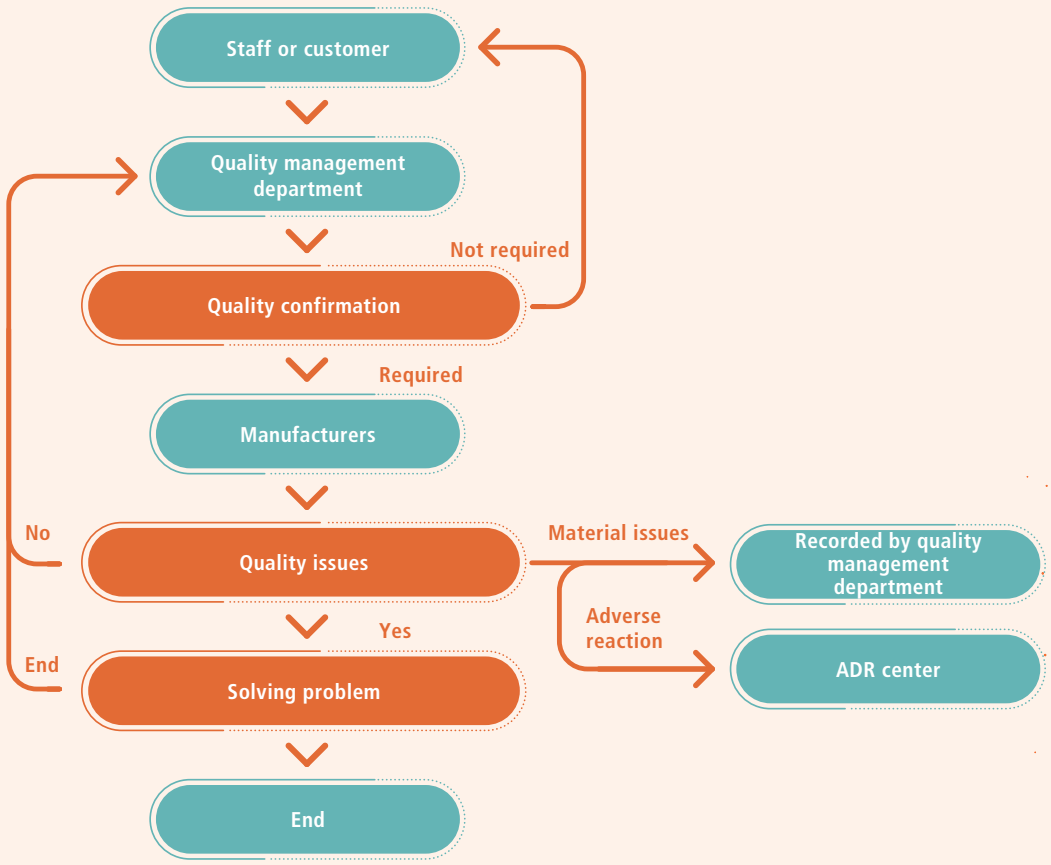
When information on adverse drug reactions is received, the relevant functional departments and subsidiaries of the Group will take response measures in accordance with the Administrative Procedures for Quality Complaints. The relevant procedures are as follows:

- After receiving the complaint from the customer, the business department will fill in the Drug Quality Information Feedback Form and report to the quality management department on the day of receipt after review. Upon receipt of the Drug Quality Information Feedback Form, the quality management department should first determine the type of product complaint and organize and implement an investigation. If immediate response is possible, it should give a reply within 24 hours. If further investigation and analysis are required, it should communicate with the customer within 48 hours and handle it properly, and further verify with the Marketing Authorization Holder (the "MAH") within 24 hours as the case may be.

- After the MAH receives the Drug Quality Information Feedback Form, the quality complaint handling procedures shall be activated. For complaints involving adverse drug reactions, in addition to activating the quality complaint handling procedures from each MAH, they shall be handled in accordance with the Adverse Drug Reaction Reporting and Monitoring Management System. All the adverse reaction information shall be reported by the MAH to the ADR center (Adverse Drug Reaction Monitoring Center for Drugs and Medical Devices) according to the regulations.

- After the quality complaint is handled, the quality management department will summarize the handling of the product quality complaint. They should annually summarize the complaints about all varieties, compare and analyze with historical data, and report to the person in charge of the enterprise, the quality management head office of the Company and the vice president in charge of the Company.

Flowchart of Handling Product Quality Complaints of Livzon



7.6 PHARMACOVIGILANCE *(Continued)*

7.6.2 Report of adverse drug reaction *(Continued)*

For medical device-related adverse events, the Group has allocated full-time staff for monitoring adverse events of medical devices according to the internal systems such as the Procedures for Adverse Event Monitoring and Control. The Group actively fulfilled its primary responsibilities for monitoring by proactively collecting adverse events of medical devices, and conducting prompt investigation, analysis, and evaluation to improve the ability to prevent and control risks, and effectively ensure the safety and effectiveness of the medical devices for the public.

Case: Pharmaceutical Factory was awarded the "National Outstanding Unit for the Adverse Drug Reaction Monitoring and Evaluation in 2020"

During the Reporting Period, Pharmaceutical Factory continued to improve the monitoring and evaluation of adverse drug reactions and made continuous contribution to the drug safety for public use. It was awarded the honorary title of "National Outstanding Unit for the Adverse Drug Reaction Monitoring and Evaluation in 2020" by the Center for ADR Monitoring of NMPA.

7 PRODUCT RESPONSIBILITY

7.7 ESTABLISHMENT OF QUALITY CULTURE

To enhance the quality risk awareness and quality management capabilities of all employees, Livzon formulates annual training programs for quality control and product safety in accordance with the quality management regulations and standards, based on the regulatory updates of the product regulatory agencies. Every year, Livzon provides regular quality trainings to all employees within the quality systems, including R&D, production and operation, covering GMP for pharmaceuticals, GMP for veterinary drugs, fundamental knowledge of microbiology and hygiene as well as products. Through annual quality meetings, weekly quality meetings and regular reports on pharmaceutical policies and regulations, the Company's quality culture and quality control requirements are disseminated and strictly implemented from top to bottom.

In 2021, the Group's quality-related trainings covered all (100%) employees within the Group's quality systems.

Livzon's main channels for disseminating and implementing quality culture:

- **Regular report on quality regulations:** The quality management head office of the Company sorts out the newly promulgated pharmaceutical regulations every week, month and year, extracting the highlights of the regulations, and summarizing into weekly, monthly and annual reports. The person in charge of quality management, the quality authorizers and all employees in production-related positions (manufacturing, quality control, quality assurance, technology, etc.) from each manufacturing enterprise of the Group are able to gain a timely and comprehensive understanding of the updates and trends of pharmaceutical regulations through the weekly/monthly/yearly reports, and will modify and improve the workflow according to the latest regulations to carry out the R&D, manufacturing and operation work in an orderly and compliant manner.

- **Weekly quality meeting:** Every week, the person in charge of quality management of each manufacturing enterprise of the Group reports work to the senior management of the Company, including the continuous compliance and work progress of the week, next week's key tasks, emergency response and quality team building, at the weekly quality meetings.

- **Annual quality meeting:** The senior management of the Company, the quality management head office of the Company as well as persons in charge of the enterprises, persons in charge of production management, persons in charge of quality management, quality authorizers, persons in charge of quality assurance and persons in charge of quality control from all manufacturing enterprises of the Group, among others, participate in this meeting held every year to review the reports themed on quality.

7.7 ESTABLISHMENT OF QUALITY CULTURE *(Continued)*

Case: 2021 annual quality meeting of Livzon

In December 2021, the Group held an annual quality meeting, where attendees included senior management of the Company as well as persons in charge of enterprises, persons in charge of production management, persons in charge of quality management, quality authorizers, persons in charge of quality assurance and persons in charge of quality control from all manufacturing enterprises of the Group. Reports themed on the implementation of "One Law and Two Regulations" and the Pharmacopoeia of the PRC (2020 edition), corporate change management system, R&D quality management and Livzon's quality culture were presented at the meeting with a view to enhancing employees' abilities in compliance management throughout the life cycle of pharmaceuticals, including R&D, manufacturing, sales, use, and pharmacovigilance. After the meeting, the participants were responsible for disseminating the themes and training content to all employees in production-related positions of each enterprise of the Group.

Case: Special training on medical devices

In March and May 2021, Livzon Diagnostics conducted trainings on the amendments to the Regulations on the Supervision and Administration of Medical Devices for the employees from quality assurance, quality control, technology, R&D, manufacturing, equipment engineering and other relevant departments. The trainings clarified the relevant regulatory requirements for medical devices to avoid quality risks arising from human factors throughout the life cycle of devices to the most extent, and to ensure that influencing factors such as man, machine, material, method and environment in the manufacturing process of medical devices meet the GMP management requirements.

7.7 ESTABLISHMENT OF QUALITY CULTURE *(Continued)*

Case: Quality-related trainings in 2021

Trainings on pharmaceutical regulations

- In 2021, Limin Factory conducted quality management trainings every month to enhance employees' understanding of newly promulgated laws and regulations, such as the Provisions for the Change Management of Post-approval Drugs (Interim), the Technical Guidelines on Studies of Post-approval Pharmaceutical Changes to Chemical Drugs (Interim), the Good Pharmacovigilance Practice, and the Administrative Measures for Drug Inspection (Interim), and to strengthen the awareness of compliance in drug quality management of all employees of the company.

7.7 ESTABLISHMENT OF QUALITY CULTURE *(Continued)*

Case: Quality-related trainings in 2021 *(Continued)*

Trainings on drug manufacturing

- In December 2021, Livzon Microsphere conducted trainings on standardized operations in clean areas such as hygiene standards, aseptic gowning, work standards, and cleaning & disinfection, for relevant personnel such as technical staff from the process research department, production staff, staff from the equipment engineering department and quality assurance staff. The trainings were carried out to minimize the risks of contamination by staff during drug manufacturing and ensure that the environment of drug manufacturing complies with the GMP requirements.

- In December 2021, the business school branch of Pharmaceutical Factory organized the "Capability Enhancement Camp for Production Operation and On-site Quality Management", which comprised trainings targeted to front-line management and management trainees. The trainings were conducted on a group basis in which participants discussed about how to improve quality management. The trainings have further raised employees' awareness of quality management and enhanced their capability of production operation and on-site quality management.

7.7 ESTABLISHMENT OF QUALITY CULTURE *(Continued)*

Case: Quality-related trainings in 2021 *(Continued)*

Trainings on drug distribution

- In 2021, Sichuan Guangda conducted over 900 training sessions for its employees on laws and regulations including the Drug Administration Law of the PRC, the Good Manufacturing Practice, the Good Pharmacovigilance Practice, the Provisions for the Change Management of Post-approval Drugs (Interim), the Technical Guidelines on Studies of Post-approval Pharmaceutical Changes to Traditional Chinese Medicine, and the Company's management regulations. By clarifying the quality control measures to be observed in the stages of procurement, production, storage, sales and transportation of pharmaceutical products, employees' awareness of compliance in the daily operation and drug distribution and management was raised, so that they would know and abide by the regulations.

Trainings on quality culture

- In 2021, Pharmaceutical Factory conducted multiple large-scale trainings on corporate quality culture for its employees, involving all frontline and management staff. Combining lectures and discussions, these trainings allowed them to gain a comprehensive and in-depth understanding of the Company's quality culture.

7.7 ESTABLISHMENT OF QUALITY CULTURE *(Continued)*

Case: Quality culture activities in 2021

- In 2021, to enhance the corporate's quality management, Sichuan Guangda organized training sessions and education such as training on new regulations, monthly examination, monthly meeting on quality analysis and quarterly analysis on deviation cases. It also conducted various company-wide quality culture activities, including team building, training material creation competition, production skills competition, and quality inspection items competition. These activities effectively improved the employees' production operation skills and enhanced the corporate's quality control capability. In 2021, the company conducted 95 activities at the workshop level and 356 activities at the team level.

- In June 2021, Pharmaceutical Factory held a "Regulation Knowledge Competition-Learning about and Understanding Law by Heart", which was participated by all production-related staff. There were six finalist teams which had passed their respective departmental qualifier. Not only did the staff demonstrate their understanding of regulations in various forms of examinations, but they also gained a more comprehensive and in-depth knowledge of regulations through this activity, which furthered their understanding of the importance of quality control on drug manufacturing and enhanced their awareness of "Learning about and Understanding Law by Heart".

7.7 ESTABLISHMENT OF QUALITY CULTURE *(Continued)*

Case: Quality culture activities in 2021 *(Continued)*

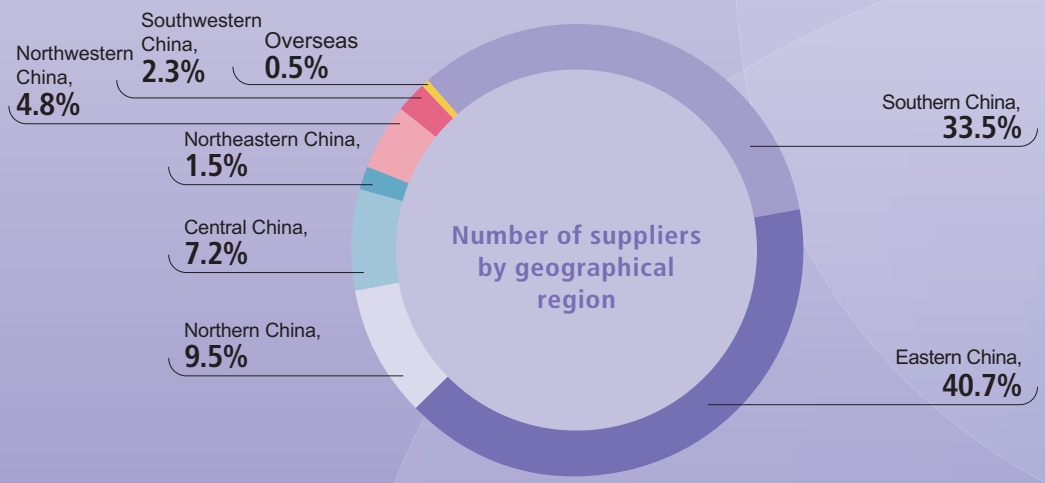
- In July 2021, Fuzhou Fuxing held inspection skill competitions for the purpose of "improving skills and standardizing operations". The competitions included theoretical knowledge test, practical skills competition, and joint competition of teams, among other forms. Through positive response and participation, the entire workforce improved their practical skills and quality awareness to ensure standardized operations.

8 RESPONSIBLE SUPPLY CHAIN

8 RESPONSIBLE SUPPLY CHAIN

In the face of the serious pandemic impact and the increasingly strict environmental requirements, a high quality, efficient and sustainable supply chain is crucial to the stable operation of enterprises. Adhering to the procurement principle of combining market-based pricing and comprehensive assessment and evaluation of tenders, Livzon, together with supply chain partners, has been socially responsible and has been committed to promoting the healthy development of the supply chain, creating a green, healthy, scientific and efficient supply chain system while striving for win-win cooperation.

As at 31 December 2021, the Company had 2,055 suppliers with the following regional distribution:



8 RESPONSIBLE SUPPLY CHAIN

8.1 SUPPLY CHAIN MANAGEMENT

Livzon strictly abides by the Company Law of the PRC, the Tendering and Bidding Law of the PRC and other relevant laws and regulations. In accordance with GMP requirements, Livzon has also formulated internal management regulations such as the Material Management System, the Administrative Measures for Supplier Entry, the Administrative Measures for Supplier Classification, Maintenance, Risk Assessment and Annual Appraisal, and the Administrative Measures for Electronic Procurement to regulate supply chain management.

We control the entire life cycle of supplier management through qualification confirmation, evaluation and maintenance, quality audit, additions and changes, and quality rating at all stages of selection, admission, use, evaluation, maintenance, and elimination. We evaluate suppliers' annual performance based on comprehensive indicators such as suppliers' qualification and certification, delivery timeliness, financial status and quality, energy conservation and environmental protection, and use the evaluation results as the basis for subsequent allocation of procurement share.

In addition, we proactively maintain active cooperation with suppliers on resolving issues related to product quality and safety; we actively conduct supplier training, promote energy conservation and emission reduction in the supply chain, and provide support for suppliers to improve themselves and obtain certification. In doing so, we are committed to building a healthy, green and sustainable supply chain.

8 RESPONSIBLE SUPPLY CHAIN

8.1 SUPPLY CHAIN MANAGEMENT *(Continued)*

8.1.1 Entry management

To regulate supplier entry procedure, during the Year, the Company formulated the Administrative Measures for Supplier Entry, which specifies the requirements for sourcing, evaluation, testing and verification, product quality standards, process testing evaluation, and stability inspection in supplier selection. Apart from the necessary qualifications, we focus on the performance of suppliers in terms of quality management system, EHS management system, social responsibility, and environmental protection; under the same conditions, the Group will give priority to enterprises with relevant certifications for cooperation and continuously increase the proportion of procurement from enterprises with ISO management systems certifications. We have defined the specific qualification requirements and certification documents standards by type of suppliers as follows:

Type of suppliers	Qualification and certification documents
Suppliers of pharmaceutical raw materials and auxiliary materials	Approval number of corresponding material, CDE (Center for Drug Evaluation of the National Medical Products Administration) registration number, quality standard, drug manufacturing license, business license, ISO 9001/ISO 14000/ISO 45001/ISO 50001 (quality management system/environmental management system/occupational health and safety/energy management system) and other series certificates, other EHS-related certificates (such as green factory, cleaner production audit, standardization of production safety), etc.
Suppliers of immediate pharmaceutical packaging materials	Manufacturing license of pharmaceutical packaging materials, registration certificate of pharmaceutical packaging materials, CDE registration number, quality standard, inspection report, printing business license, business license, ISO 9001/ISO 14000/ISO 45001/ISO 50001 and other series certificates, other EHS-related certificates (such as green factory, cleaner production audit, standardization of production safety), special printing license or packaging decoration printing license, commodity barcode printing license, etc.
Suppliers of pharmaceutical printing and packaging materials	Special printing license or packaging decoration printing license, commodity barcode printing license, quality standard, business license, ISO 9001/ISO 14000/ISO 45001/ISO 50001 and other series certificates, other EHS-related certificates (such as green factory, cleaner production audit, standardization of production safety), etc.

8.1 SUPPLY CHAIN MANAGEMENT *(Continued)*

8.1.2 Classification and risk assessment management

During the Reporting Period, to properly manage the classification, maintenance, risk assessment and annual appraisal of the Group's suppliers and to improve the management efficiency of contractual suppliers, the Group formulated the Administrative Measures for Supplier Classification, Maintenance, Risk Assessment and Annual Appraisal, which classifies suppliers into three categories, namely, critical suppliers, key suppliers and general suppliers, according to comprehensive factors such as procurement amount, material category and quality risk levels of suppliers. The annual list of supplier classification will be updated in the first quarter of each year.

At the same time, according to the requirements of the Administrative Measures for Supplier Classification, Maintenance, Risk Assessment and Annual Appraisal, to ensure stable supply chain and avoid the risk of supply disruption, each enterprise of the Group conducts regular risk assessment of its suppliers according to the classification. The assessment indicators include but are not limited to: enterprise qualification, enterprise financial status, enterprise business environment, enterprise service performance, changes in and impact of national environmental protection regulations and policies, international trade environment and impact, impact of international finance and exchange rate, impact of major unexpected events and social events, and impact of unusual weather and festivals on transportation. According to the assessment results, suppliers are categorized as high risk, medium risk and low risk. Each enterprise of the Group has developed appropriate risk prevention and response measures as well as a precaution mechanism according to the different risk levels of suppliers, imposing responsibilities on project leaders and support teams, striving to minimize supply risks.

Classification of suppliers	Definitions	Frequency of risk assessment
Critical suppliers	1. The top ten suppliers in terms of annual procurement amount of the enterprise; 2. The suppliers of raw materials and auxiliary materials involved in the top varieties of the enterprise accounting for 80% of profits among all varieties ordered from high to low, and with annual procurement amount of over RMB10 million.	Not less than 4 times a year
Key suppliers	Suppliers (excluding critical suppliers) of materials (raw materials, auxiliary materials, and packaging materials, and consumables and additives involved in process, etc.) with annual procurement amount of over RMB10 million, or suppliers of materials with annual procurement amount of below RMB10 million but assessed by the quality department of the enterprise as high or medium risk.	Not less than twice a year
General suppliers	Other suppliers than critical suppliers and key suppliers.	Determined according to the actual situation of the enterprise

8.1 SUPPLY CHAIN MANAGEMENT *(Continued)*

8.1.3 Supplier audit

To guarantee product quality and safety at source, Livzon conducts supplier audits in accordance with the Administrative Procedures for Supplier Audit to ensure controllable material quality risks through comprehensive auditing on supplier qualification documents, staff composition, equipment and facilities, material management, production management, quality control and quality assurance. In addition, to promote a green and sustainable supply chain, the Group formulated the Administrative Procedures for Supplier EHS Audit during the Year to formally include suppliers' EHS performance in the scope of supplier audits. Please refer to "8.5 Green and sustainable supply chain" for details of the suppliers' EHS audit.

Due to the large number of suppliers, we categorize suppliers into Tier 1, Tier 2 and Tier 3 according to their classifications and risk levels, and we use different audit frequencies and audit methods for scientific and efficient auditing:

Classification	Definitions	Audit frequency and method
Tier 1 suppliers	• Critical suppliers • Material suppliers with the highest risk in quality impact assessment	Not less than 1 on-site audit every two years
Tier 2 suppliers	• Key suppliers • Material suppliers with high risk (other than the highest risk) in quality impact assessment	Not less than 1 on-site audit every three years
Tier 3 suppliers	• General suppliers • Material suppliers with medium and low risks in quality impact assessment	Not less than 1 written audit every three years

8.1 SUPPLY CHAIN MANAGEMENT *(Continued)*

8.1.3 Supplier audit *(Continued)*

Supplier Audit Dimension of Livzon

During the Reporting Period, the Group completed the classification of 1,813 suppliers and planned audits of 673 of them according to the classification. We audited 625 suppliers (including 171 on-site audits and 454 written audits), a 93% completion rate of the plan. We will keep tracking the corrections of the suppliers. Due to the impact of the COVID-19 pandemic, some of the audit plans were delayed or cancelled, and we are planning online auditing in place of some on-site audits in the future.

8.1.4 Appraisal and maintenance

In the first quarter of each year, the supply chain department of the Company's subsidiaries engages production department, quality department and EHS department in completing the annual appraisal of supplier performance in the previous year. The appraisal indicators include, but are not limited to, suppliers' qualification and certification, delivery timeliness, financial status, quality of supply, energy conservation and emission reduction, transportation and after-sales service, audit results and correction of audit defects.

The results of the annual supplier appraisal is divided into four levels: excellent, good, qualified and unqualified. For suppliers whose annual appraisal results are excellent, we will issue excellent supplier certificates and may consider increasing procurement volume; for suppliers whose annual appraisal results are unqualified, we will suspend the procurement and request immediate correction, and the suppliers can requalify after their corrections meet the requirements, or they will be eliminated and moved out of the qualified supplier pool after the approval process if they fail to make timely corrections or meet the correction requirements. The results of the annual supplier appraisal will be an important consideration for allocation of procurement share in the following year. The enterprise can make reasonable adjustments to the procurement share for the current year according to business operation and the results of the annual supplier appraisal for the previous year.

8 RESPONSIBLE SUPPLY CHAIN

8.2 IMPROVEMENT OF SUPPLY CHAIN QUALITY

Keenly aware that the quality of material supply will directly affect the final product, Livzon attaches high importance to management of supply chain quality and takes all kinds of proactive actions to enhance it. The key actions are as follows:

- Reemphasize to suppliers our specific quality requirements through quality audit, the result of which shall be an important consideration for allocation of procurement share in the following year;
- Engage suppliers in discussion about how to solve issues related to product quality and safety together and reach an agreement regarding supply quality;
- Provide annual quality training for suppliers to convey the Company's quality philosophy and requirements; help improve the suppliers' quality management level by providing technical guidance and management training, and actively support suppliers to obtain ISO certifications;
- Before the promulgation and implementation of new industry regulations and standards, take the initiative to understand suppliers' interpretation and implementation of such regulations, and provide trainings if necessary;
- In case of abnormalities in material supply or quality, provide guidance on process improvement, quality inspection, etc., and provide on-site assistance when necessary to assist suppliers for as quick corrections as possible.

In addition, following the standard requirements under the Implementation Guide for Traditional Chinese Medicine Traceability System, the Traditional Chinese Medicine Traceability Information Requirements – Cultivation of Traditional Chinese Medicinal Materials, and the Traditional Chinese Medicine Traceability Information Requirements – Production of Traditional Chinese Medicine Tablets, the traditional Chinese medicine ("TCM") business department of the Company established a TCM traceability system management software platform and has completed the traceability information construction of 9 key medicine cultivation bases. It allows the sources of traditional Chinese medicinal materials and their whereabouts to be traced and verified and all parties concerned to be held accountable. As such, the quality and safety of our TCM products can be further improved.

Supplier training on quality assurance

Supplier training on quality assurance is an important leverage to control the supply chain quality risk management and ensure the effective operation of the quality management system. The quality management head office of the Company develops annual training plans according to supplier classification on a yearly basis, and each subsidiary of the Company is responsible for implementing the training plans, either online or offline, or by distributing materials, and conducts annual supplier trainings on quality assurance for all high risk suppliers of the Group.

We conduct trainings for suppliers specifically based on the results of supplier evaluation and the audit defects found in the audit process, to guide suppliers in improving their quality control systems and levels of process quality. At the same time, we plan to increase the proportion in relation to business ethics, anti-corruption, EHS, and social responsibility in trainings in 2022. This plan is intended to convey clearly to the partners of Livzon our win-win philosophy via stable quality, optimized system, green circulation, and sustainability.

During the Year, the Group's supplier trainings on quality assurance covered all high risk suppliers of the Group.

8.2 IMPROVEMENT OF SUPPLY CHAIN QUALITY *(Continued)*

Supplier training on quality assurance *(Continued)*

Case: Supplier quality training

In December 2021, Xinbeijiang Pharma invited 44 suppliers of raw materials/auxiliary materials and packaging materials to attend the online training on the Supplier Quality Management. The training covered supplier regulatory requirements, supplier selection criteria, supplier quality management, and supplier environmental protection management. This online training provided all suppliers with a more comprehensive understanding of supplier quality requirements, quality audit management procedures, quality agreement requirements, EHS audit requirements, and other requirements for supplier quality and environmental protection management, which helped to further improve the quality level of the supply chain.

In December 2021, Sichuan Guangda held a supplier quality training seminar, inviting 28 suppliers of production materials such as bulk medicinal materials, raw materials/auxiliary materials, and packaging materials to participate in the training seminar. The training covered the acceptance standards and usage requirements of commonly used traditional Chinese medicinal materials, supplier quality requirements, quality audit management procedures, quality agreement requirements, supplier rating schemes, summary of material quality issues, EHS audit requirements, etc. This training provided all suppliers with a more comprehensive understanding of Livzon's requirements for material quality and quality agreements, and helped to further improve the quality level of the supply chain.

8 RESPONSIBLE SUPPLY CHAIN

8.3 ESTABLISHMENT OF CLEAN SUPPLY CHAIN

In 2021, to promote the establishment of a clean supply chain, the Company revised the Administrative Measures for Whistleblowing and Complaint and the Anti-Corruption and Anti-Commercial Bribery Regulations, and issued the Staff Commitment for Anti-Corruption and Anti-Commercial Bribery and the Supplier Commitment for Operating with Integrity on the website of the Company. These regulations clearly cover all external economic activities of the Group and are applicable to all suppliers, service providers, contractors, and clients who have business connection with the Group. The senior management of the Company, all management personnel at the deputy manager level or above in departments of each subsidiary and staff in key positions (procurement, engineering, EHS, etc.) have signed the Staff Commitment for Anti-Corruption and Anti-Commercial Bribery.

At the same time, we have added an integrity commitment clause to all sample commercial contracts of the Company, requiring the transaction parties such as suppliers to commit to operating with integrity and take active part in the integrity trainings organized by the Group. If there is any violation, the Group has the right to terminate the contract. When signing a contract with the Group, the supplier must also sign the Supplier Commitment for Operating with Integrity which will be kept on file, pledging to follow Livzon's anti-corruption policy. If there is any breach of commitment, the Group will disqualify such suppliers, service providers, agents and distributors, cancel their bidding qualification and terminate the contracts, and will transfer those suspected of crime to the judicial organs.

With the above mechanism, we can ensure that the anti-corruption policies of the Company are legally binding on all suppliers of the Group.

In addition to the continuous improvement of rules and regulations, we have also further strengthened control of anti-corruption in the supply chain by regulating the management of business process, changed our way of supervision from "ex post supervision" to "ex ante involvement, ad interim control and ex post supervision", and strengthened the supervision of the entire process.

Livzon attaches great importance to clean procurement and strictly controls the standards for supplier entry. While inspecting the entry qualifications of suppliers by multiple departments, we regularly conduct quality audits on suppliers. The procurement staff have no right to add suppliers to the system. The procurement business of bulk materials and engineering equipment requires public tender by announcement on the Company's official website and the establishment of an evaluation team by multiple departments (legal compliance head office, production technology head office, and risk management head office, etc.) to inspect and review the supplier applicants from different aspects such as corporate strength, legal risks, and operation compliance before determining their bidding qualifications; for daily material procurement business, suppliers make quotations in the Group's Supplier Relationship Management System. If the procurement amount is within the specified limit, multiple departments must be involved in the bidding. If the procurement amount is below the specified limit, the procurement will be carried out by inquiry for quotation. The Group has a strictly regulated supplier bidding process in place, with the on-site supervision from the Company's risk management head office to ensure a standardized, open and transparent bidding, which eliminates the possibility of commercial bribery, and select truly competent suppliers.

8.3 ESTABLISHMENT OF CLEAN SUPPLY CHAIN *(Continued)*

Supplier integrity audits

According to the audit plan, the Company conducts follow-up inspections of the Group's major construction projects on a quarterly basis to confirm the construction progress, the procurement and use of materials, the changes in engineering quantities, and the compliance of supervisors' performance. We also conduct random checks from time to time on bidding (purchasing) files, contracts, financial payments and other documents to ensure the compliance of each business and avoid the occurrence of bribery and corruption.

We regularly conduct supplier integrity audits to convey the Company's anti-corruption and anti-commercial bribery policies and ensure legal compliance at all levels of the supply chain.

In addition, we will continue to promote the construction of a digital platform for procurement to achieve open, transparent and traceable procurement operations.

Case: Supplier anti-corruption and integrity trainings

- To regulate the work behavior of suppliers in the supply chain process and prevent any existing or potential commercial bribery, Shanghai Livzon Biotech conducted trainings for representatives of suppliers on combating corruption and upholding integrity in supply services in October 2021, to improve suppliers' awareness of anti-corruption and integrity.

- In December 2021, Livzon Hecheng conducted trainings for representatives of suppliers on anti-corruption and upholding integrity, which required contract performance process to be fair, just and open, aimed to enhance suppliers' awareness of anti-corruption and integrity and prevent any misconduct during the business cooperation.

Anti-corruption training conducted by Shanghai Livzon Biotech

Anti-corruption training conducted by Livzon Hecheng

8 RESPONSIBLE SUPPLY CHAIN

8.4 ENHANCEMENT OF SUPPLY CHAIN STABILITY

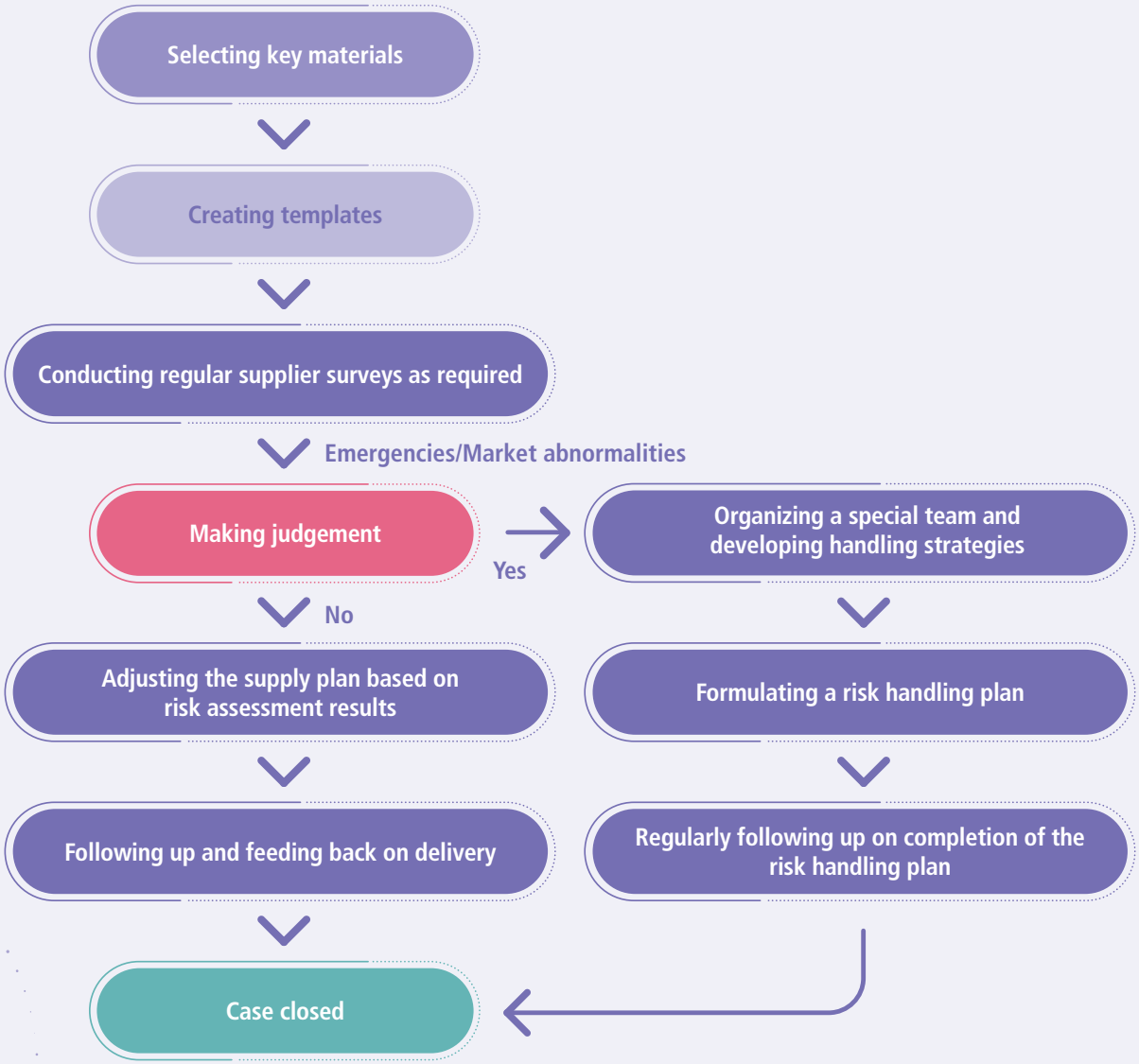
During the Reporting Period, to improve supply chain stability and mitigate the systematic risks of the supply chain, the Company newly formulated the Administrative Measures for Supplier Classification, Maintenance, Risk Assessment and Annual Appraisal. All manufacturing enterprises of the Group have established the Supplier Risk Management System, which covers the following suppliers: the suppliers of raw materials for the Group's products that rank top 10 in terms of profit or output value, and the suppliers of production materials with an annual procurement amount of over RMB3 million.

The Supplier Risk Management System formulated by the Group specifies the respective responsibilities of each department of the enterprises for the management of supply chain risks and stipulates the principles of supply chain risk assessment and supply chain risk control process. Appropriate principles of response measures have been established for each type of supply chain risks (e.g. supply quality, delivery risk, service situation, material cost, enterprise qualification and business environment). Each enterprise is required to prepare an Annual Supplier Risk Assessment Report each year and submit it to the Company's production technology head office for reporting and review. The above system established a whole-process systematic risk mitigation plan and control system for the supply chain risks of the Group.

The Group conducts supply risk assessment at least four times a year for critical suppliers and twice a year for key suppliers. Based on the risk assessment results, the Group will develop risk prevention and response measures and establish an early warning mechanism to reduce supply chain risks. The Group also develops emergency contingency plans for suppliers identified as high and medium risks.

8.4 ENHANCEMENT OF SUPPLY CHAIN STABILITY *(Continued)*

Supply chain risk control process of Livzon



8.4 ENHANCEMENT OF SUPPLY CHAIN STABILITY *(Continued)*

General measures:

- Improve communication and sign long-term agreements with suppliers, and ensure the priority order of material delivery;
- Optimize supply chain distribution, reasonably allocate the proportion of imported and domestically produced materials, and actively develop alternative resources;
- Develop and deploy suppliers for key varieties in advance, and promote the improvement of alternative supplier quality;
- Regularly investigate the price trend of bulk key materials;
- Ensure the availability of 2-3 qualified suppliers in different regions for each type of material;
- Carry out supplier visits regularly to investigate the production and operation of suppliers.

Corresponding measures for risks:

- For key materials involved in key products, formulate a plan of adding alternative suppliers to avoid exclusive supply;
- For high supply risk materials, adopt a safe inventory strategy by establishing a reasonable inventory (to meet the production needs of six months or up to one year) and carrying out dynamic management;
- For exclusively supplied materials that cannot be replaced temporarily, increase the frequency of on-site audits as appropriate or jointly build bases to reduce supply risks;
- For materials with a long order cycle, such as imported materials, sign long-term agreements with suppliers to ensure annual supply;
- Develop futures hedging business to hedge the risk of price fluctuations of bulk materials such as corn starch and glucose, and stabilize procurement costs.

In addition, the TCM business department of the Company cooperated with suppliers to jointly build a base for growing traditional Chinese medicinal materials in simulated wild conditions to ensure the quality and quantity of the raw materials supplied for our key products. As at the end of the Reporting Period, the Group has completed the construction of multiple jointly-built bases for growing various traditional Chinese medicinal materials such as codonopsis（黨參）, astragalus root（黃芪）, isatis root（板藍根）, and rehmannia glutinosa（地黃）in simulated wild conditions, feeding the Group with continuous supply of high-quality traditional Chinese medicinal materials.

8.5 GREEN AND SUSTAINABLE SUPPLY CHAIN

In active response to the national green development policy guidelines, Livzon has introduced the concept of energy conservation and emission reduction, and green and low-carbon into the supply chain management process. During the Year, while incorporating EHS requirements into supplier quality audits, the Group imposed new management requirements for energy conservation and emission reduction target on suppliers. These requirements defined suppliers' green and low-carbon business performance as an indicator in the comprehensive evaluation of market-based procurement by linking appraisal results to procurement share. We are expecting concerted efforts with our supply chain partners to explore actively and establish a green and low-carbon sustainable supply chain.

8.5.1 Supplier EHS audit

To better identify EHS risks along the supply chain during the Reporting Period, all manufacturing enterprises of the Group have established the Administrative Procedures for Supplier EHS Audit, adding EHS audit requirements to the enterprises' original supplier audit management systems. These procedures specifically include the following key points:

- the inclusion of EHS audit in the annual supplier audit plan when such plan is formulated;
- the audit team should include EHS management professionals;
- EHS audit mainly includes the implementation of the "three simultaneous" system, compliance with pollutant discharge standards, the compliance of solid waste collection and disposal, the ISO system certification, and the progress of safety standardization;
- upon completion of the audit, preparing an annual audit report of the supplier containing the key points of the EHS audit and the assessment results, and submitting it to the Company's production technology head office for reporting and review;
- urging suppliers to use more environmentally-friendly products and services and to improve their EHS performance;
- giving preference to suppliers with environmentally-friendly products and services;
- giving preference to suppliers with higher EHS audit scores under the same conditions.

8.5 GREEN AND SUSTAINABLE SUPPLY CHAIN *(Continued)*

8.5.2 Sustainable procurement

To promote the establishment of a green supply chain and to achieve sustainable procurement, during the Reporting Period, all manufacturing enterprises of the Group have established the Administrative Procedures for Energy Conservation and Emission Reduction for Suppliers, which imposed clear requirements for energy conservation and emission reduction on the suppliers of raw materials for the Group's products that rank top 10 in terms of profit or output value and the suppliers of production materials with an annual procurement amount of over RMB3 million. These procedures include the following key points:

- Based on the actual situation of suppliers, set targeted appraisal goals for suppliers, such as reducing resource consumption of water and electricity, and reducing discharge of pollutants (e.g. air emissions, wastewater and wastes);

- Audit cycle: suppliers submit a report on the results of energy conservation and emission reduction every six months, and the Group conducts annual audits;

- The results of the annual audits are either Pass or Fail. Suppliers who fail the appraisal will be eliminated or re-qualified, while suppliers who pass the appraisal will be retained and continue to be used. The audit results will be used as an important basis for the allocation of procurement shares in the following year. This will urge suppliers to develop effective measures for energy conservation and emission reduction, such as establishing environmental and energy management systems, promoting clean production, and prioritizing the use of advanced process equipment and clean energy;

- Under the same conditions, priority will be given to suppliers with good environmental performance, especially those listed in the green factory or green supply chain.

At the same time, we actively provide guidance and advice for our suppliers to help them improve their EHS management performance, obtain relevant certifications and achieve their energy conservation and emission reduction targets.

8.6 DRIVING INDUSTRY DEVELOPMENT

Livzon actively participates in the activities of industry associations, and becomes formal members and holds positions such as vice-chairman, executive director and board member of several associations. By providing assistance in the development of industry standards, delivering academic presentations and participating in seminars, the Group has helped to alleviate the shortage of raw and auxiliary materials, improved standards of medicinal materials supplied, evaluated and mitigated supply chain risks, and kept promoting product quality improvement in the industry. In 2021, the Company put forward 11 amendments to laws and regulations through associations and sent experts to participate in more than 20 industry system certification reviews.

Improving the plight of the auxiliary materials industry

In 2021, the increasingly severe overseas pandemic has seriously affected the supply of raw and auxiliary materials for biopharmaceuticals and chemical drugs. To overcome this obstacle, the Company, as the executive director of the "Guangdong Food & Drug Technology Association for Evaluation & Certification (GD. FDTAEC)", collaborated with the Pharmaceutical Special Committee to conduct a research on technical issues in the pharmaceutical auxiliary materials industry. Through this research, we summarized the existing problems in the domestic auxiliary materials industry and made targeted suggestions for improvement. We suggested to avoid problems such as insufficient supply of auxiliary materials and poor product quality by refining relevant technical standards, improving the quantification accuracy of auxiliary materials standards, and conducting cooperative clinical trials through import substitution and division of labor.

Promoting high-quality development of the traditional Chinese medicinal materials industry

Limin Factory, a subsidiary of the Company, has joined the Professional Committee of Traditional Chinese Medicinal Materials Cultivation of the China Association of Traditional Chinese Medicine (CATCM) and has been elected as the vice chairman. Limin is committed to strengthening the establishment of TCM sources and promoting the efficient and high-quality development of the traditional Chinese medicinal materials cultivation industry. During the Year, the Company participated in the preparation of the Report on Development of the Traditional Chinese Medicinal Materials Industry organized by the Professional Committee of Traditional Chinese Medicinal Materials Cultivation of CATCM, and prepared the section of "Promotion of the Standardized Cultivation Techniques for Growing the Traditional Chinese Medicinal Material Astragalus Root in Simulated Wild Conditions". The cultivation technique simulates, by following the laws and patterns of nature, the wild environment and conditions where traditional Chinese medicinal materials naturally grow, based on their growth habits and requirements for ecological environment, in a natural environment with relatively stable ecological conditions. The technique plays a role in improving the efficacy of the medicinal materials, and the promotion of the standardized cultivation can effectively ensure the quality of medicinal material production and supply.

8.6 DRIVING INDUSTRY DEVELOPMENT *(Continued)*

Promoting high-quality development of the traditional Chinese medicinal materials industry *(Continued)*

In addition, we participated in the Source of TCM in Action – Into Daxinganling • 2021 Forum Meeting on the High-quality Development of the TCM Industry in Cold Region(中藥源頭在行動 – 走進大興安嶺•2021年寒地中藥產業高品質發展論壇會議)and The First National Conference on the Development of Chinese and Mongolian Medicinal Materials Industry in Chifeng City(赤峰市首屆全國中蒙藥材產業發展大會)organized by the Professional Committee of Traditional Chinese Medicinal Materials Cultivation of CATCM. During the two meetings of promoting cultivation of traditional Chinese medicinal materials, we actively participated in the discussion of the current development status of the traditional Chinese medicinal materials industry and the exploration of subsequent planning, and made constructive suggestions for optimizing the cultivation of traditional Chinese medicinal materials.

List of associations in which Livzon was formal participants in 2021 (partial)	
• China Pharmaceutical Enterprises Association	• Guangdong Food & Drug Technology Association for Evaluation & Certification
• China Chamber of Commerce for Import and Export of Medicines and Health Products	• Guangdong Food and Drug Anti-Counterfeiting Association
• China Association of Pharmaceutical Commerce	• Guangdong Province Pharmaceutical Industry Association
• Price Association of China	• Guangdong Pharmaceutical Association
• China Pharmaceutical Industry Association	• Guangdong Bio-pharmaceutical Innovation Technology Association
• China Association for Public Companies	• Guangdong Independent Innovation Promotion Association
• Professional Committee of Traditional Chinese Medicinal Materials Cultivation of the China Association of Traditional Chinese Medicine	• Guangdong Association of Traditional Chinese Medicine
	• Guangdong Pharmaceutical Price Association

9 TAKE HUMAN AS THE FOREMOST

9 TAKE HUMAN AS THE FOREMOST

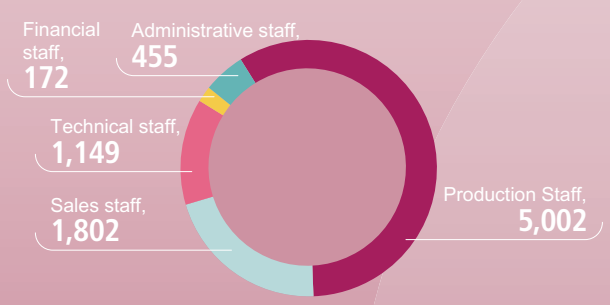
9.1 EMPLOYMENT

The Group has always upheld the talent cultivation philosophy "Employees are the Company's most valuable resource, and high-calibre talents are the Company's most important asset". Livzon remains true to the belief that high-quality talents are the core competitiveness for the Company's development. We are committed to creating a diverse and inclusive workplace for employees, improving the vocational training system for talent development and retention, and safeguarding the legitimate rights and interests of employees as well as their health and safety. We are dedicated to building a talent cluster for the enterprise.

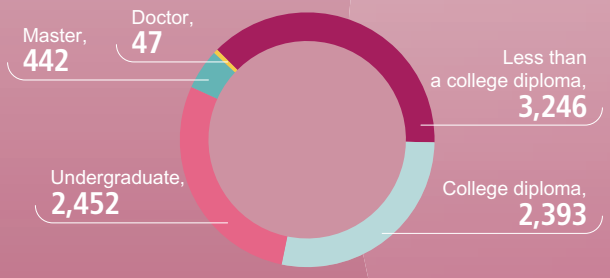
Livzon adheres to the standard of selecting talents who have both moral integrity and professional competence. Additionally, we adopt a rotation system for key positions to strengthen the movement of people between jobs and implement the principle of cultivating versatile talents. We also reinforce efforts to train and promote young talents and nurture experts in different fields by internal training and external recruitment, allowing elites to flourish together with Livzon.

As at the end of the Reporting Period, the Company and its wholly-owned subsidiaries and controlling subsidiaries had a total of 8,580 employees (31 December 2020: 8,367 employees).

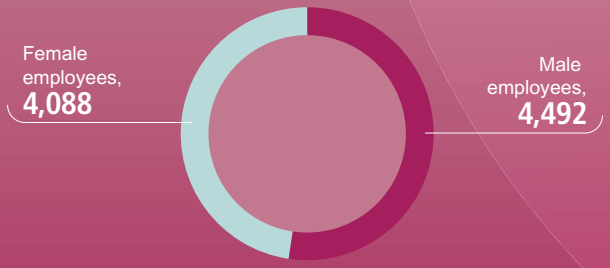
Livzon's number of employees by function in 2021



Livzon's number of employees by educational attainment in 2021



Livzon's number of employees by gender in 2021



9.1 EMPLOYMENT *(Continued)*

9.1.1 Compliant employment

Livzon supports the United Nations Global Compact, follows the ILO core conventions, and strictly abides by the Labor Law of the PRC, the Labor Contract Law of the PRC, the Labor Right Protection Law, the Provisions on the Prohibition of Using Child Labor, the Social Security Law of the PRC and other relevant national and local laws and regulations.

During the Year, to regulate the labor management and ethical conduct within the Group and protect the legitimate rights and interests of labors, the Company established the Code of Labor Employment and Ethical Conduct (the "Code") of the Group in accordance with the ILO core conventions and relevant Chinese laws, and with reference to the United Nations Global Compact. The Code is applicable to all permanent, part-time and temporary employees of the Group, as well as to all suppliers, contractors, service providers and clients that have business relationship with the Group in order to ensure that the Group complies with the ILO core conventions in terms of employment.

Summary of the Code of Labor Employment and Ethical Conduct of Livzon

01 The scope of application of the Code is the Group and all of its employees, as well as all clients, suppliers, service providers and contractors that have business relationship with the Group. Each unit shall fully abide by the Code while making its own human resources and related policies.

02 Wage distribution shall be made according to individual performance, following the principle of equal pay for equal work.

03 The Group's recruitment and employment follows the principle of fairness, impartiality and openness. The recruitment is based on job qualifications and the ability of the candidate, regardless of age, ethnicity, race, family status, ethnic background, skin color, gender, sexual orientation, religious belief, social origin, nationality, disability, pregnancy, etc. Each unit shall ensure equal opportunities during the employment process and reject all acts of discrimination and prejudice.

04 The Group prohibits the use of child labor, and all units are forbidden to recruit and employ minors under the age of sixteen.

05 The Group strives to create a healthy working environment for employees and respects their freedom of association. Employees have the right to freely choose to form or join a union.

06 The Group guarantees the labor safety and health protection of employees in the workplace in accordance with the requirements of national regulations, and supports the continuous improvement of the working environment. All employees are responsible for reporting potential unsafe factors in the workplace.

07 The approval and calculation of employees' remuneration and related benefits shall follow the principle of fairness. Employees' remuneration shall not be lower than the minimum wage standard stipulated in national and local regulations.

9.1 EMPLOYMENT *(Continued)*

9.1.1 Compliant employment *(Continued)*

Summary of the Code of Labor Employment and Ethical Conduct of Livzon *(Continued)*

08 Employees who work overtime should be able to take working days off or be offered overtime pay in accordance with national laws and the Company's regulations.

09 The Group is against forced labor. No unit shall force employees to labor by means of violence, threats or illegal restrictions on personal freedom.

10 The Group strictly prohibits sexual harassment in the workplace, including sexual harassment against the will of others by means of oral language, written texts, images, physical behavior, etc. We encourage employees who are victims of sexual harassment to immediately report the situation to their supervisor or the human resource department for the Company to investigate. We will investigate such reports confidentially as promptly as possible. Once the investigation is sufficient to substantiate relevant allegations, we will take appropriate corrective actions.

11 The Group is against corruption and bribery. All employees and units of the Group must abide by the Anti-Corruption and Anti-Commercial Bribery Regulations of the Company, and all clients, suppliers, service providers and contractors who have business relationship with the Group are within the scope of this regulation.

12 The Group endeavors to create an inclusive working environment and respects the diversity and differences of our employees. We incorporate the principle of diversity into the recruitment and employment policies of each unit of the Group.

13 The Group will give its best effort to identify acts that do not comply with the provisions of the Code, and will commit to make every effort to prevent such acts from occurring. To this end, we encourage relevant personnel to report violations of the Code to their supervisors or the human resource department as promptly as possible so that the Company can investigate and tackle them to reduce the occurrence of such violations in the future.

14 The Group will investigate the violations of the Code as promptly as possible and take necessary measures to protect the legitimate rights and interests of relevant personnel who report and complain in good faith. Those who deliberately fabricate facts and make false charges or frame-ups under the pretext of reporting or complaining will be seriously dealt with in accordance with relevant regulations, and shall be transferred to judicial organs for handling if the action constitutes a crime.

15 Once the investigation is sufficient to prove that there is a violation of the Code, the Group will impose appropriate penalties and take appropriate corrective actions, including but not limited to the termination of labor contracts and commercial contracts. Those whose actions are suspected of constituting a crime shall be transferred to judicial organs for handling.

9.1 EMPLOYMENT *(Continued)*

9.1.1 Compliant employment *(Continued)*

The Group prohibits the recruitment and employment of minors under the age of sixteen. Applicants are required to provide identity documents during the recruitment process to ensure that they meet the minimum working age requirements stipulated by law. In order to ensure that every step of the employment process is in compliance with laws and regulations, we encourage relevant personnel to report violations of regulations to their supervisors or the human resource department in a timely manner for investigation and handling.

The Group strictly forbids forced labor by any operating unit, who shall not force employees to labor by means of violence, threats or illegal restrictions on personal safety.

During the Reporting Period, Livzon did not use child labor or force labor.

9.1.2 Diversity and inclusiveness

Livzon has always believed that diversity is one of the key elements in maintaining its competitive advantage and promoting its sustainable development. We strive to create an inclusive working environment, respect the diversity and differences of our employees and incorporate the principle of diversity into the recruitment and hiring policies of the Group's subsidiaries, and explicitly reject all discriminatory and prejudicial behavior, create and maintain an inclusive and equal working environment and respect each and every employee.

We have incorporated the principles and concepts such as diversity, inclusiveness, impartiality and anti-discrimination into the trainings of all employees and developed relevant materials for all employees to study.

Diversity

During the Year, we improved our diversity policy and set a diversity target of having no less than 40% female employees in the future, continuously optimized the organizational structure of our workforce, guaranteed equal opportunities for women in employment, and promoted diversity and inclusiveness in our business. The human resource head office of the Company annually compiles the Livzon Group Annual Diversity Report on a regular basis presenting the Group's workforce diversity and the implementation of the Code of Labor Employment and Ethical Conduct for the year, and submits it for review to the ESG Committee of the Board, which oversees the diversity performance, evaluates the diversity policy, reviews the current status of diversity and explores future planning.

The Company highly recognizes the contribution of a diverse Board in its corporate development and considers that the diversity of members of the Board is one of the key factors that maintain our competitive strength and promote our sustainable development. The nomination committee of the Board annually reviews the Board diversity policy and monitors its implementation on a regular basis.

9.1 EMPLOYMENT *(Continued)*

9.1.2 Diversity and inclusiveness *(Continued)*

Diversity *(Continued)*

In 2014, the Company issued the Board Diversity Policy, with a comprehensive consideration of the composition of the Board from multiple dimensions of gender, age, cultural and educational background, professional experiences, skills and knowledge. On this basis, the Company shall base decisions on objective conditions such as comprehensive values a candidate can deliver to the business and development of the Company, contributions a candidate can make to the Board while ensuring the diversity of the Board, and make sure that the Board includes at least one female member to achieve gender diversity in the Board. In addition, the Company's nomination committee will regularly monitor and review the policy to ensure that it is working effectively.

The Company considers the current composition of the Board to be a balanced and diverse mix, composed of members aged 46-66 years, including one female director. The Board members have diverse professional backgrounds and extensive industry experience, including accounting professionals, domestic and international lawyers and individuals experienced in enterprise management. Their knowledge structure and areas of expertise are both professional and complementary to the Board, providing forward-looking, scientific and feasible opinions on the Group's regulatory governance and major policy decisions.

During the Year, the Company appointed Mr. Luo Huiyuan and Ms. Cui Lijie as independent non-executive directors to fill the vacancies left by Mr. Zheng Zhihua and Mr. Xie Yun as independent non-executive directors due to the expiration of tenure. In particular, Ms. Cui Lijie has more than 12 years of experience in the operation and management of pharmaceutical enterprises and capital market operation and over 5 years of experience in risk management; Mr. Luo Huiyuan has more than 20 years of experience in legal practice and over 5 years of experience in corporate regulatory governance. In addition, Mr. Bai Hua, an independent non-executive director of the Company, is a Chinese certified public accountant (non-practicing) with in-depth financial expertise and extensive research and practice experience in corporate governance, risk management and internal control.

As at 31 December 2021, the Board of the Company had a total of 11 members, of which female director accounted for 9%; the executive management of the Company had a total of 8 members, of which 2 were women, representing 25%; the average percentage of women in the executive management of the Company over the past three years (2019-2021) was 25%; the age distribution of the Group's employees was: 37% aged 30 and below, 57% aged 31-49 and 6% aged 50 and above.

9.1 EMPLOYMENT *(Continued)*

9.1.2 Diversity and inclusiveness *(Continued)*

Anti-discrimination

Upholding the principle of anti-discrimination, Livzon treats every employee equally and encourages effective collaboration in a diverse, open, respectful and inclusive culture:

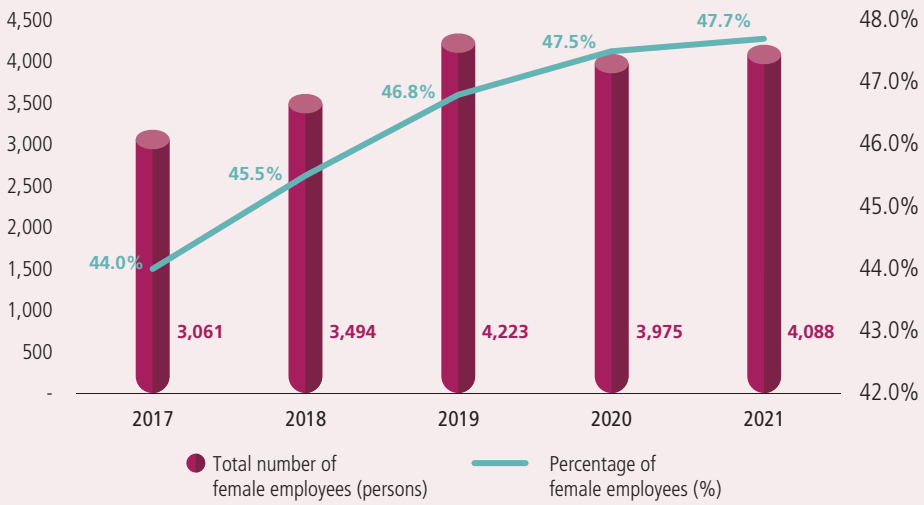
- Employment process: We select talent in a fair and impartial manner, treating all candidates equally and matching jobs and employees strictly according to qualifications, without discriminating them based on ethnicity, race, nationality, gender, religion, age, sexual orientation, disability, pregnancy, skin color, family status, social origin, etc.;

- Operation process: We encourage employees to respect each other at work, give them equal opportunities for career development and promotion, implement equal pay for equal work, and continuously improve employee satisfaction to facilitate talent retention.

Proactively responding to the direction of national policy, we promote equality in employment and treatment of women, ensure various benefits for female employees and give full care and attention to female employees. We strictly observe the national regulations on leave management for female employees and specify that female employees enjoy paid marriage leave, maternity leave and breastfeeding leave in the employment system. We have set up mother-and-baby rooms to support female employees returning to work after giving birth, and provide paternity leave for male employees. We also respect the customs and culture of our foreign employees and ethnic minority employees. In addition to the Company's holidays, we ensure that they enjoy their respective ethnic cultural festivals, such as Christmas, Eid al-Adha, Eid al-Fitr, etc.

As at the end of the Reporting Period, the proportion of female employees in Livzon's workforce continued to grow, reaching 47.7% (31 December 2020: 47.5%), and the number of women in management positions at manager level or above was 391, accounting for 35%. The gender ratio of employees showed a positive and balanced trend of changes; there were 408 ethnic minority employees and 9 foreign employees.

Livzon's Employee Distribution by Gender from 2017 to 2021



9 TAKE HUMAN AS THE FOREMOST

9.1 EMPLOYMENT *(Continued)*

9.1.3 Talent retention

To minimize employee turnover, Livzon implements talent retention programs continuously, makes competitive remuneration packages, gives incentive bonuses in line with job characteristics, and identifies high potential and key talents to provide appropriate support in certain processes such as promotion. In addition, we conduct regular employees exchange conferences and discussion meetings, and hold exit interviews with departing employees. By listening to the suggestions of current employees and making analysis and summary of the reasons why employees quit, we optimize and improve the management of employee retention in a targeted manner. In 2021, the Group's total employee turnover rate was 19.95%, of which the voluntary turnover rate was 11.11% (2020: 14.80%). During the Year, the Company optimized the scope of employee turnover statistics to include "the number of permanent and probationary employees who leave employment with the Group voluntarily or due to dismissal, retirement or death in service during the reporting period", in line with the Guide of the Hong Kong Stock Exchange, resulting in a year-on-year increase in the total employee turnover rate of the Year.

In the last three years, the Group has not experienced any major layoffs or major mergers/acquisitions, which affected the majority of its employees.

9.2 TALENT MANAGEMENT

Livzon continuously optimizes its talent management model, adopts targeted training plans and management strategies based on different talent groups, develops long-term incentive programs and is committed to building a professional and innovative staff team as the Group's core competitiveness

9.2.1 Recruitment and promotion

Based on its corporate development and business needs, Livzon continues to increase its efforts in recruiting talents through campus recruitment and social recruitment to expand its talent team and provide strategic protection for the Group's future talent needs.

9.2 TALENT MANAGEMENT *(Continued)*

9.2.1 Recruitment and promotion *(Continued)*

Talent pool

Livzon has established and deepened cooperation with domestic first-class research institutes and universities, such as the Chinese Academy of Sciences, Sun Yat-sen University, Zhejiang University, China Pharmaceutical University, Shanghai Jiao Tong University, and has become the social practice base of many professional colleges and universities, smoothing the channel for transferring talents from schools to the enterprise. At the same time, approved by government departments, the Company has set up a post-doctoral research station, which can recruit and train post-doctoral researchers, establishing a bridge between high-tech talents and the Company, and further deepening the cooperation relationship between "enterprises, universities and research institutes".

At the same time, we conduct long-term cooperation with universities, such as Peking University, Macau University of Science and Technology and Shenyang Pharmaceutical University, striving to cultivate the professional knowledge and practical ability of the employees. In 2021, there were 15 employees of the Company enrolled in the programs of Shenyang Pharmaceutical University. Through studying the courses such as chromatographic analysis, pharmacy monograph, research methods in chemical pharmaceutical processes, application of experimental design methods in pharmaceutical sciences, management research methodology, application of modern instrumental analysis in pharmaceutical research, in-vivo drug analysis and pharmaceutical literature methodology, they have further enhanced their medical knowledge structure and improved their professional skills.

Talent attraction

Livzon continues to improve its talent structure through talent planning based on BD, R&D, medical and clinical business modules. We have systematically enhanced the Group's innovative R&D, medical and clinical capabilities by deepening R&D pipelines, establishing a computational chemistry platform, strengthening biologics early-stage R&D and complex preparation platforms, consolidating medical and clinical teams and recruiting appropriate talent in line with business needs.

At the same time, we have optimized the talent structure of our existing team, continuously developed new pools of talents, and recruited international talents and set up overseas offices in countries such as the United States, the United Kingdom, Russia, Spain, Pakistan, the Philippines and Malaysia, so as to complement the arrangement of our overseas business.

9.2 TALENT MANAGEMENT *(Continued)*

9.2.1 Recruitment and promotion *(Continued)*

Talent succession

Livzon continues to plan its talent succession system, design competency models for key positions, assess the gap between successors and incumbents, and implement talent development programs for different job grades, including management trainee camps and new employee induction training, to train succession candidates in advance and prepare a talent pool. In addition, the Company screens out outstanding personnel through interviews with the heads of units and departments, promotes and appoints those with outstanding overall capabilities and first-class expertise, and engages backbone personnel and managers in the Company's leadership development planning sessions.

Promotion mechanism

The Company has established a multi-faceted development channel for administrative sequence, technical sequence and R&D sequence, fully respecting and supporting employees to choose their career development plan and grow along the way, expanding their career paths and development space, and providing a level-by-level promotion channel for administrative, technical and R&D staff according to their performance contribution and working ability by means of "ladder promotion". At the same time, the Company has formulated the Administrative Measures for Technical Sequence to provide a clear promotion path for employees engaged in professional and technical work, while technical staff and R&D staff can also transfer from their specialized sequence positions to administrative sequence positions in accordance with the relevant provisions of the Administrative Measures for Job Grades of the Company. During the Year, the promotion mechanism for employees worked well and employees were successfully promoted or transferred through the administrative or technical or R&D sequence.

In addition, the Company regularly reviews the construction and reserve of talent echelon every month, collates and publicizes internal job opportunities in a timely manner, and encourages employees to achieve internal promotion through open competition.

We attach importance to the talent of each employee, fully recognize the value that each employee creates for the Company in different positions, give employees a platform to play freely, and create fair and reasonable opportunities for promotion and job transfer for employees. During the Year, the human resource head office conducted interviews with over a thousand employees in the headquarters' industrial park of the Company to search for potential talent and identify successors for key positions based on a combination of work performance and actual work results. Eligible employees are promoted to be offered additional work challenges and opportunities to build a backup talent echelon for the sustainable development of the Company.

9.2 TALENT MANAGEMENT *(Continued)*

9.2.2 Training and development

Livzon believes that adequate training resources are necessary to ensure the development of our employees. We have developed the Training Management System to standardize training management, and are constantly improving our training system and supporting resources to systematize and institutionalize staff training, ensuring that employees are adequately trained and that we continue to build a workforce that is fit for business development.

The Group uses the Livzon Business School as its core platform to create an all-round and diversified employee training system, implementing a system that combines online and offline learning and training, creating four major training modules including basic skills, job skills, management skills and continuing education. Through the effective integration of internal and external resources, we provide targeted training for employees in different positions to further strengthen their business foundation and enhance their professional skills.

In 2021, Livzon offered a broad range of training programs for all employees on leadership, project management, innovative practice, job-specific development, corporate culture and knowledge of various professional areas. Each employee had an average of 76.2 training hours. To ensure the effectiveness of trainings, we had specialized training officers to track the study progress of the trainees and to provide feedback and follow up on the effectiveness of training by means of questionnaire collection and offline interviews with the trainees.

New employee cultivation

We implement a "180-day tracking program" for new recruits, through eight stages of training courses on corporate culture, HR policies and career skills, etc., as well as in-house instructor training, outdoor development activities and one-week online training for fresh graduates, to help new recruits fit into the Company and the team as soon as possible, learn the Company's core values, master workplace skills, adapt quickly to their jobs and build mutual trust.

9.2 TALENT MANAGEMENT *(Continued)*

9.2.2 Training and development *(Continued)*

Job-specific development trainings

The human resource department formulates an annual training program for each department based on the corporate development objectives for the year and the previous year's performance appraisal results. The production, quality, equipment, supply chain, EHS, sales, R&D, HR, finance and other business departments provide business knowledge and job-specific skill trainings for employees based on the annual training program, business development requirement and job competency requirements, to assist employees in mastering the operational skills of each business line, thus achieving organic unity between the growth of employees and the needs of the enterprise. Examples are as follows:

- Special operation positions: conducting qualification trainings for special operation personnel to ensure that they are licensed to work;
- R&D positions: conducting competency enhancement courses on project management, experimental skills, literature review, etc.;
- Production positions: conducting hands-on trainings on knowledge such as production safety, machine operation and environmental awareness;
- Sales positions: conducting competency enhancement courses on product knowledge, responsible marketing, communication skills, etc.;
- Quality positions: conducting education and practical trainings on knowledge of quality, quality awareness, regulations and policies, operational skills, etc.

In addition, each department has a specific training fund in its annual budget so that employees can attend external professional skills training according to business needs.

9.2 TALENT MANAGEMENT *(Continued)*

9.2.2 Training and development *(Continued)*

Leadership development

Livzon is fully aware of the importance of management optimization on improving organizational effectiveness. We raise the level of corporate management by cultivating employee leadership to achieve high-quality development in the fierce market competition. We incorporate a managerial development training series in the regular training system which covers basic-level management, middle-level management and senior management. The Group has developed a series of managerial and leadership enhancement trainings for the management and high potential employees at multiple levels, including:

- Middle and senior management training programs: the Livzon Youth Class training and others. The level focus on the development of leadership, strategic management capability, comprehensive organizational capability, etc. of the middle and senior management.

- Junior management and executives training programs: the Qing Lan Class program and overseas training program and others. The level focus on the development of execution capability of employees to provide employees with preliminary knowledge and basic skills of leadership.

- Induction training programs: the training camps for management trainees, fresh graduate trainings, team development projects and others. The level focus on the integration of employees into the workflow quickly and equip them with a clear understanding of the future development path and relevant knowledge reserve requirements.

In addition, the Company's directors, supervisors and senior management regularly participate in training programs provided by external organizations such as the stock exchanges and the Hong Kong Institute of Corporate Governance to contribute to the sustainable development of the Company while refining their own knowledge and skills.

During the Year, the Group had a total of 482 people involved in leadership training, with a total of 606 training hours. As a result of the leadership training programs of the Year, over 60 employees of the Group were promoted and 375 employees obtained job-specific certificates, with a total of 5,333 certification. During the Year, the Group provided managerial trainings of approximately 107,226 hours.

9.2 TALENT MANAGEMENT *(Continued)*

9.2.2 Training and development *(Continued)*

Leadership development *(Continued)*

Case: "Livzon Youth Class" high potential employee trainings

To strengthen the development of young talents, the Company established the Livzon Youth Class in 2020 to provide intensive trainings for young high-potential employees through a combination of internal executive sharing and external lecturers' courses. The trainings were conducted on a monthly basis, alternating between online and offline. The training courses covered such topics as financial management, production quality, supply chain, safety and environmental management, scientific research, leadership, etc. In 2021, the Livzon Youth Class had 46 existing trainees and conducted 12 training sessions with a total of 114 training hours.

Case: Training camp for management trainees of Livzon Diagnostics

In July 2021, Livzon Diagnostics initiated a training camp for management trainees as an important step to ensure a continuous supply for talent echelon and proper talent pool building. It provided training courses in general, professional and product categories, with a total of over 104 training hours. Livzon Diagnostics adopted an intensive training model consisting of beginner stage, intermediary stage and advanced stage for 50 outstanding fresh graduates, and put a particular focus on the 10 outstanding fresh graduates who successfully entered the advanced stage to help them gradually develop into the highly qualified talent desired by the Company.

9.2 TALENT MANAGEMENT *(Continued)*

9.2.2 Training and development *(Continued)*

Leadership development *(Continued)*

Case: Pharmaceutical Factory "Qing Lan Class" leadership development program

In order to stimulate the potential of employees and select talents with high-potential leadership, Pharmaceutical Factory has launched the "Qing Lan Class" talent development program, with internal and external lecturers conducting specialized trainings on three major modules: project practice, professional courses and public management courses, including leadership training programs like "Self-Motivation and Management", "Self-Empowerment – Employee Motivation, Training and Initiative Workshop", and "Workplace Communication". 13 trainees completed the training program in September 2021 in the second "Qing Lan Class".

Case: Middle and senior management training program

In March 2021, Limin Factory conducted a 2-day training on "From Management to Operation" for middle and senior management, which focused on the mission, essence, goals and plans of operation, how to use the management mindset to manage well, practicing the use of various team management tools, and helping middle and senior management enhance their ability to manage decision-making and compliant operation.

In August 2021, Fuzhou Fuxing organized a 2-day training on "Seven Keys to Middle Management Ability", which systematically introduced middle management the abilities and qualities required of mature managers through seven courses on managerial role awareness, leadership and motivation, concept-perception-destiny, planning and execution, and helped them improve their management skills such as self-management, team management and efficient decision-making.

9.2 TALENT MANAGEMENT *(Continued)*

9.2.2 Training and development *(Continued)*

Support for degree programs and certifications

Livzon supports all permanent employees of the Group to obtain job-related degrees and professional certifications in their spare time, and assists employees in applying for relevant specific certifications or nationally accredited professional titles. We also encourage part-time employees and contractors to improve their degrees and certifications. For the professional and technical titles, vocational qualifications and skills and other certificates or re-education degrees obtained by employees of their own accord, the Company will give corresponding bonus points or economic subsidies during the internal technical sequence evaluation. The Company will also reimburse the costs for obtaining certificates of special operations.

We have also established the Rules of the Training of Doctoral Candidate (or Master Degree Candidate in Management) for Permanent Employees to support employees to upgrade their qualifications through on-the-job master's or doctoral degree programs or masters in management programs. We provide full tuition fee subsidies to employees who graduate and obtain their degrees on time, and ensure that employees are also entitled to standard salary, year-end bonus and corresponding project incentives during their studies.

At the same time, according to the local government's talent policy, the Company actively assists employees in the application and submission of documents and other work every year in order to help them apply for local qualifications and certifications for high-level talents, craftsmen, young outstanding talents, talents for industrial innovation and development, innovation teams, etc..

Case: Qualification enhancement of talent

In October 2021, Pharmaceutical Factory, a subsidiary of the Company, was approved by the Zhuhai Human Resources Assessment and Examination Institution as an organization that can independently conduct national vocational skill level recognition and certification, and all employees of Pharmaceutical Factory can apply for occupational skill level certification of drug preparation at the enterprise.

9.2 TALENT MANAGEMENT *(Continued)*

9.2.3 Remuneration and benefits

Remuneration composition

In accordance with relevant laws and regulations, Livzon formulated the Remuneration Management System, the Administrative Measures for Remuneration Adjustment, the Provisions on the Base Salary of Fresh Graduates and other internal policies, and established a salary structure consisting of fixed and variable income for all employees (including non-officer and non-sales staff), with variable income linked to company performance and individual performance, to motivate employees and maximize their personal value and give full play to the incentive effect of the remuneration system on talents.

Every year, we adjust our employees' salaries in accordance with the market salary level and performance results, and continue to improve our remuneration policy to protect the basic rights and interests of our employees and fulfill Livzon's commitment to valuing our employees and respecting labor.

In addition, we have developed a long-term employee stock ownership plan (ESOP) to fully motivate our talents and to promote mutual development and benefit sharing between the Company and our employees.

Performance appraisals

In accordance with the relevant administrative measures for performance, the Group conducts monthly, quarterly, semi-annual and annual performance appraisals on a regular basis which cover all employees, evaluates their performance in a timely manner, and gives them suggestions for improvement and optimization through continuous feedback and interviews.

In addition, based on the characteristics of different positions in R&D, production, sales and functions, the Group has special appraisal schemes for each business line, such as production cost appraisal, quality appraisal, EHS special appraisal and project appraisal, the scope of which covers the entire Group, so as to ensure that the performance and contribution of each employee of the Group is evaluated objectively and fairly and that each employee can be effectively motivated.

The Group always attaches importance to two-way communication between supervisory leaders and employees, and has established a feedback mechanism for appraisal objections. Any employee who disagrees with the performance appraisal may lodge an appeal to the supervisory leader of higher level or the human resource department within 3 working days after the result interview, and the leader or department receiving the feedback must respond to the appeal within 3 working days.

9.2 TALENT MANAGEMENT *(Continued)*

9.2.3 Remuneration and benefits *(Continued)*

Stock incentive

In order to motivate talents, retain outstanding talents, continue to improve the long-term incentive mechanism and implement stock incentive as an attraction, Livzon has put forward various forms of stock incentive plans for the Group's key employees, middle management, senior management and employees who have made outstanding contributions to the Company's performance or have significant impact on future performance of the Company.

Since the end of 2014, the Company has successively launched the 2015 Restricted A Shares Incentive Scheme and the 2018 Share Options Incentive Scheme to constantly improve the long-term incentive mechanism for employees. The 2015 Restricted A Shares Incentive Scheme has been completely implemented in 2019. In 2021, the Company completed the option exercise work for the third exercise period under the first grant and the second exercise period under the reserved grant of the 2018 Share Option Incentive Scheme.

The incentive targets of the 2015 Restricted A Shares Incentive Scheme and the 2018 Share Options Incentive Scheme cover a wide range of employees, including the relevant core personnel, core technical (business) personnel, middle management, senior management, directors and relevant employees who are considered by the Board to be in need of incentive.

In addition, to promote the long-term stable development of the Company and enhance the overall value of the Company, optimize the remuneration structure of the Company, improve the benefit sharing mechanism between the employees and the shareholders of the Company, the Company launched the Medium to Long-term Business Partner Share Ownership Scheme (Draft) (the "2019 ESOP") at the end of 2019, and subsequently formulated its revised draft as well as the First Phase Ownership Scheme thereunder, which were approved at the general meetings of the Company in February 2020, December 2020 and May 2021, respectively. The First Phase Ownership Scheme has purchased a total of 2,348,960 shares of the Company by way of centralized bidding transaction on 26 May 2021, with a transaction amount of RMB117,268,338.21. In May 2022, the general meeting of the Company considered and approved the commencement of the Second Phase Ownership Scheme.

The incentive targets of the 2019 ESOP are: senior management of the Company, R&D personnel and sales personnel who have made outstanding contribution to the performance in the assessment period or will have important impact on the future performance of the Company, general managers of the business divisions of the Company, general managers of the subsidiaries and heads of level 1 functional departments at the headquarters of the Company, etc.

The incentive targets will increase their shareholding in the Company through the employee stock ownership plan and lock these shares in the medium and long term, which is conducive to realizing long-term incentives and constraints and optimizing the compensation structure of the company, and will foster the long-term stable development of the Company and enhance the overall value of the Company, so as to ensure the realization of long-term operation targets of the Company.

9.2 TALENT MANAGEMENT *(Continued)*

9.2.3 Remuneration and benefits *(Continued)*

Stock incentive *(Continued)*

The 2019 ESOP will be implemented in multiple phases. Within the ten years from 2020 to 2029, the multiple independently existing phases of the 2019 ESOP shall be implemented on a reasonable basis and, in principle, once a year, after determining whether the special fund for the previous year shall be extracted or not, be determined by the Board to decide whether to implement or not. The special fund shall be extracted with net profit attributable to the shareholders of the Company after deducting the extraordinary gains or loss in 2018 as the base. During the assessment period, the Company will use the compound growth rate of net profit achieved in each year as the assessment indicator to calculate and set aside a progressive special fund for each period. The ratios are set out in details as below:

Compound growth rate of net profit achieved in each year of assessment (X)	Percentage of progressive special funds with a compound growth rate of over 15%
X≤15%	0
15%<X≤20%	25%
20%<X	35%

Benefits and welfare

During the Year, the total wages, bonuses, allowances, compensation, welfare, housing funds and social insurance paid to the employees by the Group amounted to RMB1,382.17 million (31 December 2020: RMB1,051.79 million).

Livzon is mindful of the well-being of its employees and continues to improve the welfare packages of employees. In addition to the statutory benefits for all our employees (e.g. payment of social insurance and housing provident fund), the Group also provides a broad range of non-pay benefits for all employees, including festive allowances/gifts, commuter shuttles, welfare dormitories, etc. In addition, we have dedicated benefits for certain special employees, such as relief funds for employees in need and funeral subsidies, etc.

9.2 TALENT MANAGEMENT *(Continued)*

9.2.3 Remuneration and benefits *(Continued)*

Benefits and welfare *(Continued)*

Specific benefits are listed in the table below:

Statutory benefits	Universal benefits	Dedicated benefits
In accordance with national or local regulations, we offer/pay for our employees: • Statutory holidays • Statutory leave, such as sick leave, injury leave, marriage leave, condolence leave, maternity leave, paternity leave, breastfeeding leave and annual leave • Social insurance, including basic pension insurance, medical insurance, unemployment insurance, work injury insurance, maternity insurance, etc. • Housing provident fund • Other statutory employee benefits	All employees are entitled to: • Holiday allowances or gifts for traditional festivals • Staff birthday allowances or gifts • Maternity/illness visitation • Commuter shuttles • Staff welfare for medical check-up • Staff association activities • Anniversary greetings • Welfare dormitory • Welfare canteens • Afternoon tea • Summer welfare • Annual meeting luck draw • Book corner • Gym • Internal referral award • Team-building activities • Staff activity center	Employees who meet special conditions are entitled to: • Supplementary commercial insurance • Accidental injury insurance • Overseas allowance • Work allowances for industrial talents • Living allowances for imported talents • Industrial talent skills upgrading incentive • Government talent apartments • Government public rental housing • Mother and baby room • Staff work uniform • Consolation allowances for employees in desperate need • Funeral subsidies • Retirement incentive* • President's commendation • Post-doctoral workstation • Postgraduate study • Occupational skill improvement certification

* Note: In recognition of the employees who have served Livzon for a long period of time, the Company, in accordance with the Employee Retirement Reward Scheme, provides certain rewards to employees whose employment relationship with the Company has lasted for more than 10 years and who have gone through retirement procedures with the Company, based on the number of years the employment relationship has lasted. The plan is applicable to employees who have a labor relationship with the Company and its wholly-owned or controlled subsidiaries established in Zhuhai.

9.2 TALENT MANAGEMENT *(Continued)*

9.2.3 Remuneration and benefits *(Continued)*

Benefits and welfare *(Continued)*

Case: Employee care actions

In July 2021, the trade union of the Company provided grants to 12 employees of Jiaozuo Hecheng who suffered heavy losses in the Henan rainstorm to help them through difficult times.

In September 2021, the trade union of the Company invited Zhuhai People's Hospital to the headquarters' industrial park of the Company to organize a free breast cancer screening campaign to offer attentive care for employees.

In April, June and December 2021, the trade union of the Company invited Zhuhai People's Hospital to the headquarters' industrial park of the Company to organize free COVID-19 vaccination campaigns for the first three shots.

In 2021, the trade union of the Company invited medical institutions to pay several visits to the headquarters' industrial park of the Company to conduct free nucleic acid tests for our employees, thereby facilitating employees' traveling arrangement during the pandemic.

In January 2022, the trade union of the Company provided Spring Festival relief funds to 42 employees in severe difficulty to bring festive care and warmth to employees in hardship.

Vaccination in the headquarters' industrial park of the Company

Nucleic acid tests in the headquarters' industrial park of the Company

Spring Festival relief funds for employees in severe difficulty

9.2 TALENT MANAGEMENT *(Continued)*

9.2.3 Remuneration and benefits *(Continued)*

Work-life balance

Livzon cares for the health of its employees and promotes work-life balance. Through organizing a series of sports and team-building activities, we enrich the spare time of our employees, promote a positive work atmosphere and create a harmonious working atmosphere.

To promote work-life balance and make work more enjoyable, we have set up a staff activity center, a gym and a leisure book bar, and regularly organize team-building activities such as fun games for employees to help balance their work and life.

In addition, Livzon's employees have self-organized various clubs, such as dance (yoga) club, badminton club, e-sports club, basketball club, mountaineering club, music association and photography association, etc. These clubs bring together Livzon's employees who share the same interests and enrich their work and life.

Case: A wide variety of diversified sports activities

In 2021, in order to put into practice the corporate culture value of "happy life, happy work" and to show the colorful cultural life of Livzon people, the Group held a number of diversified competitive sports and cultural activities, including the 24th Basketball Match, the 11th Staff Football Match, the 18th Badminton Team Competition, the 2nd "R&D Cup" Badminton Exchange Competition, the 1st Photography Competition, the 17th Staff Mountaineering Team Competition, the Tree Planting Festival, the Mid-Autumn Festival Family Party, the Dragon Boat Festival Fun Quiz and the Staff Sports Day, etc.

Badminton match

Basketball match

Football match

Photography competition

9.2 TALENT MANAGEMENT *(Continued)*

9.2.3 Remuneration and benefits *(Continued)*

Work-life balance *(Continued)*

Mountaineering team competition

Tree planting activity

Gym in the headquarters' industrial park of the Company

Mid-autumn festival family party

Outdoor hiking

Women's day activity

Sports day for staff

Revolutionary song chorus

9.3 EMPLOYEE COMMUNICATION

Livzon respects the opinions and advices of our staff and strives to create an equal, harmonious, smooth and transparent communication environment. The Company regularly organizes employee representative conferences, new employee meeting and face-to-face meetings with senior management, while establishing a good communication mechanism with employees through various channels and forms such as employee discussion meetings, forums, websites, WeChat communities and public accounts to thoroughly understand employees' demands. Based on demands and feedbacks of our employees, we strategically assist our employees in tackling practical difficulties they face at work and in life, while consistently solving the problems in the work process of the Company to increase employees' sense of belonging and satisfaction.

During the Year, the human resource head office of the Company communicated with more than a thousand employees one-on-one in the headquarters' industrial park of the Company, listened to the employees' thoughts and demands, gave them feedbacks in a timely manner and coordinated with each unit and department to satisfy their demands and increase their satisfaction.

9.3.1 Communication of trade union

Livzon regards the trade union as the bridge between the management and ordinary employees, and our trade unions conduct collective agreement negotiations to protect the rights and interests of the workforce. Through the trade union, we provide employees with practical help to make good things happen and solve their difficulties, sending the Company's message of care and love to each employee. In order to promote mutual understanding between the enterprise and our employees and enhance their sense of corporate identity, the Company's trade union regularly holds employee representative meetings to maintain close communication with employees, fulfilling the role of a special bridge.

In 2021, the Group reached 100% participation in the trade union from employees.

Case: The 7th trade union congress of workers of the Company (2021)

In December 2021, the Company held the first session of the 7th trade union congress of workers, where the 7th trade union committee, the funding review committee and the female worker committee were formed through democratic elections. The chairman and vice-chairman of the trade union committee, and the director and vice-director of the funding review committee were elected by the new trade union committee and the new funding review committee. The tenure for the new committees is five years. Through the establishment of these committees, the trade union will gradually develop and improve the reasonable communication channels between the employees and the management, actively protect the legitimate rights and interests of the employees and strive for health corporate development.

9.3 EMPLOYEE COMMUNICATION *(Continued)*

9.3.1 Communication of trade union *(Continued)*

Case: Trade union of Fuzhou Fuxing held the 4th employee representative conference

In May 2021, Fuzhou Fuxing held the 4th employee representative conference. At the meeting, the chairman of the trade union made a report on the work arrangement of the trade union in 2021. The union listened to the employees' proposal to implement a special working hour system for dual-earner families with young children to facilitate children's pick-up and drop-off. They discussed and approved the disclosure of the general manager's mailbox/email address and the email address of the secretary of the Party committee to give access to employees' appeal.

9.3.2 Logistics communication and services

The Company has formulated and strictly implemented the Livzon Industrial Park Logistic Management System, the Collective Dormitory Management System and the Activity Center Management System, which specify the detailed requirements for dormitory management, activity center management, canteen management, security work management, greening management, cleaning management and vehicle management, etc. The Company aims to create a healthy working and living environment for employees, strengthen employee communication, standardize work behavior and improve work efficiency. This represents the Company's care for people by enabling employees to work happily and live joyfully.

In its online aspect, the Company has established a platform for communication with employees through the WeChat public account of the support service center. The public account spreads the positive energy from the support service center by promoting good personalities and good deeds, publishes announcements and information of the support service center, and fully utilizes the platform to collect opinions. It also adds functions such as meal ordering. Through the quarterly investigation on the dining preferences and dining satisfaction of employees in the park, dishes are adjusted based on the big data to meet employees' dining needs.

9.3 EMPLOYEE COMMUNICATION *(Continued)*

9.3.2 Logistics communication and services *(Continued)*

In its offline aspect, the Company organized a series of celebrations in the cafe and canteens for, for example, Winter Solstice, Dragon Boat Festival, Mid-Autumn Festival, Centennial of the Chinese Communist Party, etc. On every festival, the canteens creates a festive atmosphere on site, offers festive recipes and dishes, and presents festive food such as traditional Chinese rice-pudding on Dragon Boat Festival, tangyuan and dumplings on Yuanxiao and Winter Solstice. Furthermore, we opened the 3rd canteen to create an even more comfortable dining environment. Employees may also learn new knowledge in Xiaoli book bar.

In addition, to improve the employee accommodation services in the headquarters' industrial park of the Company, the support service center of the Company has established two dormitory service WeChat groups as the platform to receive service needs, complaints and suggestions, and actively improved logistics services and the quality of employees' life according to the reasonable suggestions.

9.3.3 Grievance procedures

Livzon insists on providing smooth, confidential and formal grievance reporting procedures for employees, takes necessary measures to protect the legitimate demands and rights of bona fide whistleblowers, and encourages employees to promptly report grievance to their supervisors or the human resource department when they are subjected to unfair treatment such as sexual harassment.

According to the Code of Labor Employment and Ethical Conduct of the Company, Livzon's grievance procedures are as follows:

- The Group will give its best effort to identify behaviors that do not comply with the provisions of the Code, and will commit to make every effort to prevent such behaviors from occurring. To this end, we encourage relevant personnel to report violations of the Code to their superiors or the human resource department as promptly as possible so that the Company can investigate and tackle them to reduce the occurrence of such violations in the future.

- The Group will investigate the violations of the Code as promptly as possible and take necessary measures to protect the legitimate rights and interests of relevant personnel who report and complain in good faith; those who deliberately fabricate facts and make false charges or frame-ups under the pretext of reporting or complaining will be dealt with seriously in accordance with relevant regulations, and shall be transferred to judicial organs for handling, if the action constitutes a crime.

- Once the investigation is sufficient to prove that there is a violation of the Code, the Group will impose appropriate penalties and take corrective measures, including but not limited to the termination of labor contracts and commercial contracts. Those whose actions are suspected of constituting a crime shall be transferred to judicial organs for handling.

9.3 EMPLOYEE COMMUNICATION *(Continued)*

9.3.4 Employee satisfaction survey

During the Year, the Company invited an external third-party professional organization to conduct an employee engagement survey with reference to the Gallup Kincentric model in the dimensions of work/life balance, safety, decision-making, organizational support, career development opportunities, rewards and recognition, diversity and inclusion, learning and development, cooperation, work assignments, and performance management with an aim to monitor employee satisfaction. The Company plans to organize an employee engagement survey annually in the future, and will annually track performance and take improvement actions in response based on the survey results.

In 2021, the employee engagement survey covered all permanent employees of the Group, with a 92% employee response rate and an overall engagement score of 70%. The results showed that the overall employees were more satisfied with the dimensions of cooperation, direct supervisor and decision-making. Based on the findings of the Year's survey, Livzon plans to implement a series of measures to increase employee satisfaction on organizational support, employer brand and senior management personnel, including enhancing campus recruitment and recruitment and introduction of outstanding talents from society, improving our corporate culture and values while enhancing promotion and implementation, continuously stepping up the construction of the dual channels for talents – "external recruitment and internal training", building effective communication channels for employees, establishing a reasonable wage system, providing employees with appropriate work autonomy and building an organizational atmosphere that values knowledge, etc.

All permanent employees

Employee response rate **92%**

Overall engagement score **70%**

9.4 OCCUPATIONAL HEALTH AND SAFETY

The health and safety of employees are the foundation of Livzon's sustainable development. Livzon strictly abides by and implements various laws and regulations of occupational health and safety, including the Production Safety Law of the PRC, the Law of the PRC on the Prevention and Control of Occupational Diseases and the Fire Prevention Law of the PRC. We continuously improve systematic EHS risk management and control and safety management mechanisms in compliance with the various provisions of the occupational health and safety management system, strengthen emergency response capabilities for safety risk, and create a safety culture atmosphere so as to ensure the health and safety of employees.

EHS CULTURE OF LIVZON

GOAL

Zero accidents and zero injuries.

VALUES

Take life as the foremost, safety comes first, compliance with regulations and laws, protect the environment

CONCEPTS

- All accidents can be prevented;
- Staff at all levels shall take the initiative to assume their own responsibilities for safety and environmental protection;
- Safety and environmental protection must be taken care of in production;
- Employees must receive strict job safety training;
- Any errors or omissions found must be corrected immediately;
- Relying on technological progress to improve safety and environmental protection;
- Safety outside work is as important as safety at work;
- Energy conservation and emission reduction, adhere to green production and sustainable development;
- Care for employees and provide employees with occupational health protection;
- Good safety and environmental protection equal good business performance.

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

The EHS department (the production technology head office) of the Company is equipped with dedicated occupational health and safety management personnel, and responsible for supervision and management of occupational health and safety. Each subsidiary of the Company has the occupational health and safety management department in place, which is equipped with dedicated occupational health and safety management personnel as required, who are responsible for the management of safe production and occupational health.

In 2021, there were no major safety accidents in the Group, and the annual work targets and plans for safety and environmental protection of all manufacturing enterprises of the Group have been implemented effectively.

As at the date of disclosure of the Report, all manufacturing enterprises of the Group were certified to GB/T 45001-2020/ ISO 45001:2018 Occupational Health and Safety Management System certification (100% certification rate). Among which, 6 manufacturing enterprises also obtained the safety production standardization certificates.

ISO 45001 system certificate

Safety production standardization certificate

Livzon safeguards occupational health and safety investment, vigorously promotes technology improvement and equipment upgrading for safety production, and strives to eliminate potential risks. In 2021, Livzon invested an aggregate of approximately RMB26.9451 million in occupational health and safety, the breakdown of which is as follows:

Investment in technology improvement of safety production	RMB12.7519 million
Investment in operation and maintenance of safety production	RMB10.1034 million
Investment in occupational health	RMB4.0898 million

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.1 Occupational health

Strictly abiding by the Law of the PRC on the Prevention and Control of Occupational Diseases, Livzon formulated the Administrative Procedures for Occupational Health, and based on the principles of prevention-oriented, comprehensive planning, adapting to local conditions and comprehensive management, Livzon created a sound, healthy and safe working environment through the upgrading and transformation of production equipment and occupational disease protection facilities to ensure the health and safety of employees.

During the Reporting Period, the Group recorded no new occupational diseases, suspected occupational diseases or occupational contraindications, and achieved the goal of zero major occupational health accident.

Occupational hazard test: In order to create a healthy and safe working environment for employees and ensure their physical health, each manufacturing enterprise of the Group commissions qualified unit to inspect and evaluate the occupational disease hazard factors in the production site on a regular basis.

Occupational health notification: For job posts with occupational health hazards, we inform new employees of the risks of occupational hazards and the measures to be taken to prevent and control occupational diseases in their positions through employment contract before they report for duty, and set up warning signs at prominent locations in workplaces where occupational health hazards exist to provide necessary information on occupational hazards and protection measures.

Labor protection equipment: We equip employees who are exposed to occupational hazards with standardized, appropriate and effective personal labor protection equipment, regularly purchase and distribute such equipment for employees' use and supervise the use of personal protection equipment to prevent occupational diseases. we set up flushing facilities in places with corrosive substances such as acid and alkali or potential risk of chemical burns, and maintain, upgrade and improve the occupational disease protection facilities.

Occupational health examination: We organize pre-job, in-job and off-job occupational health examinations for employees in posts exposed to occupational hazards, and establish occupational health files and manage the tracking thereof.

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.1 Occupational health *(Continued)*

Occupational health training: The Group attaches importance to publicity and training on employee health and safety, and makes targeted safety education efforts every year according to job characteristics and needs, requiring new recruits, transfer and reinstatement personnel to attend pre-job training, and requiring them to pass the assessment before they can officially work, ensuring that all special operators attend qualification training and obtain their work license, providing safety training on occupational hazard prevention and control for employees on duty, and inviting safety and health education experts to provide employees with mental health lectures and psychological rescue knowledge to ensure their physical and mental health. At the same time, the Group conducts safety training for all contractors' employees in accordance with the Contractor Safety Management System.

Case: Occupational health training

To enable employees to understand and learn about knowledge of occupational hygiene and health and safety protection, the Group conducted a number of trainings on occupational health during the Reporting Period, including respiratory protection, hearing protection, eye and face protection, fall protection, first aid, selection and use of protective equipment, prevention of work-related injuries and occupational health knowledge, which effectively enhanced employees' health and safety awareness. During the Reporting Period:

- Livzon Hecheng conducted a total of 3,653 individual training sessions on occupational health;
- Limin Factory invited the Health Bureau and the Occupational Disease Control Institute to conduct a total of 4 occupational health training sessions for employees, with over 300 participants.

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.1 Occupational health *(Continued)*

At the same time, Livzon continues to invest in occupational health protection for employees, conducts regular maintenance of protection facilities, and continuously carries out technical improvements and upgrades of protection facilities to effectively protect the interests of employees' occupational health.

Case: Construction of occupational disease protection facilities

Gutian Fuxing

- RMB660,000 was invested to replace the old air compressors with magnetic levitation air compressors that can be operated by remote control, which reduces the noise of the workshop site by more than 10 decibels and significantly reduces the impact of noise on employees' work and reduces the contact time of personnel and the potential danger of employees' manual work.

Jiaozuo Hecheng

- RMB500,000 was invested to introduce bottom discharge centrifuges, changing the original open discharge to automatic under-discharge of the enclosed machine, avoiding the spread of odor, reducing the contact between employees and chemical solvents when discharging, and reducing the safety hazards of employees;
- RMB500,000 was invested to change triethylamine from barrel to storage tank with sealed storage and transportation to reduce solvent volatilization;
- RMB180,000 was invested to configure automatic dispensing machine, changing material dispensing from manual operation to automatic dispensing to avoid dust and odor spreading and reduce occupational hazards at workplace.

Livzon Hecheng

- RMB550,000 was invested to physically isolate the vacuum pump group area in 3 workshops to reduce noise pollution.

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.1 Occupational health *(Continued)*

During the COVID-19 pandemic, the Company and its subsidiaries actively invested a substantial amount of human and material resources for the prevention and control of the COVID-19 pandemic, insisted on the regular management of pandemic prevention and control, updated the emergency plan for pandemic prevention and control in a timely manner, and safeguarded the health and safety of our employees. We distributed pandemic prevention supplies to employees, organized free nucleic acid testing in the office park; conduct temperature, health code and travel code tests and real-name registration for all personnel entering the office park, and required all personnel to wear masks when entering and leaving the office area; implemented employee movement registration, and adopted advance reporting management for outsiders and travelers; maintained disinfection and sterilization in the workplace; and conducted the COVID-19 pandemic prevention and control drills, so as to raise employees' awareness of pandemic prevention and control.

Case: Implementation of pandemic prevention and control

Ningxia Pharma

- Set up a leading team for the prevention of the COVID-19 pandemic, regularly carried out pandemic prevention work deployment meetings and strictly applied pandemic prevention measures, implemented the responsibility system of pandemic prevention for the leaders of each workshop, and formulated "three prevention strategies": (1) prevent the importation of cases: to know in advance, control in advance, know the whole process, check before entering the factory, know before entering the factory, and control in the factory. (2) prevent the spread of the virus in the company: persistently implement body temperature check and real name registration for people entering the premise, maintain the normal disinfection and sterilization in the workshop, and strengthen the publicity of pandemic prevention. (3) strict prevention of spread: strengthen prevention, strictly control and monitor the situation, conduct regular checks, and resolutely prevent individuals from spreading groups.

Limin Factory

- Employees were required not to leave Shaoguan during holidays, and leaving Shaoguan was subject to the approval of the factory manager. External personnel entering the factory were required to take body temperature, present health code, trip code and 48h nucleic acid test results before they can go through the check-in procedures. Personnel from high-risk areas were required to be isolated for 7 days before going through the check-in procedures with nucleic acid test results.

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.1 Occupational health *(Continued)*

Case: Implementation of pandemic prevention and control *(Continued)*

Headquarters' industrial park of the Company

- A pandemic command and leadership team was established to take charge of daily prevention and control management, study and implement various prevention and control measures, and deal with various situations arising from park management in a timely manner. Insisting on checking the trip code, Yuekang code and body temperature monitoring for employees and visitors entering the park every day, requiring staff to wear masks to enter the park, maintaining regular cleaning and disinfection of all park areas, and requiring personnel who have been to cities with medium and high risk to enter the park with 48h nucleic acid test certification to ensure the park is safe and orderly and operated normally.

Case: COVID-19 Pandemic emergency drills in headquarters' industrial park of the Company

In 2021, the support service center of the Company held COVID-19 pandemic prevention and control emergency drills in the headquarters' industrial park of the Company, including 7 scenarios of daily disinfection, daily pandemic prevention, case detection, isolation and observation, on-site transfer, sterilization and isolation, and case reporting. Through the drills, the coordination and combat ability of all departments has been improved to deal with the pandemic, which can effectively prevent and timely control pandemic emergencies and arising hazards, protect the health and life safety of employees, and maintain the normal work and life order in the park.

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.2 Safe production

Livzon strictly complies with the relevant requirements of the Production Safety Law of the PRC and the Fire Prevention Law of the PRC, adheres to the safe production policy of "safety comes first, prevention as primary concern, integrated governance, total involvement, risk control and continuous improvement", and formulates a series of regulations and systems on safe production, such as the General Requirements of EHS Management System, the EHS "Three Simultaneous" Management System for Construction Projects, the Administrative Measures for EHS Accidents, the Regulations on Safe Production Penalties, the Safe Production Responsibility Management System, the Contingency Plans for Production Safety Accidents, the Safe Production Training Management System, the Administrative Procedures for Internal EHS Audit, the Contingency Command Plans for Typhoon Prevention and the Procedures for Hazardous Chemicals Management which cover the safety management structure and rules of procedure, safety risk classification and control, hidden danger investigation and management, emergency plans, assessment method, measures of accountability, etc. The Group regularly reviews the safe production status of each unit of the Group, identifies problems and rectifies them in a timely manner, and strictly trains its employees to implement each safety systems to ensure production safety.

In order to continuously improve the production safety management system, the Company established the Management System for Grading and Controlling Safety Risks, the Management System for Investigating and Managing Accidental Hazards, the EHS "Three Simultaneous" Management System for Construction Projects and the Contractor Safety Management System in 2021. To undertake the Company's requirements and combining with their own operating characteristics, each subsidiary established or revised the Production Safety Responsibility System, the Management Procedures for Double Prevention System and the Contractor Safety Management System and other management documents to further strengthen the safety management objectives at all levels and implement the production safety management requirements of each production unit and relevant stakeholders of the Group.

In accordance with the Ten Prohibitions for Safe Production, the Company requires each manufacturing unit to implement a safety responsibility system, strictly manage and control all production and operation links, and continuously renews production equipment and adds safety production automation systems. We focus on the production line itself to identify risk points, control danger points, and prevent production safety accidents caused by human operation errors to further improve the Group's safety production level.

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.2 Safe production *(Continued)*

During the Reporting Period, Livzon invested approximately RMB22.86 million on safe production, including to automate the production equipment and facilities such as Class A tank farms and Class A production equipment, to comprehensively upgrade the automatic alert and firefighting system, to conduct process safety analysis on new products, to provide employees with occupational health and safety trainings and education, to organize emergency drills in respect of various production safety incidents, so as to ensure safe production.

Partial safe production improvement projects in 2021

Fuzhou Fuxing

- RMB5,120,000 was invested to upgrade and improve the production process and equipment of the products: adopt low-toxic and low-risk solvents instead of high-toxic and high-risk solvents to enhance the work safety of employees; apply a large number of three-in-one equipment and vacuum loading machines to reduce the combustion and explosion environment and personnel exposure caused by solvent volatilization; change the common pipeline unloading in the solvent tank area to safer crane loading and unloading to improve the safety of the solvent loading and unloading process and reduce the safety risk;
- RMB190,000 was invested to establish a dedicated emergency rescue team, and 29 training sessions, 6 emergency drills, and 3 quarterly assessments were conducted by emergency team members during the Reporting Period;
- RMB102,000 was invested to carry out HAZOP (Hazard and Operability) analysis and optimize the process design based on the analysis results to ensure the essential safety of the production units.
- RMB65,000 was invested to replace milbemycin reaction tanks to ensure compliance in the use of special equipment and to improve the safety of operations by optimizing process operations.

Livzon Hecheng

- RMB2,180,000 was invested to upgrade the equipment of hazardous chemical products by adopting the domestic advanced micro-reactor process technology to reduce the process production safety;
- RMB1,300,000 was invested to set up automatic sprinkler fire-fighting system and infrared automatic fire detection system in hazardous chemical raw material warehouse, solid waste warehouse and waste liquid storage to realize unmanned and automatic handling of emergencies in key hazardous places and reduce the risk of employees' safety and health.

Jiaozuo Hecheng

- RMB1,800,000 was invested to upgrade the automatic control system, adding an automatic instrumentation valve control system, changing from manual operation to computerized automatic control, reducing human errors, realizing double review control of on-site inspection and computerized terminal control, which essentially improved the safety of production equipment.

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.2 Safe production *(Continued)*

Partial safe production improvement projects in 2021 *(Continued)*

Gutian Fuxing

- RMB1,300,000 was invested to comprehensively upgrade the company's fire system, further improving the fire water system, emergency lighting system and smoke alarm system, realizing comprehensive control of the fire protection system and greatly enhancing the fire safety emergency response capability.

Ningxia Pharma

- RMB400,000 was invested to move the control room out of the explosion-proof area to ensure employees work in a better environment;
- RMB180,000 was invested to conduct safety data test on product dust such as minimum ignition energy, minimum explosion concentration and thermal stability, and improve dust points and reduce ignition energy according to the test results to reduce safety risks and occupational hazards;
- RMB100,000 was invested to install dust collection devices such as dust hoods and collectors at the crusher, coal conveyor belt and coal bin entrance to reduce the safety risks and occupational hazards of flying coal dust.

Limin Factory

- RMB160,000 was invested to install fiber optic and remote information activation devices between fire alarm systems to synchronize alarm information in the fire monitoring center and realize remote operation of smoke detectors, sound and light alarm buttons, fire start buttons and other equipment;
- RMB110,000 was invested to install equipotential connection devices on workshop steel platforms, extraction tanks, motor shells, fan shells and other facilities and equipment that may generate static electricity, eliminating the risk of fire due to static electricity;
- RMB280,000 was invested to upgrade the combustible gas alarm system in the Chinese medicine extraction workshop and establish a combustible gas alarm monitoring center to ensure that alarm information is accurately and timely reported to the monitoring center.

Xinbeijiang Pharma

- RMB80,000 was invested to add insulation materials to the outside of the solvent storage tank to achieve heat preservation in the tank and ensure that the temperature of the tank is lower than the specified storage temperature in summer;
- RMB50,000 was invested to link the combustible gas alarm system with the accident fan system to ensure that the fan is automatically turned on to exhaust air when the concentration of combustible gas exceeds the standard to reduce safety risks.

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

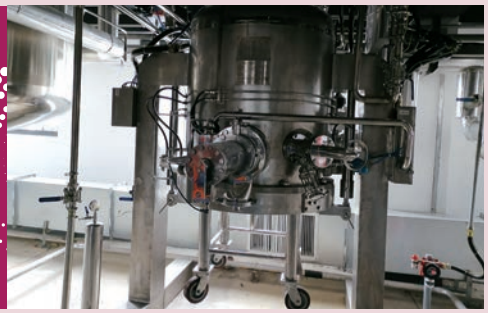
9.4.2 Safe production *(Continued)*

Partial safe production improvement projects in 2021 *(Continued)*

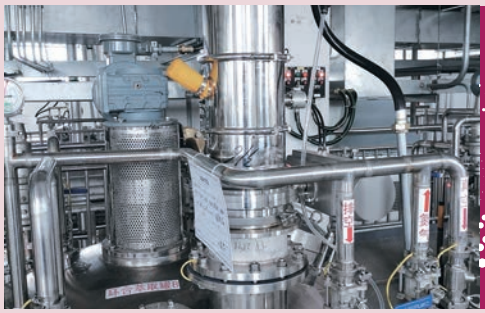
Sichuan Guangda

- RMB150,000 was invested to interlock the high liquid level of the extraction tank and the heating kettle of the alcohol recovery system with the feed valve and the pressure with the steam inlet valve to ensure the safe operation of the device in case of emergency;

- RMB80,000 was invested to replace the roof of the alcohol storage with rock wool sandwich corrugated board flame retardant material and the ordinary door with fireproof door, which reduced the safety impact of the alcohol storage on external environment in emergency.



Three-in-one equipment



Vacuum loading machine

Fire control room

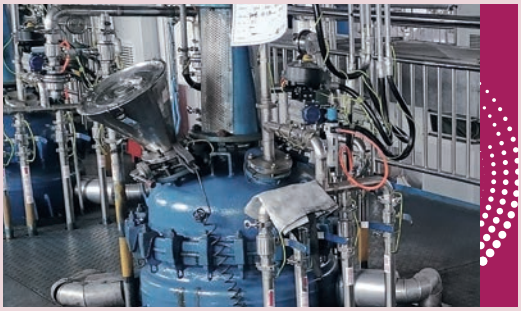
Fire alarm monitoring platform

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.2 Safe production *(Continued)*

Partial safe production improvement projects in 2021 *(Continued)*

Fire pumps



Replacement of milbemycin reaction tank

Solvent storage tank insulation

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.2 Safe production *(Continued)*

The Group continues to take "zero accidents and zero injuries" as its ultimate goal, and reviews the completion of the goals on a regular basis. During the Reporting Period, each of units of the Group formulated annual safety work goals and plans and such plans were implemented effectively, respectively.

In 2021, the Group achieved the goal of zero major safety accidents and a low rate of minor injury accidents. With respect to minor injury accidents, the Group has provided compensation and arranged treatment in accordance with the provisions of the Social Security Bureau, conducted a comprehensive investigation into the cause of the accidents, identified and rectified potential safety hazards in a timely manner, and emphasized to all employees in safety training the accident-related hidden dangers and preventive measures, so as to avoid re-occurrence of similar accidents.

Management and control of safety risk

In accordance with accident prevention systems like the Management System for Grading and Controlling Safety Risks and the Hazard Sources Identification and Risks and Opportunities Evaluation Requirements, we regularly identify and analyze hazard sources in production and operation activities, products and services, evaluate and classify the level of risks, and formulate plans and safety management and control measures based on the risk levels.

Safety emergency management

According to the Administrative Measures for Contingency Plans for Emergency, based on actual conditions, we prepare plans covering comprehensive emergency, special emergency and on-site disposal, provide trainings for relevant personnel and conduct regular emergency drills, and improve the emergency plans and disposal plans based on the drill results.

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.2 Safe production *(Continued)*

Safety emergency management *(Continued)*

Case: Emergency plan drills in 2021

Livzon Hecheng

- Livzon Hecheng organized 4 emergency plan drills, including drills of hazardous chemicals leakage, fire drills and night evacuation drills, and 3 drills of emergency fire-fighting equipment use, to improve the staff's emergency handling capability through continuous reinforcement drills.

Headquarters' industrial park of the Company

- In November 2021, a total of 332 people participated in a fire emergency drill in the headquarters' industrial park of the Company, which included drill items on 4 aspects, namely on-site fire alarm simulation, emergency evacuation of staff, use of dry powder fire extinguishers and evacuation tent drills. This drill has enhanced the fire safety awareness and emergency handling capabilities of the staff of the Company.

Fuzhou Fuxing

- Fuzhou Fuxing held comprehensive fire accident drills for all employees during the Safe Production Month and Fire-fighting Propaganda Month, conducted special fire safety inspections, including 35 evacuation drills, 30 emergency disposal drills, 27 trainings on the use of fire-fighting equipment, and provided 29 trainings for the company's emergency response team members, thereby effectively enhancing the emergency capability of staff.

Livzon Hecheng's firefighting knowledge briefing and practical exercises

Fire drill in Livzon's headquarters' industrial park

Fuzhou Fuxing's comprehensive fire accident drills

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.2 Safe production *(Continued)*

Hazard inspection and treatment

In accordance with the Management System for Investigating and Managing Accidental Hazards, we conduct regular hazard inspections for all factories, which include production procedure, production sites, warehouses for product storage, construction sites, etc. All factories are required to implement rectification and treatment of identified hazards within the time specified, and the progress of rectification shall be reviewed and assessed on a regular basis.

Safety training and education

Livzon attaches importance to publicity and trainings on employees' health and safety. We develop practical safety training materials based on the actual work content of each position, conduct targeted safety education, and implement compulsory pre-work training for personnel who are newly recruited, change positions and return to positions. The employees can only be arranged to work after passing the assessment; we also conduct qualification trainings for special operational personnel to ensure that they work with certificates. Meanwhile, the Group enhances the overall awareness of health and safety of employees through safety education and promotion for employees at different levels and of different types.

Moreover, in accordance with the Contractor Safety Management System, we provide safe production trainings for all relevant personnel involved in construction from external parties, so as to ensure operation is in compliance with regulations and prevent the violation of regulations.

Case: Safe production trainings in 2021

Ningxia Pharma

- Ningxia Pharma requires new employees to undergo 72 hours of Level 3 safety trainings before employment, and pass an assessment before they are qualified for the position. The person in charge of each department will organize quarterly trainings for all employees on duty on the identification of hazard sources and preventive measures, safety operation procedures and emergency disposal measures, and conduct corresponding examinations in the form of written tests to ensure that the average length of safety trainings per employee is not less than 20 hours/year. In 2021, Ningxia Pharma invited safe production experts to conduct trainings for the management and management officers of each department on the Safe Production Law and How to Implement the Principal Responsibility of Safe Production, so as to ensure that each management officer has a clear understanding of his or her own responsibilities in safe production and can fulfil them in earnest.

Pharmaceutical Factory

- Pharmaceutical Factory provides monthly trainings to all employees on safety, fire prevention, environmental protection and occupational health, and requires all frontline employees to learn and consistently implement the new systems and operating procedures promulgated by the company. In 2021, Pharmaceutical Factory conducted Level 3 safety trainings for 363 new employees and 191 transferal trainings. It also conducted trainings for all employees on extreme weather prevention, fire extinguisher practical training, dissemination of the new safety laws and accident cases summary, and invited external environmental protection experts to provide trainings on environmental protection compliance for staff to enhance their awareness of their responsibilities in safe production.

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.2 Safe production *(Continued)*

Safety training and education *(Continued)*

Case: Safe production trainings in 2021 *(Continued)*

Xinbeijiang Pharma

- Xinbeijiang Pharma requires all departments and workshops to develop annual safety training and education plans based on their actual situation. In 2021, Xinbeijiang Pharma conducted Level 3 safety education trainings for all new employees, as well as transferal trainings for all employees changing posts. Xinbeijiang Pharma organized 182 departmental trainings and 161 drills, and conducted trainings and education on the EHS Responsibility System, the Fire Safety Knowledge Training, the Occupational Health-Related Knowledge Training and the Safe Production Law.

Limin Factory

- In 2021, Limin Factory conducted trainings and education for its employees on the Safe Production Law, explaining the revised and new sections compared to the old version, conducted 3 trainings on environmental safety management such as VOC and hazardous waste, and conducted Level 3 safety trainings for all new employees.

Livzon Hecheng

- Livzon Hecheng conducted a total of 75 safety trainings, including 45 "weekly training", covering 45 subjects, and 246 trainings for external workers, with a 100% training passing rate.

Safety culture promotion

In order to build a corporate safety culture and raise the awareness of all staff on safe production, Livzon regularly organizes various safety-themed activities. The 4th, 14th and 24th days of each month are the safety reflection days of the Group. We organize safety reflection activities, including trainings and education, emergency drills, safety tips, hidden danger investigation, seminars, etc., thereby continuously improving the safety awareness of all employees of the Group and avoiding safety accidents.

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.2 Safe production *(Continued)*

Safety culture promotion *(Continued)*

Case: Fuzhou Fuxing conducted the Safe Production Month and the Fire-fighting Propaganda Month theme events

In 2021, Fuzhou Fuxing conducted 2 theme events, namely the Safe Production Month and the Fire-fighting Propaganda Month. During the Safe Production Month, Fuzhou Fuxing held activities including 2 "Safety Talks", safety works collection activities, safety knowledge competition, firefighting skills competition and 6S on-site management appraisal, and arranged for staff with grade above supervisor level to take safety examinations. In the Fire-fighting Propaganda Month, Fuzhou Fuxing held special inspections on fire safety and 100-metre fire-fighting competitions.

Safety seminar

Safety knowledge competition

Firefighting competition

Safety examination

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.2 Safe production *(Continued)*

Safety culture promotion *(Continued)*

Case: Xinbeijiang Pharma conducted the Safety Month theme events

In 2021, Xinbeijiang Pharma conducted a series of events in the Safety Month with the theme of implementing safety responsibilities and promoting safety development, including a safety month mobilisation meeting, watching a safety month themed warning education video, an EHS knowledge competition, a safety month blackboard newspaper competition in each workshop, and a comprehensive emergency plan drill, etc.

In August 2021, the WeChat safety quiz app set up by Xinbeijiang Pharma was officially put into operation to provide all employees with a "daily practice" safety quiz and monthly assessment.

In September 2021, Xinbeijiang Pharma conducted the "Anti-violation, Promote Safety" campaign. Through activities such as oath signing, and watching an educational film on violation of rules and regulations by all employees, Xinbeijiang Pharma enhanced employees' awareness of violations of rules and regulations, and required the management officers of the safety and environmental protection department and the workshops to record, correct, educate and punish violations of rules and regulations at the production site by stepping up on-site inspections and viewing video surveillance replays.

9.4 OCCUPATIONAL HEALTH AND SAFETY *(Continued)*

9.4.2 Safe production *(Continued)*

Safety culture promotion *(Continued)*

Case: Pharmaceutical Factory conducted events on strengthening safe production awareness

In June 2021, Pharmaceutical Factory further strengthened the awareness and responsibility of its staff in safe production through conducting activities such as safety training seminars, safety-themed fun sports games and safety knowledge competitions.

Contractor Safety Management

Livzon is acutely aware of the importance of contractor safety management. The Company established Contractor Safety Management System during the Reporting Period, which explicitly extends the safety management requirements to contractors. Our EHS departments and engineering departments work together to provide safety trainings to contractors, supervise their safe construction, establish safety files and conduct regular safety performance appraisals.

10 GREEN OPERATION

10 GREEN OPERATION

Livzon strictly abides by the Environmental Protection Law of the PRC, the Law on the Prevention and Control of Environmental Pollution by Solid Waste of the PRC, the Prevention and Control of Atmospheric Pollution Law of the PRC, the Water Pollution Prevention and Control Law of the PRC, the Regulations on the Administration of Pollutant Discharge Permits, the Guidelines for the Identification of Potential Soil Pollution Hazards in Key Regulatory Units (Interim), the Energy Conservation Law of the PRC and other related environmental laws and regulations. We established and improved the internal environmental management system on reference of the standard requirements of the ISO 14001 Environmental Management System, actively conducted training programs to raise employees' awareness on environmental protection, regularly maintained pollution treatment facilities to ensure their stable operations, continued to secure investments to promote environmental performances, and always implemented the concept of green development.

Taking into account actual operations and the characteristics of the pharmaceutical industry, the Company focuses on all key areas of environment management (such as air emissions, water discharges, waste, noise and energy), and established a series of comprehensive internal management policies including the Procedures for Air Emission Management, the Procedures for Wastewater Management, the "Three-waste" and Noise Management System, the Procedures for Solid Waste Management, the Soil Pollution Potential Hazards Inspection System, the Procedures for Noise Emission Management, the Procedures for Resources Management, the Procedures for Energy Management, the Energy Management System, the General Requirements of EHS Management System and the Contingency Plan for Environmental Emergency, and requires each enterprises of the Group to strictly abide by and implement them.

In addition, combining with their own circumstances, all manufacturing enterprises of the Group also established the Environmental Protection Responsibility System, the Sewage Treatment Station Management System, the Hazardous Waste Management System, the Air Emission Management System, the Soil Hidden Hazards Examination System, the Environmental Performance Appraisal and Reward and Punishment System and the Noise Pollution Prevention and Control Procedures and other various environmental management policies, signed environmental protection target indicators and responsibility statements, formulated annual key environmental targets and correspondent work plans, and reviewed the achievement of each target and indicator on a regular base.

During the Reporting Period, there were no environment pollution incidents or environmental administration penalties, waste gas and wastewater were all discharged or reused after treatment and meeting the discharge standards, no environmental monitoring items exceeded the standards, and wastes were all disposed or recycled in compliance with regulations.

10 GREEN OPERATION

In 2021, Livzon's investments in environmental protection are as follows:

Investments in technical renovations of environmental protection	RMB14.3724 million
Investments in operations and maintenance of environmental protection	RMB65.3780 million

10.1 ENVIRONMENTAL MANAGEMENT SYSTEM

To further refine the Group's current environmental management system, we newly established the Energy Management System, "Three-waste" and Noise Management System and EHS "Three Simultaneous" Management System for Construction Projects and other internal policies in 2021, adhered to the EHS management policy of "compliance with laws and regulations, prevention of risks, continuous refinements and timely communication", strictly controlled pollutants discharge and reduced the use of resources, conducted regular reviews and appraisals on operation of the environmental management system of each manufacturing enterprise, and performed in-depth analysis of various environmental management indicators, to ensure the effective operation of the environmental management system.

As at 31 December 2021, all manufacturing enterprises of the Group have established the internal environmental management system (EMS). All manufacturing enterprises of the Group were certified to the GB/T 24001/ISO 14001 Environmental Management System (EMS) certification (100% certification rate).

10.1.1 Management structure

To ensure the effective operation of environmental management system and continuous improvement of EHS management performance, Livzon has established a top-down management structure, decomposing the tasks item by item and implementing responsibilities layer by layer.

- The ESG Committee of the Board is responsible for establishing EHS-related policies and regulations such as environmental management and use of resources, reviewing the implementation status on a regular basis and reporting to the Board on such matters;
- The EHS management department of the Company's headquarter (i.e., the production technology head office) is responsible for implementing the Group's EHS work tasks and managing and supervising EHS-related work of the subsidiaries;
- The Company's subsidiaries also have EHS departments responsible for their own EHS works, such as specific implementation of energy conservation and emission reduction, three-waste (wastewater, waste gas and solid waste) discharge management, climate risks management, carbon emission management, ensuring environmental protection investments and environmental protection technology upgrades, and occupational health and safe production.

10.1 ENVIRONMENTAL MANAGEMENT SYSTEM *(Continued)*

10.1.2 Certification

To continuously enhance the level of corporate environmental management and improve environmental protection performances, Livzon made great efforts to promote subsidiaries to obtain ISO environmental management system certifications, carry out cleaner production and apply for certification of green factory, etc.

As at the disclosure date of the Report, all manufacturing enterprises of the Group were certified to GB/T 24001/ ISO 14001 Environmental Management System (EMS) certification (100% certification rate). In addition, among all manufacturing enterprises of the Group, 8 have completed the cleaner production audit, 2 have obtained the certification for "National Green Factory" and 1 has obtained the certification for "Provincial Green Factory".


CCCI

环境管理体系认证证书

注册号：02119E11070R2M

兹证明

丽珠集团利民制药厂

统一社会信用代码：91440200618357941C

注册/办公/生产地址：中国·广东省·韶关市工业西路 89 号

环境管理体系符合标准

GB/T 24001-2016/ISO 14001:2015

认证范围如下：

大容量注射剂、小容量注射剂、片剂、胶囊剂、颗粒剂（以药品批文为准）及口服制剂、注射制剂的中药前处理和提取的生产及相关管理活动。

本证书有效期自 2019 年 12 月 24 日至 2022 年 12 月 23 日

认证范围涉及法律法规要求的行政许可、资质许可、强制性认证的，证书与资质共同使用有效。

在正常接受年度审核的情况下，与年度监督保持通知一并使用有效。

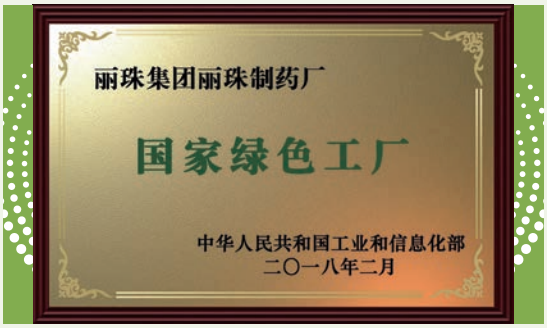
本证书信息可在国家认证认可监督管理委员会官方网站（www.cnca.gov.cn）上查询。

华夏认证中心有限公司

总经理：

颁证日期：2019 年 12 月 24 日

IAF CNAS 中国认可 国际互认 管理体系 MANAGEMENT SYSTEM CNAS C021-M


丽珠集团丽珠制药厂

国家绿色工厂

中华人民共和国工业和信息化部

二〇一八年二月


环境管理体系认证证书

ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATION

10 GREEN OPERATION

10.1 ENVIRONMENTAL MANAGEMENT SYSTEM *(Continued)*

10.1.3 Regular audits

According to the requirements of ISO 14001 environmental management system, each manufacturing enterprise of the Group operates and maintains the effectiveness of the system in a method of "Plan – Do – Check – Act" (PDCA). Meanwhile, Livzon carries out internal and external audits regularly to assess each subsidiary's operation conditions of EHS management system and EHS management performances, etc.

Internal Audit

Livzon has established the EHS internal audit system according to requirements of internal policies such as the Administrative Procedures for Internal EHS Audit and the Regular EHS Meeting and Flight Check Management System, and conducts regular environmental management audits on all manufacturing enterprises of the Group. Audits mainly include contents such as EHS compliance, implementation of the "three-simultaneous" system, operation of pollution treatment facilities, air emissions and greenhouse gas emissions, discharge of pollutants into water and land, generation of hazardous and non-hazardous waste, storage and disposal, storage and use of hazardous chemicals, implementation of EHS accountability system, personnel training, hidden hazards examination, emergency plans and drills, etc. The frequency of internal audit is as follows:

- The production technology head office of the Company conducts as least 1 comprehensive EHS audit every year on all manufacturing enterprises of the Group and continues to follow up on the improvement of each enterprise;
- The API business department of the Company conducts 3 to 4 EHS cross-checks every year for the API manufacturing enterprises of the Group and continues to follow up on the improvement of each enterprise;
- All manufacturing enterprises of the Group conduct at least 1 EHS meeting and inspection at the corporate level every month, and rectify findings in a timely manner;
- All enterprises of the Group that have obtained the ISO management system certification conduct at least 1 EHS comprehensive internal audit every year (as at the disclosure date of the Report, all manufacturing enterprises of the Group were certified to ISO 14001 management system certification), and carry out management reviews according to the audit results. Accordingly, the management of the Company evaluate and make improvement suggestions on the suitability, adequacy and effectiveness of the operation of management systems.

External audit

- All enterprises of the Group that have obtained the ISO management system certification engage independent third-party certification authorities to conduct EHS system supervisory audits once a year (as at the disclosure date of the Report, all manufacturing enterprises of the Group were certified to ISO 14001 management system certification, which means all relevant operations of the Group conduct an external independent audit once a year), and to conduct audits of recertification (certificate renewal) once every three years.

10.1 ENVIRONMENTAL MANAGEMENT SYSTEM *(Continued)*

10.1.4 Pay linked to ESG performance

To ensure the achievement of environmental targets and carbon neutralization goals and to promote green and low-carbon operation, Livzon has established a policy of linking ESG performances to the pay of the management, and has included ESG indicators in the operation performance appraisal of its subsidiaries, details are as follows:

- To set an ESG appraisal indicator weighted at 10% (including achievement of environmental targets (e.g. reduction of toxic emissions and waste) and goals of carbon emission reduction, ESG governance, etc.) in the personal performance appraisal of all members of the ESG work group. The members of the ESG work group cover the senior management for all operations of the Group, which include:

  (1) President, vice presidents, chief investment officer, secretory to the Board, assistants to president, dean of research institution, chief engineer, general manager of API business department, general manager of traditional Chinese medicine business department; and

  (2) Heads of each functional department, heads of each business unit, and heads of each subsidiary of the Company.

- To set ESG and EHS related appraisal indicators in the personal performance of the head of the EHS department in the headquarter of the Company (including achievement of environmental targets (e.g. reduction of toxic emissions and waste) and goals of carbon emission reduction, ESG governance, EHS performance, etc.). Among which, the ESG appraisal indicator accounts for 10%.

- To set ESG and EHS related appraisal indicators in the personal performance of the EHS management of each subsidiary (including achievement of environmental targets (e.g. reduction of toxic emissions and waste) and goals of carbon emission reduction, ESG governance, EHS performance, etc.).

- To set ESG and EHS related appraisal indicators in the operation performance of each subsidiary (including achievement of environmental targets (e.g. reduction of toxic emissions and waste) and goals of carbon emission reduction, ESG governance, EHS performance, etc.), and to determine the amount of EHS bonuses of the subsidiary in accordance with the appraisal scores.

- Due to the relatively high amount of energy consumption and emissions of the API enterprises of the Group, the Company sets up additional special bonuses for each API subsidiary, and the bonuses will be distributed to the enterprises which meet the targets, in order to encourage the enterprises to actively engage in energy conservation and emission reduction (e.g. toxic emissions and waste).

10.2 ENVIRONMENTAL MANAGEMENT GOALS

Livzon established and published the Environmental Management Targets of Livzon Group for 2021-2025 according to the Reporting Guidance on Environmental KPIs of the ESG report issued by Hong Kong Stock Exchange, with reference to the management practices of domestic and overseas peers and combining its own operation characteristics, in order to achieve the Group's refined management on pollutants discharge and use of resources. This document clearly regulates the quantitative targets of each indicator and action plans which the Group will take to achieve the targets, specifies the people in charge of each procedure. The production technology head office of the Company is responsible for following up the target achievement progress of the Group and each subsidiary quarterly. The ESG Committee of the Board is responsible for overseeing and reviewing the environmental management performance and strategy, and providing improvement suggestions, and reports to the Board on a regular basis. For details of the environmental management targets and their achievements in the Reporting Period, please see the table as below:

Livzon's Environmental Management Targets for 2021-2025 and the Achievements in 2021

Item	Indicator	Targets for 2021	Target Achievement in 2021	Targets for 2022	Targets for 2023-2025
Sulphur dioxide (SO_2)	Amount of emission per RMB10,000 of output value	To decrease by 2.2% compared with 2020	Achieved	To decrease by 2.2% compared with the previous year	To decrease by 2.2% compared with the previous year
Chemical Oxygen Demand (COD_{cr})	Amount of emission per RMB10,000 of output value	To decrease by 2.2% compared with 2020	Achieved	To decrease by 2.2% compared with the previous year	To decrease by 2.2% compared with the previous year
Hazardous waste	Amount of disposal per RMB10,000 of output value	To decrease by 0.5% compared with 2020	Achieved	To decrease by 0.5% compared with the previous year	To decrease by 0.5% compared with the previous year
Non-hazardous waste	Amount of disposal per RMB10,000 of output value	To decrease by 0.8% compared with 2020	Not Achieved [Note]	To decrease by 0.8% compared with the previous year	To decrease by 0.5% compared with the previous year
Water	Amount of consumption per RMB10,000 of output value	To decrease by 3% compared with 2020	Achieved	To decrease by 3% compared with the previous year	To decrease by 3% compared with the previous year
Electricity	Amount of consumption per RMB10,000 of output value	To decrease by 3% compared with 2020	Achieved	To decrease by 3% compared with the previous year	To decrease by 3% compared with the previous year

Note: The Group's non-hazardous waste was mainly derived from general industrial solid waste such as pharmaceutical residue, bacterial residue, sludge and slag, etc. API enterprises and traditional Chinese medicine preparation enterprises are the main enterprises that generate non-hazardous waste. In 2021, failure to achieve the emission reduction goal of non-hazardous waste was mainly attributable to the year-on-year increase in slag produced during the Reporting Period. In the future, the Group will continue to reduce non-hazardous waste produced through measures such as improving production process technology and adjusting product structure while strengthening comprehensive utilization of non-hazardous waste.

10.2 ENVIRONMENTAL MANAGEMENT GOALS *(Continued)*

In addition, to respond to the national dual-carbon goals of "achieving carbon peaking by 2030 and carbon neutrality by 2060" and practice the concept of low-carbon operation, Livzon established the goals for carbon emission reduction and carbon neutrality (scope 1 & scope 2) during the Reporting Period.

Year	Goals	
2021	To decrease amount of emission per RMB10,000 of output value as compared with 2020	By 6% (Achieved)
2022	To decrease amount of emission per RMB10,000 of output value as compared with 2020	By 11%
2023	To decrease amount of emission per RMB10,000 of output value as compared with 2020	By 17%
2024	To decrease amount of emission per RMB10,000 of output value as compared with 2020	By 22%
2025	To decrease amount of emission per RMB10,000 of output value as compared with 2020	By 26%

To achieve carbon neutrality by 2055

10.3 POLLUTANT PREVENTION AND CONTROL

The Group strictly abides by relevant laws and regulations on pollutants prevention and treatment, conducts strict control on various aspects such as air emissions, wastewater, solid waste, soil pollution hidden hazards inspection, and noise, making sure that various pollutants are treated in compliance with regulations and discharged after meeting the standards. The Company established the "Three-waste" and Noise Management System in 2021, further refining the discharge management of the Group. In addition, we took measures of reducing and limiting production for heavy pollution weather, making our best to minimize the impact of pollutants on the atmosphere, water, soil and other environment.

For new construction, renovation and expansion projects, Livzon strictly implements the environmental protection "Three-Simultaneous" system (environmental protection facilities shall be designed, constructed and put into operation simultaneously with the main body of the project) in accordance with the Environmental Impact Assessment Law of the PRC and the Administrative Rules of Environmental Protection for Construction Projects, so as to achieve effective control over the pollutants discharge from the initial stage of project construction. During daily production and operation, in accordance with the Regulations on the Administration of Pollutant Discharge Permits and the Self-monitoring Technical Guideline for Pollutant Discharging Units, the Company requires its subsidiaries to engage qualified third-party monitoring authorities to carry out self-monitoring on a regular basis, to disclose environmental monitoring information in a timely manner and be subject to review by regulatory authorities and public supervision.

10.3.1 Treatment of air emissions

Livzon strictly abides by the Prevention and Control of Atmospheric Pollution Law of the PRC and other relevant laws and regulations. The Company formulated the Procedures for Air Emission Management as the guide of air emission management of the whole Group, and requires all manufacturing enterprises of the Group to strictly abide by it. In addition, in combination with their own actual conditions, each manufacturing enterprise established and implemented the "Three-Waste" and Noise Management System, Air Emission Management System and other specialized management systems for air emission, and continuously promotes emission reduction of pollutants on the foundation of emission after reaching standards, ensuring that the environmental management goals will be achieved successfully. To verify the effectiveness of air emission management work, we regularly engage qualified third-party monitoring authorities to conduct environmental monitoring on air emission.

In 2021, Livzon's major air pollutants emissions are as follows:

Livzon's Major Air Pollutants Emissions in 2021[1]

Indicator	Unit	APIs	Drug Preparations	Total
Volatile organic compounds ("VOCs")	tonne	45.9	0.5	46.4
Nitrogen oxides	tonne	126.4	9.3	135.7
Sulphur dioxide	tonne	44.7	0.7	45.4
Particulate matter	tonne	21.9	1.0	22.9

1 The statistics scope of this table covers all manufacturing enterprises of Livzon.

10.3 POLLUTANT PREVENTION AND CONTROL *(Continued)*

10.3.1 Treatment of air emissions *(Continued)*

All manufacturing enterprises of the Group actively implement programs to reduce air emissions. Through measures such as low-nitrogen upgrade of boilers, selecting and using advanced, energy-saving and environmental friendly boilers, purchase of steam to reduce boiler usage, conducting comprehensive treatment of VOCs (volatile organic compounds), centralized treatment of diffuse air pollutants, we continuously decrease air emissions of sulphur dioxide, nitrogen oxides, smoke and dust, VOCs, etc. During the Reporting Period, some of Livzon's key air emissions treatment and improvement programs are set out in details as below:

Some of Livzon's Key Air Emissions Treatment and Improvement Programs in 2021

Company name	Program name	Input *(RMB'0,000)*	Description of effects
Sichuan Guangda	Low-nitrogen renovation of biomass boilers	114.1	Conducted low-nitrogen renovation on two biomass boilers, and the concentration of nitrogen oxides emissions decreased from 138mg/m³ to approximately 98mg/m³, effectively reducing the emission of nitrogen oxides
Ningxia Pharma	Centralized treatment of waste gas	60	Introduced waste gas containing, e.g. hydrogen sulfide and methane generated from two primary sedimentation tanks into RTO (Regenerative Thermal Oxidizer) for incineration treatment, effectively reducing fugitive emission of diffusive waste gas and enhancing the treatment of malodorous gases generated from wastewater treatment
	Installation of online monitoring equipment to RTO	40	Installed online monitoring equipment to RTO at its waste gas outlet and made it accessible to government regulators, improving monitoring of waste gas emissions
	Dust collection and treatment of coal conveyor corridors	20	Through installing bag filter devices, conducted collection and treatment of dust generated in the process of coal crashing
	Installation of waste gas collection and treatment facilities in the storage of hazardous waste	5	Installed waste gas collection and treatment facilities (activated carbon adsorption) in the storage of hazardous waste, enhancing the control of fugitive emission of diffusive waste gas
	Treatment of waste gas generated from the doramectin acidification tank of workshop 101	2	Introduced waste gas generated from the doramectin acidification tank of workshop 101 into the dedicated waste gas treatment facility for doramectin fermentation of fermentation workshop 102 for treatment, reducing emission of peculiar smell gas and improving ambient air quality

10.3 POLLUTANT PREVENTION AND CONTROL *(Continued)*

10.3.1 Treatment of air emissions *(Continued)*

Some of Livzon's Key Air Emissions Treatment and Improvement Programs in 2021 *(Continued)*

Company name	Program name	Input *(RMB'0,000)*	Description of effects
Livzon Hecheng	Upgrade and renovation of waste gas treatment facilities of the production lines of Bismuth Potassium Citrate and Ilaprazole	45	Upgraded to the "activated carbon adsorption + water spray" combination treatment process, enhancing the treatment effects of VOCs to above 80%, effectively reducing the concentration of VOCs emissions (< 10mg/m^3)
	High-concentration exhaust gas absorption treatment for the production lines of Ceftriaxone Sodium and Cefuroxime Sodium	20	Connected high-concentration exhaust gas into GAC activated carbon adsorption facility for treatment, which is expected to reduce approximately over 20 tonnes of VOCs emissions per year
	Collection and treatment of waste gas from the laboratory and the R&D department	26	Collected waste gas from the laboratory and added follow-up water spray treatment equipment, effectively reducing the concentration of VOCs emissions (< 10mg/m^3), with treatment efficiency reaching over 60%
	Liquid nitrogen cryogenic recovery device	65	Conducted cryogenic treatment for Trichloromethane waste gas from the Ilaprazole manufacturing process, which is expected to recover 95% of the 40% loss of Trichloromethane.
	Post cleaning device of RTO	80	Installed secondary post cleaning device for the RTO treatment of exhaust gas, reducing the peculiar smell of incineration of waste gas
	Collection and pre-treatment of high-concentration exhaust gas	234	Installed high-concentration exhaust gas collection and pre-treatment system in each workshop, with the pretreated exhaust gas connected to RTO for treatment, effectively improving the effect of exhaust gas treatment

10.3 POLLUTANT PREVENTION AND CONTROL *(Continued)*

10.3.1 Treatment of air emissions *(Continued)*

Some of Livzon's Key Air Emissions Treatment and Improvement Programs in 2021 *(Continued)*

Company name	Program name	Input *(RMB'0,000)*	Description of effects
Limin Factory	Technological transformation project of the exhaust gas treatment facilities at the R&D center	30	• Added activated carbon adsorption facilities, effectively reducing the concentration of VOCs emissions, which decreased by approximately 50% • Added water spray treatment facilities, effectively absorbing sulfuric acid mist and hydrogen chloride acid mist, with outlet concentration decreasing by approximately 84%
Xinbeijiang Pharma	Installation of FID[2] online monitoring system	25	Added FID online monitoring system to RTO at its waste gas outlet and made it accessible to government regulators, improving monitoring of waste gas emissions
	Renovation of fungi residue field	16	Used sealed ton bag to collect fungi residues and added cranes to facilitate transportation, effectively reducing on-site peculiar smell
	Sealing of waste gas from wastewater station equalization (EQ) tanks	4.5	Sealed and reinforced surroundings of reverse hanging membrane in the wastewater station EQ tanks, effectively reducing fugitive emission of odors.
	Enhanced efficiency of RTO treatment	0	Communicated with the manufacturer during the maintenance period to send technician over to check the RTO and replace the pipe valve plate, and improved RTO operation treatment level, with treatment efficiency of VOCs increasing to approximately 98% while reducing the emission of VOCs

2 FID, i.e., flame ionization detector, is a high-sensitivity common detector

10.3 POLLUTANT PREVENTION AND CONTROL *(Continued)*

10.3.1 Treatment of air emissions *(Continued)*

Some of Livzon's Key Air Emissions Treatment and Improvement Programs in 2021 *(Continued)*

Company name	Program name	Input *(RMB'0,000)*	Description of effects
Gutian Fuxing	Addition of cover and sealing to equalization tanks	8	Added cover and sealing to equalization tanks, effectively reducing fugitive emission of odors
Jiaozuo Hecheng	Waste gas treatment at wastewater station	3	Changed third-level spray towers and added UV light oxygen catalytic treatment, effectively reducing the concentration of waste gas emissions
	Installation of vacuum feeder	5	Installed vacuum feeder to achieve sealed feeding, reducing evaporation of solvent from reaction tanks, reducing the emission of VOCs
Fuzhou Fuxing	Waste gas treatment of quality control laboratory	11.2	Established two new waste gas treatment facilities for the quality control laboratory, adopting "water spray + activated carbon adsorption" two-stage treatment process, effectively reducing concentration of laboratory waste gas emissions
Shanghai Livzon	Integrated VOCs treatment to reduce emission	3	Used Benzalkonium Bromide solutions in replacement of some Ethanol for disinfection wipes, thus achieving the goal of reducing emission of VOCs

10.3 POLLUTANT PREVENTION AND CONTROL *(Continued)*

10.3.2 Wastewater management

Livzon strictly abides by the requirements of the Water Pollution Prevention and Control Law of the PRC and other related laws and regulations. The Company formulated the Procedures for Wastewater Management as the guide of wastewater management of the whole Group, and requires all manufacturing enterprises of the Group to strictly abide by it. In addition, in combination of their own actual conditions, each manufacturing enterprise formulated and implemented the "Three-waste" and Noise Management System, the Wastewater Emission Management System and other specialized wastewater management systems, ensuring that wastewater is discharged after reaching the standards, continuously improving the proportion of reuse of wastewater, and reducing fresh water consumption. Furthermore, all of our key pollutant discharge subsidiaries have installed on-line wastewater monitoring instruments at the discharge outlets of wastewater, connecting the on-line systems with government supervising authorities to realize real-time monitoring and share the discharge indicators of processed wastewater such as COD (Chemical Oxygen Demand), ammonia nitrogen, pH, etc., so as to monitor on a dynamic basis that wastewater is discharged after reaching the standards.

In 2021, Livzon's emissions of wastewater and major water pollutants are as follows:

Livzon's Emissions of wastewater and major water pollutants in 2021[3]

Indicator	Unit	APIs	Drug Preparations	Total
Emissions of industrial wastewater	tonne	3,542,825.2	679,858.3	4,222,683.5
Chemical Oxygen Demand	tonne	250.6	18.9	269.5
Ammonia nitrogen	tonne	12.7	2.2	14.9

3 The statistics scope of this table covers all manufacturing enterprises of Livzon.

10.3 POLLUTANT PREVENTION AND CONTROL *(Continued)*

10.3.2 Wastewater management *(Continued)*

In order to reach the goal of emission reduction, the Group continuously refines daily management, upgrades wastewater treatment techniques, and eliminates leakage in the production process, ensuring that wastewater treatment facilities are operating normally and stably, improving the efficiency of wastewater treatment. During the Reporting Period, some of Livzon's key wastewater treatment and improvement programs are set out in details as below:

Some of Livzon's Key Wastewater Treatment and Improvement Programs in 2021

Company Name	Program name	Program input *(RMB'0,000)*	Description of effects
Fuzhou Fuxing	Extraction and recovery of ammonium salt in high-salt wastewater	78	Adopted the method of "Yin-Yang homogeneous membrane electroosmotic filtration" to purify and recover waste ammonium salt, in order to remove ammonia nitrogen from wastewater in replacement of the original precipitation method, effectively reducing the emission of ammonia nitrogen by approximately 15% and saving wastewater treatment operation expenses of approximately RMB1,500/ton, while achieving resources recovery.
Gutian Fuxing	Installation of membrane treatment system for high ammonia nitrogen wastewater	50	Constructed membrane treatment system to conduct pre-treatment of high ammonia nitrogen wastewater, effectively reducing the ammonia nitrogen concentration of wastewater entering the EQ tanks and reducing the operation load of wastewater treatment system
Livzon Hecheng	Solvent extraction from methyl wastewater	30	Installed distillation equipment to distill methyl wastewater and extract solvent, with the removal rate of COD reaching over 80%, effectively reducing the emission of COD and achieving the recovery of methyl acetate

10.3 POLLUTANT PREVENTION AND CONTROL *(Continued)*

10.3.2 Wastewater management *(Continued)*

Some of Livzon's Key Wastewater Treatment and Improvement Programs in 2021 *(Continued)*

Company Name	Program name	Program input *(RMB'0,000)*	Description of effects
Xinbeijiang Pharma	Renovation of wastewater tanks in workshop 1 of refining department III	4.5	Conducted consolidation and renovation of wastewater tanks in the fermentation department II and workshop 1 of refining department III, utilized integrated FRP caisson, to avoid risks of leakage of wastewater
	Replacement of the biofilter aeration pipes at the wastewater station	6.3	Replaced the original biofilter aeration pipes which experienced severe corrosion and gas leakage, to eliminate gas leakage, improving the aeration efficiency of the biofilter
Pharmaceutical Factory	Renovation of the wastewater station	1,000	Invested over RMB10 million in phase I and phase II wastewater treatment stations with designed processing capacity of 1,000t/d, adopting the CASS process for phase I and the A/O process for phase II, discharging and treated wastewater through the municipal pipeline network to wastewater treatment plants

10.3 POLLUTANT PREVENTION AND CONTROL *(Continued)*

10.3.3 Solid waste management

The Group strictly abides by the requirements of the Law on the Prevention and Control of Environmental Pollution by Solid Waste of the PRC, the Standards for Pollution Control on the Storage and Disposal Site for General Industrial Solid Wastes, the Technical Specifications of Collection, Storage and Transport for Hazardous Waste, the Administrative Measures for Hazardous Waste Transfer and other related laws and regulations. The Company formulated the Procedures for Solid Waste Management and the "Three-waste" and Noise Management System as the guide of the solid waste management of the whole group, and requires all manufacturing enterprises of the Group to strictly abide by it. In addition, in combination with their own actual conditions, each manufacturing enterprise formulated and implemented the Hazardous Waste Management System and other specialized management system for solid waste. Livzon continuously enhances standardized management and compliance disposal of solid waste, avoiding to cause pollution to soil and surrounding environments.

In 2021, Livzon's solid waste disposal is as follows:

Livzon's Solid Waste Disposal in 2021[4]

Indicator	Unit	APIs	Drug Preparations	Total
Total non-hazardous waste	tonne	105,556.7	12,598.1	118,154.8
Of which: non-hazardous waste (recyclable)	tonne	0	1,853.0	1,853.0
Non-hazardous waste (non-recyclable)	tonne	105,556.7	10,745.1	116,301.8
Total hazardous waste	tonne	3,039.0	198.5	3,237.5
Of which: medical waste (HW02) and waste medicines (HW03)	tonne	1,712.8	76.4	1,789.2
Other hazardous waste	tonne	1,326.2	122.1	1,448.3

4 The statistics scope of this table covers all manufacturing enterprises of Livzon, among which data of non-hazardous waste is derived from general industrial solid waste while data of hazardous waste is derived from hazardous waste.

10.3 POLLUTANT PREVENTION AND CONTROL *(Continued)*

10.3.3 Solid waste management *(Continued)*

All manufacturing enterprises of the Group strive to reduce the waste generation from the source by various programs such as continuously improving production techniques, adjusting product structures and conducting cleaner productions, while actively exploring applicable technologies to improve the comprehensive utilization rate of solid waste and actively promoting the reduction, resourcefulness and harmlessness of solid waste. During the Reporting Period, some of Livzon's key solid waste management and improvement programs are set out in details as below:

Some of Livzon's Key Solid Waste Management and Improvement Programs in 2021

Company name	Program name	Program input *(RMB'0,000)*	Description of effects
Fuzhou Fuxing	Technology R&D on fungi residue reduction and recycling	R&D: 50 Operation (monthly): 35	Carried out Enterprise-University-Research Institute collaboration with South China University of Technology, effectively reducing approximately 60% of the annual output of fungi residues – 3,200 tonnes through optimizing the flocculant formulation for ceramic membrane fungi residues and improving low-temperature drying facilities, saving disposal expenses of approximately RMB 5.4 million/year.
Ningxia Pharma	Reuse of (partial) waste activated carbon	10	Reused (partial) waste activated carbon generated from decolorization process of Phenylalanine, which is expected to reduce the annual output of waste activated carbon by 160 tonnes
Shanghai Livzon	Floor improvement of hazardous waste temporary storage	1.3	Transformed the hazardous waste temporary storage for ground anti-corrosion by floor laying, regulating management of the hazardous waste temporary storage
Livzon Hecheng	Reuse of activated carbon	0.1	Reused the activated carbon used in the refinement of Cefuroxime Sodium in the synthesis process and then disposed of it as hazardous waste, which is expected to reduce the annual output of hazardous waste by approximately 12 tonnes and save disposal expenses of approximately RMB48,000 per year
Gutian Fuxing	Upgrade and renovation of sludge press system	60	Conducted upgrade and renovation of sludge press system and changed high pressure plate frame, effectively decreasing the sludge water content and consequently reducing the sludge output

10.3 POLLUTANT PREVENTION AND CONTROL *(Continued)*

10.3.4 Noise management

The Company formulated the Procedures for Noise Emission Management and the "Three-waste" and Noise Management System as the guide for noise management for the whole Group, and requires all manufacturing enterprises of the Group to strictly abide by it. In addition, in combination with their own actual conditions, each manufacturing enterprise formulated and implemented the Noise Pollution Prevention and Control Procedures and other noise management systems. All manufacturing enterprises of the Group carry out regular monitoring of noise inside the factory to ensure that noise at day/night is lower than the emission limit value in the Emission Standard for Industrial Enterprises Noise at Boundary. In addition, to reduce noise pollution and improve environment quality, we continuously conduct noise management work through various methods such as adopting low-noise equipment/technique first, actively eliminating and changing old equipment and installing noise segregation/silencing material/equipment.

Some of Livzon's Key Noise Management and Improvement Programs in 2021

Company name	Program name	Program input *(RMB'0,000)*	Description of effects
Xinbeijiang Pharma	Renovation of power cooling tower for noise reduction	36	Installed sound insulation cotton wall on the side of the cooling tower closer to residents due to the large noise from the operating cooling tower, significantly reducing the spread of cooling tower noise to surrounding neighborhoods.
	Installation of the boiler inlet muffler	3.4	Installed muffler for the large inlet noise from the original boiler, effectively reducing the inlet noise from the boiler
	Noise reduction of MVR fans	2	Used sound-absorbing cotton plates to enhance the noise reduction effect of Mechanical Vapor Recompression (MVR) fans room, reducing the spread of fans noise.
Limin Factory	Sound insulation wall installation project	10	Installed sound-absorbing cotton for noise reduction treatment, reducing noise by approximately 10 decibels

10.3 POLLUTANT PREVENTION AND CONTROL *(Continued)*

10.3.5 Reducing impact on the environment

When heavy pollution weather warnings occur, Livzon proactively cooperates with requirements of local governments to reduce production volume, so as to reduce discharge of pollutants such as VOCs, nitrogen oxides, particulate matter and sulphur dioxide, and to minimize the impact of corporate operations on the environment as much as possible. For details of emission reduction scheme, please see below:

- In response to yellow warning of heavy pollution weather, the running time of boilers shall be cut by 30%;
- In response to orange warning of heavy pollution weather, the running time of boilers shall be cut by 50%;
- In response to red warning of heavy pollution weather, the running time of boilers shall be cut by 70%.

Due to the excellent environmental management performances of the Group, Xinbeijiang Pharma is rated as a VOC key regulatory Class-A corporate, which can carry out autonomous emission reduction in heavy pollution weathers. Jiaozuo Hecheng is rated as a Class-B corporate in key industry performance rating under heavy pollution weather in Henan Province, which is not required to reduce production volume in yellow warning and is only required to conduct appropriate emission reduction in orange or above warnings of heavy pollution weather according to the requirement of heavy pollution weather control.

10.4 RESOURCE USE MANAGEMENT

Livzon strictly complies with the Energy Conservation Law of the PRC, the Water Law of the PRC, the Recycling Economy Promotion Law of the PRC and other relevant laws and regulations, and has established an energy management system. The Company formulated the Procedures for Energy Management, Procedures for Resources Management and Energy Management System, as the guide of resource use management of the whole Group, and requires each enterprise of the Group to strictly abide by it. In addition, in combination of their own actual conditions, each manufacturing enterprise of the Group formulated and implemented the Resource Management System and the Energy Conservation and Emission Reduction Management System and other resource use management systems, and implements a standardized and systematic resource use management and vigorously promotes the improvement of resource utilization efficiency. At the same time, the Company set out targets for water and electricity conservation for the Group in its Environmental Management Targets for 2021-2025, and plans to enhance the overall efficiency of use of resources through management improvement, technological innovation and regular review of the target's fulfillment.

10.4.1 Water management

In order to implement water conservation initiatives, the Group implements a stringent management system, introduces advanced technology and adopts various measures to reduce water consumption. The Group strengthens the maintenance of various water-consuming equipment and facilities, and continuously invests in water recycling projects, and strives to enhance the reuse of water resources through various measures such as reducing consumption of fresh water, regulating water usage during process and promoting the recycling of reclaimed water and cooling water. During the Reporting Period, Livzon did not encounter any issue in sourcing water that is fit for purpose.

In 2021, Livzon's water consumption is as follows:

Livzon's Water Consumption in 2021[5]

Indicator	Unit	APIs	Drug Preparations	Total
Fresh water consumption	tonne	4,539,298.0	1,557,214.8	6,096,512.8
Recycled water volume	tonne	0.0	2,400.0	2,400.0

5 The statistics scope of this table covers all manufacturing enterprises of Livzon.

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.1 Water management *(Continued)*

During the Reporting Period, some of Livzon's key water management and improvement programs are set out in details as below:

Some of Livzon's Key Water Management and Improvement Programs in 2021

Company name	Program name	Program input *(RMB'0,000)*	Description of effects
Livzon Hecheng	Renovation of fire protection pipe network	65	Transformed the old underground fire protection pipe network into an above-ground pipe network, effectively improving the waste of water resources caused by pipeline leakage, with an estimated annual saving of about 500 tonnes
Limin Factory	Reuse of wastewater	26	Reused treated and acceptable wastewater for the greening of the plant, reducing freshwater consumption with an estimated annual saving of about 32,400 tonnes, saving water costs by approximately RMB140,000 per year
Jiaozuo Hecheng	Collection and reuse of RO wastewater	6.6	Collected wastewater from the purified water maker for floor humidification, saving freshwater consumption of approximately 1,080 tonnes per year
	Reuse of steam condensate	2	Replenished steam condensate to the hot water tank and cooling tower in the workshop, cutting the steam and fresh water consumption, saving approximately 1,200 tonnes of fresh water per year
Fuzhou Fuxing	Replacement of water saving taps	3	Replaced all workshop taps with water saving taps, with an estimated water saving of 100-200 tonnes per year
Ningxia Pharma	Cooling tower project for water conservation	130	Installed two 1,500 m^3/h cooling towers to meet the temperature demands of production water, reducing the consumption of underground water by approximately 30,000 m^3 per year
	Recycling of MVR condensate water	3	Recycled condensate wastewater generated from MVR equipment in replacement of underground water to rinse ceramic membrane, reducing the discharge of wastewater by approximately 60,000 m^3 per year

Water risk assessment

In order to identify the potential risks associated with access to water at each operation of the Group, all manufacturing enterprises of the Group conduct water risk assessment at least once a year, sets reasonable water conservation targets and countermeasures based on the assessment results, conducts and implements improvement measures, carries out daily monitoring and reports to the EHS department of the Group's headquarter on a regular basis.

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.1 Water management *(Continued)*

Water risk assessment *(Continued)*

In 2021, all manufacturing enterprises of the Group conducted water risk assessment in terms of 17 dimensions in aggregate, which include: overall water risk, physical risks quantity, water stress, water depletion, interannual variability, seasonal variability, groundwater table decline, riverine flood risk, coastal flood risk, drought risk, physical risks-quality, untreated connected wastewater, coastal eutrophication potential, regulatory and reputational risk, unimproved/no drinking water, unimproved/no sanitation, and peak country ESG risk index. The Group adopted quantitative and qualitative approaches to classify the risk scores for each dimension into five criteria, i.e. low, medium-low, medium-high, high and very high. As a result of the aggregation analysis, 4 operations had medium-low overall risk, 5 operations had medium-high overall risk, 1 operation had high overall risk and 3 operations had very high overall risk. In order to mitigate the risks at operational sites with medium-high, high and very high risk, the Group has adopted a series of targeted control measures, which include:

- **Setting water usage targets:** Setting water usage targets for different aspects of manufacturing and operation, such as achieving "zero wastewater discharge"; strictly controlling water usage; actively promoting water conservation among employees.
- **Building water supply facilities:** For operational sites that use groundwater as a source of water supply, we coordinate with the governments to build dedicated water supply facilities and use a combination of municipal water supply and groundwater to ensure water availability.
- **Promoting water recycling:** Actively promoting wastewater recycling and reclaimed water reuse projects to minimize water consumption.
- **Energy conservation and environmental protection system:** Ensuring the proper operation of environmental protection facilities and the compliance of water discharge with requirements of the containment and management agreement. Conducting clean energy production and reducing unnecessary waste of water resources.
- **Process optimization and adjustments:** Developing and optimizing processes to reduce the temperature control parameters of production processes as far as possible and reduce the amount of water lost through high temperature evaporation, for example by adding cooling towers to lower the temperature. Changing the process to use environmentally friendly raw and auxiliary materials that have less impact on water quality.
- **Water management for production and domestic use:** Production systems are equipped with water storage tanks to maintain production. Meanwhile, implementing pipeline separation for production water and domestic water and reducing groundwater extraction and consumption to achieve rational use of water resources.
- **Wastewater discharge control:** Eliminating leakage and dripping; discharging wastewater into the downstream wastewater treatment plant after treatment in internal wastewater treatment station and meeting the standard, and pumping the unqualified wastewater back to the balancing tanks for recycling treatment, and discharging it into the wastewater treatment plant after meeting the standard; achieving a thorough containment, management and collection of wastewater.
- **Management and control of water safety:** Using water purification system to ensure the safety of production water, stepping up monitoring and conducting regular water quality testing for domestic water and drinking water.

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.1 Water management *(Continued)*

Water risk assessment *(Continued)*

- **Emergency plan management:** To address the risk of flooding from rivers, we formulate emergency plans, deploy preventive measures in advance, and strengthen the inspection of the surrounding area during rainy seasons to deal with dangerous situations in a timely manner; conduct regular trainings, allocate emergency supplies, and negotiate with the government on dredging of river channels and flood prevention, while ensuring smooth and effective drainage equipment to reduce the risk of flooding and guarantee the safety of personnel; make efforts in diverting rainwater and sewage to reduce the amount of wastewater required to be treated at the wastewater station and ensure that the wastewater discharge meets the standard.

- **Supervision and inspection:** We actively cooperate with the local regulatory authorities in their inspections, strictly enforce wastewater discharge standards, keep information open, update environmental protection laws and regulations in a timely manner, produce in accordance with the laws and regulations, strengthen daily inspections, identify and rectify hidden hazards in a timely manner, and enhance the upgrade for environmental protection handling system.

10.4.2 Energy management

Livzon formulated the Procedures for Energy Management, Procedures for Resources Management and Energy Management System and established an internal energy management system. Through management improvement and technological innovation, we vigorously implemented energy management and adopted clean energy, and focused on increasing the proportion of clean energy usage to improve the overall efficiency of energy and resources.

As at the end of the Reporting Period, Fuzhou Fuxing and Xinbeijiang Pharma, the subsidiaries of the Company, were certified to ISO 50001:2018 / RB/T 114-2014 Energy Management System certification.

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.2 Energy management *(Continued)*

In 2021, Livzon's energy consumption and major greenhouse gas emissions are as follows:

Livzon's Energy Consumption in 2021[6]

Indicator	Unit	APIs	Drug preparations	Total
Gasoline	liter	136,178.1	148,487.5	284,665.6
Diesel	liter	243,286.5	84,779.1	328,065.6
Coal	tonne	86,291.0	0.0	86,291.0
Natural gas	10,000 cubic meters	554.3	44.3	598.6
Liquefied petroleum gas	tonne	4.3	3.6	7.9
Biomass fuel	tonne	0.0	14.4	14.4
Purchased steam	tonne	275,845.4	100,295.1	376,140.5
Purchased electricity	kWh	316,679,138.0	81,760,723.9	398,439,861.9
Solar power (self-use)	kWh	62,888.0	629,392.0	692,280.0
Intensity of total energy consumption	MWh/ RMB10,000 of output value	3.2	0.2	1.0

Livzon's Major Greenhouse Gas Emissions in 2021[7]

Indicator	Unit	APIs	Drug preparations	Total
Direct greenhouse gas emissions (Scope 1)	CO_2 equivalent (in tonnes)	191,694.8	1,544.9	193,239.7
Indirect greenhouse gas emissions (Scope 2)	CO_2 equivalent (in tonnes)	264,838.1	77,753.7	342,591.8
Total greenhouse gas emissions	CO_2 equivalent (in tonnes)	456,532.9	79,298.6	535,831.5
Intensity of greenhouse gas emissions[8]	CO_2 equivalent (in tonnes)/ RMB10,000 of output value	1.3	0.1	0.4

6 The statistics scope of this table covers all manufacturing enterprises of Livzon.
7 The statistics scope of this table covers all manufacturing enterprises of Livzon.
8 The data of intensity of greenhouse gas emissions is calculated based on the output value of the API segment, the output value of the drug preparation segment and the total output value of the Group, respectively.

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.2 Energy management *(Continued)*

The Company and its subsidiaries are actively engaged in technological renovation, equipment replacement, energy management, manufacturing process improvement and other actions, and conduct targeted energy conservation enhancements based on energy conservation diagnostic reports issued by professional energy conservation and emission reduction consulting companies, so as to reduce energy consumption and greenhouse gas emissions.

Some of Livzon's Ongoing and Planned Energy Conservation and Carbon Reduction Programs in 2021

Company name	Program type	Program description	Program effect
Ningxia Pharma	Technological renovation	Plan to renovate the boilers to increase the coal-fired steam generation rate (steam output per tonne of coal) from the current 1:4.5 to 1:5.5-6.0	It is expected to save 15,000-20,000 tonnes of coal per year and reduce carbon emission by 31,000-41,000 tonnes per year after commencement of operation
	Equipment replacement	Plan to replace ordinary circulating water pumps with high-efficiency energy-saving pumps, and reuse circulating cooling water and steam condensate in the production workshop.	It is expected to save 2,300,000 kilowatt-hours (kWh) of electricity per year after commencement of operation
	Technological renovation	Plan to renovate the phenylalanine concentration system and adopt MVR concentration to replace the original triple-effect concentration system	The energy consumption of the operation of phenylalanine concentration system will be reduced by about 50%. About 42,000 tonnes of steam will be saved annually, and about 9,300 tonnes of coal consumption will be saved annually if translated at the steam output by the Company's operating coalfired boilers
	Energy restructuring	Increased the consumption of steam from external supply, reduce the use of coal to reduce carbon emission	If translated at the steam output by the Company's operating coalfired boilers, the Company's consumption of purchased steam in 2021 is equivalent to cutting coal consumption by approximately 28,000 tonnes
Gutian Fuxing	Equipment replacement	Invested RMB1,600,000 in installation of four 130m³/min air compressors to replace the original air compressors which consume more electricity	Save 500,000 kWh of electricity monthly and over 6,000,000 kWh of electricity annually
	Equipment replacement	Replaced four air compressors and one chiller unit to reduce electricity consumption	Save over 400,000 kWh of electricity annually

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.2 Energy management *(Continued)*

Some of Livzon's Ongoing and Planned Energy Conservation and Carbon Reduction Programs in 2021 *(Continued)*

Company name	Program type	Program description	Program effect
Fuzhou Fuxing	Technological renovation	Renovated high-energy-consuming pumps for energy conservation to effectively reduce energy consumption	Saved energy by approximately 20%, equating to about 800,000 kWh/year
	Equipment replacement	Replaced 4 high energy-consuming Roots blowers with energy-saving screw blowers and cyclone floating blowers	Reduced electricity consumption, and saved energy by about 30%
	Equipment replacement	Plan to replace with new air pressure system	Save energy by more than 20%, equating to about 1,800,000 kWh/year
	Equipment replacement	Replaced with high-efficiency water motor pumps	Saved energy by about 20%, equating to about 800,000 kWh/year
	Technological renovation	Plan to build a solvent recovery system to reuse resources and reduce procurement volume of raw materials	Recover 97% or more of alcohol to reduce alcohol procurement of about 8,000 tonnes per year, and recover acetone to reduce procurement volume of about 300 tonnes per year
	Technological renovation	Through slag mineralization technology, plan to turn hazardous waste into biochemical liquid material, and produce methane through anaerobic digestion, then burn methane to produce steam, achieving resource utilization of waste, which will not only save the cost of hazardous waste treatment but also gain energy	Achieve safe disposal and recycling of liquid mycelium residue. Skip the stage of fungi residue compression, which can reduce the generation of hazardous waste by approximately 1,000 tonnes/year and save treatment cost of approximately RMB1,500,000/year, while the biogas produced is expected to generate electricity of 250,000 kWh/year

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.2 Energy management *(Continued)*

Some of Livzon's Ongoing and Planned Energy Conservation and Carbon Reduction Programs in 2021 *(Continued)*

Company name	Program type	Program description	Program effect
Sichuan Guangda	Manufacturing process improvement	Plan to change the concentration process from the original single-effect concentration to mechanical vapor recompression technology (MVR) concentration, and adopt the fully enclosed and automated pellet production technology	Increase production efficiency by 30%. Save about 50% of energy and reduce about 60% of costs
	Energy management	Plan to implement BMS (air conditioning automatic control system) and EMS (Environmental Monitoring System) for environmental energy management to achieve intelligent energy-saving operation of the plant	Save 30% more energy than manual control
Livzon Hecheng	Equipment replacement	Upgraded by replacing the two Roots blowers with high failure rate in the environmental protection center with magnetic levitation blowers to reduce electricity consumption	Save about 107,000 kWh of electricity consumption per year
	Equipment replacement	Plan to replace the existing traditional units (e.g. blowers and chillers) with magnetic levitation units	Save energy by over about 30%
	Technological renovation	Plan to apply graphene energy-saving film in the central air conditioning system to enhance the efficiency of convection heat transfer within the heat exchanger	Save energy by about 5%, equating to about 100,000 kWh annually
	Equipment replacement	Maintained and upgraded chiller units for more rational use of energy	When the product line of Bismuth Potassium Citrate and the production workshop of Ilaprazole operate separately, changed to small chiller units, saving approximately 120,000 kWh annually

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.2 Energy management *(Continued)*

Some of Livzon's Ongoing and Planned Energy Conservation and Carbon Reduction Programs in 2021 *(Continued)*

Company name	Program type	Program description	Program effect
Xinbeijiang Pharma	Technological renovation	Renovated some of the cooling towers to use water kinetic energy instead of electric motors to drive the cooling tower fans to reduce the electric energy consumption while ensuring the cooling effect	Save about RMB48,000 of electricity expenses annually
	Equipment replacement	Retrofitted the 80cfm air compressor with a heat exchanger to pre-heat the soft water of the boiler by the heat generated from the operation of the air compressor to raise the temperature of the inlet water of the boiler and effectively reduce the consumption of natural gas	Save about RMB350,000 of natural gas expenses annually
	Equipment repair and maintenance	Cleaned the inner wall of the MVR equipment to increase the evaporation rate of sugar water of the MVR equipment by about 40%, hence effectively reducing the running time of the MVR equipment and reducing electricity consumption	Save about RMB240,000 of electricity expenses annually
	Equipment replacement	Replaced old boilers of high energy consumption with new boilers	Save RMB480,000 of natural gas expenses annually
Shanghai Livzon	Manufacturing process improvement	Optimized the peptide splicing process, increased the peptide splicing yield by more than 10%, thus reducing the power consumption per unit of product	Increased the peptide splicing yield by more than 10% while reducing the power consumption
	Manufacturing process improvement	Transformed the solid preparation workshop into the powder injection workshop which produces less waste and conserves electricity	Save about RMB50,000 of electricity expenses annually
	Technological renovation	While comfortable air conditioning unit (cooling) utilized the chilled water unit in the power room, the multi-expansion air conditioning unit was placed outdoors to use air cooling, saving cooling capacity and reducing energy consumption	Saved indoor space and reduced energy consumption

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.2 Energy management *(Continued)*

Some of Livzon's Ongoing and Planned Energy Conservation and Carbon Reduction Programs in 2021 *(Continued)*

Company name	Program type	Program description	Program effect
Limin Factory	Technological renovation	Renovated steam equipment in solid preparation and high-volume workshop to reduce steam consumption	Saved a total of about 180 tonnes of steam in 2021
	Technological renovation	Appropriately adjusted the temperature and humidity settings of the air conditioning system (within the standard range) in the solid workshop to keep it as close to the outside temperature and humidity as possible, thus reducing steam consumption	Saved a total of about 500 tonnes of steam in 2021
	Technological renovation	Reduced energy consumption by controlling the number of running compressors in the air conditioning units and setting parameters by the Quality Control Department, and by implementing intermittent use mode for the bioassay lab	Reduce annual average energy consumption by about 110,000 kWh
	Technological renovation	Transferred materials stored in the cool storage in overhead storages with larger area to GSP cool storage with smaller area, and turned off the air conditioning facilities in overhead storage to reduce energy consumption	Save electricity of about 494,700 kWh, water of about 6,195 tonnes, and steam of about 647 tonnes annually
	Technological renovation	Used hot tailwater from the water distiller in the production workshop to heat the boiler soft water, thus reducing the consumption of natural gas	Reduce annual average energy consumption by about 139,000 kWh
	Technological renovation	Renovated the air-conditioning ventilation system at the R&D Centre to save electricity	Saved a total of about 180 tonnes of steam in 2021

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.2 Energy management *(Continued)*

Some of Livzon's Ongoing and Planned Energy Conservation and Carbon Reduction Programs in 2021 *(Continued)*

Company name	Program type	Program description	Program effect
Jiaozuo Hecheng	Equipment replacement	Gradually replaced high energy consuming equipment and facilities in workshops with low energy consuming or automated interlocking devices	Saved electricity by not less than 5%
	Technological renovation	Installed additional mirrors behind the steam pipeline drainage valves to observe whether there is steam loss	Promptly discovered gas leakage of drainage valve to prevent steam loss
	Technological renovation	Changed the lighting in the common areas of the workshop, corridors, etc. to sound- or light-controlled switches and gradually replace the workshop lighting with LED lights	Saved electricity by not less than 10%

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.2 Energy management *(Continued)*

Some of Livzon's Ongoing and Planned Energy Conservation and Carbon Reduction Programs in 2021 *(Continued)*

Company name	Program type	Program description	Program effect
Livzon Diagnostics	Equipment replacement	Plan to use energy-efficient central screw air conditioning units instead of air-cooled modular units with high power consumption	It is expected to save electricity by not less than 35%
	Equipment maintenance	Plan to strengthen the maintenance and optimize the regulated usage of key energy-consuming equipment such as dehumidifiers, purifying air conditioners, central air conditioners, cold storage, etc., and adjust the operating parameters in a timely manner according to the weather and changes in use, so as to achieve efficient and energy-saving operation of key equipment	It is expected to save electricity by not less than 3%
Pharmaceutical Factory	Equipment replacement	Plan to reduce electricity consumption by replacing incandescent lamps with LED lamps	It is expected to save electricity by not less than 10% for lighting
	Technological renovation	Refurbished photovoltaic inverter cabinets and roof-mounted photovoltaic modules, improving the photovoltaic power generation efficiency after refurbishment	Save about 600,000 kWh of electricity per year
	Energy restructuring	Introduced purchased steam to reduce boiler combustion and save energy	Saved purchased natural gas of approximately 1,500,000 cubic meters
	Technological renovation	Plan to implement low-nitrogen reform for five existing boilers, which can reduce the concentration of nitrogen oxide emissions and effectively minimize the impact on the atmosphere	It is expected to reduce boiler nitrogen oxides emission value from 150 mg/m^3 to 50 mg/m^3

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.2 Energy management *(Continued)*

Some of Livzon's Key Ongoing and Planned Clean Energy Programs in 2021

Company name	Program name	Program input *(RMB'0,000)*	Program description	Description of effects
Pharmaceutical Factory	Photovoltaic power generation	1,461	A total of 5,148 pieces of 195W monocrystalline silicon components used as photovoltaic conversion devices, installed on the roof of the factory building. The total power generated by the whole grid-connected photovoltaic system was 1,003.86 KWp (peak power), with the system consisting of 4 grid-connected inverters, 15 hubs and 4 grid-connected cabinets	Approximately 630,000 kWh of electricity generated in 2021
	Reconstruction of steam pipelines	110	Additional industrial steam pipeline was installed in the park connecting to the grid of Yuhai for industrial steam supply	Save energy of approximately 177.30 tce (tonne of coal equivalent) per year
Fuzhou Fuxing	Photovoltaic power generation	200	The project used monocrystalline silicon solar cells as photovoltaic conversion devices, while the corresponding access system is configured according to the construction site plan to achieve grid-connected operation, with a total power generation capacity of 393.68KWp	Put into use in November 2021, with approximately 63,000 kWh of electricity generated in 2021 and an estimated subsequent electricity generation of up to 429,000 kWh/year
Xinbeijiang Pharma	Photovoltaic power generation	130	Government subsidies for photovoltaic projects were used to promote the construction of a photovoltaic power generation project at the new plant, which will generate all electricity for its own use, with a photovoltaic power generation area of approximately 3,700 square meters and a total power generation capacity of approximately 323.4 KWp	The project is planned to be put into use for power generation in 2022, with an estimated annual power generation of approximately 400,000 kWh

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.2 Energy management *(Continued)*

Some of Livzon's Key Ongoing and Planned Clean Energy Programs in 2021 *(Continued)*

Company name	Program name	Program input *(RMB'0,000)*	Program description	Description of effects
Shanghai Livzon	Distributed photovoltaic power generation	/	A 0.17MW photovoltaic grid-connected plant is planned to be built by the partner on a site provided by Shanghai Livzon, and the photovoltaic energy generated by the project will be used by Shanghai Livzon on a priority basis	It is expected to save approximately 170,000 kWh of purchased electricity per year upon completion
Livzon Hecheng	Photovoltaic power generation	70	Plan to use the roof to install photovoltaic power generation systems in the future, taking into account the factory conditions	It is expected to save approximately 50,000 kWh of purchased electricity per year upon completion
Livzon Diagnostics	Photovoltaic power generation	/	Future assessment will consider the installation of 120KW solar photovoltaic power generation equipment to save energy and reduce consumption, taking into account the factory conditions	It is expected to generate approximately 120,000 kWh of electricity per year




10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.3 Material management

Livzon attaches great importance to the utilization of resources and has been continuously improving the utilization of production resources by promoting the recycling of industrial materials through technological renovation. At the same time, we continuously optimize our product packaging design, reduce the use of packaging materials provided that market demand and production requirements are met, and actively conduct the recycling of green packaging boxes, thereby reducing the consumption of resources and effectively protecting the environment.

Case: Fuzhou Fuxing waste material reuse project

Fuzhou Fuxing has established a recycling workshop to enhance the reasonable substitution or reuse of raw materials under the premise of satisfying product quality. Advanced optimization process and design are used to conserve raw materials and recycle and reuse waste materials. Through bipolar membrane technology with the use of waste sodium chloride solution to prepare acid and alkali solution, and the use of membrane filtration technology to recycle acetonitrile, acetone, heptane, etc., the procurement volume of raw materials is effectively reduced and the consumption of resources is reduced, while controlling logistics costs. During the Reporting Period, Fuzhou Fuxing's key enhancement projects for the recycling and reuse of materials were as follows:

- Invested RMB6 million to add a set of acetonitrile recycling device, so that the waste acetonitrile can be purified and reused through membrane recycling, with an annual recovery volume of about 6,000 tonnes of acetonitrile, generating benefits of about RMB16 million;
- Invested RMB2 million to add a set of isopropanol recycling device, so that the waste isopropanol can be purified and reused through membrane recycling, with an annual recovery volume of about 1,000 tonnes of isopropanol, generating benefits of about RMB10 million;
- Invested RMB1 million to add a set of n-butanol recycling device, so that the waste n-butanol can be purified and reused through membrane recycling, with an annual recovery volume of about 100 tonnes of n-butanol, generating benefits of about RMB4 million;
- Invested RMB780,000 in the technological upgrading of the treatment process of high saline wastewater by adopting the method of "Yin-Yang homogeneous membrane electro-osmotic filtration" to purify and reuse waste ammonium salt, in order to remove ammonia nitrogen in replacement of the original precipitation method, realizing the reuse of resources and reducing ammonia nitrogen emissions at the same time.

10.4 RESOURCE USE MANAGEMENT *(Continued)*

10.4.3 Material management *(Continued)*

Livzon's Packaging Material Consumption in 2021[9]

Indicator	Unit	APIs	Drug preparations	Total
Paper packaging material	tonne	605.2	3,186.3	3,791.5
Other packaging material	tonne	1,333.8	5,037.0	6,370.8

10.5 ADDRESSING CLIMATE CHANGE

We recognize that climate change has a significant impact on business operations and that companies also play an important role in addressing climate change. Climate change has constant impacts on human health. As a pharmaceutical company, Livzon will uphold the mission of "prioritizing the quality of life of patients" and strive to improve the climate, reduce greenhouse gas emissions and provide solutions that address healthcare demands caused by climate change, in order to minimize the impact of climate change on the environment and human health.

We support the management and disclosure of climate change impacts in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures ("TCFD"), and plan to provide more detailed disclosures through the 2022 CDP Climate Change Questionnaire.

To identify potential risks and opportunities arising from climate change, Livzon, under the leadership and supervision of its Board and the ESG Committee, has established a climate risk management process and framework and regularly convenes the management of the Company, the EHS department of the headquarter, the management and relevant departments of the subsidiaries to collaborate on the identification of climate-related risks and opportunities every year. We assess the associated risks with the help of external experts to formulate solutions and measures and periodically report on work results to the ESG Committee, so as to ensure that matters about addressing climate change are incorporated into the strategy-making considerations of the Company. In 2021, the ESG Committee held a meeting to consider and approve the Group's goals for reduction of carbon emission for 2021-2025 and goal of achieving carbon neutrality by 2055.

During the Reporting Period, the Company and each of its manufacturing subsidiaries have conducted a comprehensive assessment on the climate-related risks and opportunities which they were facing by reference to the TCFD recommendations, and have formulated and deployed specific plans and comprehensive work to address climate change and reduce greenhouse gas emissions. The Group's climate-related risk assessment and specific countermeasures are set out in details as below:

9 The statistics scope of this table covers all manufacturing enterprises of Livzon.

10.5 ADDRESSING CLIMATE CHANGE *(Continued)*

(1) Transition Risks

A. Policy and Legal Risks

a. China has implemented a carbon emission trading scheme mechanism to reduce greenhouse gas emissions through the market mechanism, and some of the pilot carbon markets have been incorporated in the pharmaceutical industry. If the pharmaceutical industry is further included in the scope of industries for the national carbon emission trading, the Group may experience an increase in operating costs due to purchasing carbon emission credits for compliance.

b. Achieving "Carbon peaking by 2030, carbon neutrality by 2060" has become a national strategic goal, and China has issued the "Working Guidance for Carbon Dioxide Peaking and Carbon Neutrality in Full and Faithful Implementation of the New Development Philosophy" and the "Action Plan for Carbon Dioxide Peaking Before 2030". Some regional governments have also issued carbon emission peaking policies and supporting energy consumption control policies. Against this policy background, a series of policies and regulations such as mandatory electricity saving and emission restrictions may be issued across the country in the future. As a result, the Group may face risks such as production reduction, administrative penalties, increase in electricity tariff and short supply of raw materials from suppliers, which may reduce the Group's production efficiency and output and increase operating costs.

Measures of Livzon:

i. Set energy conservation and consumption reduction targets and carbon emission reduction targets, actively take relevant measures to reduce greenhouse gas emissions, and promote the gradual reduction of carbon emission intensity and total volume.

ii. Employ consultants to conduct energy conservation assessment of the Company's current status and perform targeted energy conservation improvement based on the professional assessment results.

iii. Improve energy efficiency by replacing outdated, high energy-consuming equipment with energy-efficient energy-saving equipment or upgrading high energy-consuming equipment to save energy; promote resource recycling.

iv. Strengthen energy conservation and emission reduction management, training and publicity in the overall production and operation process, and raise employees' awareness of energy conservation; set up an application system for energy (e.g. steam) use and strengthen the assessment of energy use in production workshops.

10.5 ADDRESSING CLIMATE CHANGE *(Continued)*

(1) Transition Risks *(Continued)*

A. Policy and Legal Risks *(Continued)*

Measures of Livzon: *(Continued)*

v. Improve energy structure: adopt clean energy and renewable energy (e.g. photovoltaic power generation, solar street lights, etc.).

vi. Improve production technology. Improve the yield of products through technological refinement, thus reducing the raw material and energy consumption per unit of product.

vii. Reduce energy consumption from product transportation: increase the loading rate of containers and trains, use electric or natural gas vehicles to transport goods as much as possible, use electric forklifts for transportation within the plant, etc. to reduce CO_2 emissions in the transportation process.

viii. Adjust the Company's business and product structure to replace products with high energy consumption, high pollution and low added value with products with low energy consumption, low pollution and high added value.

ix. Develop contingency plans and make relevant arrangement to respond to the impact of new policies such as power outages due to staggering power usage and emission restrictions.

B. Technology Risk

a. The Group's API business is focusing on the R&D of high-end antibiotics, high-end veterinary drugs and new fermented products, for which new plants and new production lines with advanced production equipment and high environmental protection standards have been built. Compared with the original products, these new products have the advantages of higher added value, lower energy consumption and lower pollution. The capital investment for product transition is high, and it will be subject to the uncertainty of market development and the risk of lower than expected return on investment in the future.

b. In order to save energy and reduce carbon emissions, the Group is exploring various options to increase the use of clean energy, such as increasing photovoltaic power generation. The costs to transition to low carbon technologies will likely increase the Group's capital investment, increase the labor costs to deploy new processes and have a long payback period.

10.5 ADDRESSING CLIMATE CHANGE *(Continued)*

(1) Transition Risks *(Continued)*

B. Technology Risk *(Continued)*

Measures of Livzon:

i. Accelerate the R&D and production of new products for new plants; increase the marketing efforts of new products to develop new growth points of profit.

ii. Transform and refine old products, continuously optimize material processes, and develop green and low-carbon production techniques, reduce production costs and increase profit margins.

iii. Operate new technology and old processes at the same time to avoid the slow sales of products caused by technology update.

iv. Conduct adequate project inspection and suitability demonstration when adopting clean energy to reduce the risk of investment failure.

v. Evaluate the ROI (return on investment) period and feasibility comprehensively before implementing the projects of transitioning to low-carbon technologies, and select the most suitable and mature technologies.

C. Market Risk

a. Under the influence of climate change and global energy transition, the Group may face the risk of increased prices of energy (coal, electricity, steam) and raw materials (glucose, corn starch, etc.), difficult availability of some biological raw materials and closure of certain raw material suppliers in the future, which may lead to interruption of the Group's production and increased production costs.

b. Against the backdrop of the national carbon peaking and carbon neutrality policy and the prevention and control of the COVID-19 pandemic, the future market signals are uncertain, and sudden power and water rationing and outages may occur.

Measures of Livzon:

i. Improve production technology, promote product yield, and control production cost to reduce consumption of raw material and energy.

ii. Strengthen strategic cooperation with suppliers (such as signing long-term contracts to avoid the impact of price fluctuations), increase the inventory from key suppliers, and regularly analyze the supply risks of suppliers.

iii. Actively carry out technological innovation and identify alternative raw materials and energy sources.

iv. Pay close attention to market signals and energy policy changes to ensure timeliness of information.

v. Establish a communication mechanism with various departments of power supply and distribution, establish relevant systems for emergency response to power outages, allocate emergency generators and emergency pools, and adopt off-peak power use when electricity prices rise, to cope with the impact of new policies, such as power outages due to staggering power usage and emission restrictions.

10.5 ADDRESSING CLIMATE CHANGE *(Continued)*

(1) Transition Risks *(Continued)*

D. Reputation Risk

The Group's ESG performance has attracted great attention from the capital markets. Response to climate change is an important issue to investors and the capital markets, and failure to take proactive measures to address climate change could result in downgrades and reputational damage to the Group, leading to reduction in available capital.

Measures of Livzon:

Set ambitious carbon emission targets and energy management targets and include them in the management's performance appraisal. Work hard to reduce environmental impact through a series of energy conservation and carbon reduction measures, and strictly control EHS risks, so as to contribute to the global action on climate change.

(2) Physical Risks

A. Acute Risk

Due to geographical reasons, some of the Group's production bases are susceptible to extreme events, such as typhoons, storms, heavy rainfall, sandstorms and high temperatures, which may affect production capacity and damage asset values and increase operating costs due to events such as water and power outages, road disruptions, equipment damage, mandatory shutdowns and supply chain disruptions.

Measures of Livzon:

i. Formulated documents and systems such as the Emergency Plan for Extreme Weather, Contingency Command Plans for Typhoon Prevention, Contingency Plans for Production Safety Accidents and Abnormal Weather Management Regulations; established contingency command system, clarified personnel and duties in the emergency organizational structure so as to respond swiftly. Conduct safety inspection, dredge sewers, repair roofs, reinforce fences, install additional water barriers, strengthen circuit leakage protection, prepare flood prevention supplies and emergency personnel, and improve firefighting and fire extinguishing capabilities in advance of extreme events, so as to minimize the casualties and property losses caused by extreme weathers.

10.5 ADDRESSING CLIMATE CHANGE *(Continued)*

(2) Physical Risks *(Continued)*

A. Acute Risk *(Continued)*

Measures of Livzon: *(Continued)*

ii. Pay close attention to weather changes, and allocate protective devices and emergency equipment for climate disasters in advance.

iii. Shut down promptly as needed when extreme events occur, prohibit outdoor operations, to put the safety of personnel first and ensure complete emergency supplies. After the extreme events, start the damage assessment work in time to learn from the experience, reduce the loss and speed up the restoration of production.

iv. Reduce outdoor operations in hot weather, and prepare medicine for heatstroke prevention in summer; plan in advance the arrangement of off-peak power use; conduct emergency drills for heat stroke and other medical emergencies due to high temperature.

B. Chronic Risk

As a result of long-term physical environmental changes due to global climate change, the Group's certain production bases may be exposed to chronic risks, including air humidity (resulting in moldy plants, accelerated aging of equipment and moisture in raw and auxiliary materials), employee health risks (such as sandstorms), water shortages and air pollution, which will likely result in increased capital costs, decreased production capacity and early retirement of assets.

Measures of Livzon:

For air humidity, utilize anti-fungal coatings, install ventilation facilities, and provide dehumidification devices in the plants; enhance the airtightness of the plants, close and ventilate the storage spaces, and increase the frequency of cleaning and disinfection; properly conduct annual health check-ups for employees; develop a water resources management and appraisal system, reduce use of fresh water and increase reuse of wastewater; and adopt an air conditioning cleaning system with optimized filtration.

10.6 BIODIVERSITY PROTECTION

In order to protect biodiversity, in accordance with the Law of the PRC on the Protection of Wild Animals, the Regulations of the PRC on the Protection of Wild Plants, the Regulations on Protection of Wild Medicinal Resources and the Convention on Biological Diversity of the United Nations and other relevant laws and regulations and international conventions and according to the requirements for various work on biodiversity protection, the Group has developed rationally while protecting medicinal plant resources through self-construction and joint construction of medicinal material bases. The Group has focused on resource assessment and sustainable utilization, so as to ensure the healthy and orderly development of the traditional Chinese medicine industry. Meanwhile, we comply with the Forestry Law of the PRC, the Regulations on the Implementation of the Forestry Law of the PRC, the Regulations on Restoring Farmland to Forest, the Measures for the Administration of Regenerative Felling of Forests and the Water Law of the PRC and other relevant laws and regulations to manage the natural resources and raw materials in the supply chain in a sustainable and dynamic manner, and protect natural resources and maintain the diversity of the ecosystem.

- **Guaranteeing the source of raw materials for genuineness and quality:** Through order-based procurement from producing areas of genuine medicinal materials, strict raw material quality audit, measures such as a model of self-construction + joint construction of medicinal material bases, and a procurement quality management system, we guarantee from the source that all medicinal raw materials are sourced in a legal and compliant way and in good quality. We also prevent from the source any flow of traditional Chinese medicinal materials procured from unknown sources into the production link. To a certain extent, we have suppressed excessive and exploitative farming and cultivation in the production of traditional Chinese medicinal materials.

- **Constructing medicinal material plantation bases and protecting germplasm and germplasm resources:** Through the construction of demonstration bases for medicinal materials, the development and promotion of methods and standards for medicinal material plantation and processing in producing areas, and introduction of a model of joint construction of bases, among other methods, we have been vigorously promoting the construction of demonstration bases for the cultivation of traditional Chinese medicinal materials, and have built medicinal material plantation bases in Shanxi, Shaanxi, Gansu and other genuine producing areas based on the experience of traditional medicinal material plantation. Site locations for constructing the Group's medicinal material plantation bases are selected rationally in strict accordance with the suitable environment for medicinal material plantation and the historical plantation experience. By enterprise-university-research institution cooperation, self-construction of seedling experimental areas and strict control over the germplasm resource and seedling quality of medicinal materials, we are preventing from the technical source the weakening of species' germplasm resources and varieties and the invasion of alien species. Datong Livzon Qiyuan Medicine Co., Ltd.（大同麗珠芪源藥材有限公司）("Datong Livzon"), the Company's subsidiary, as a genuine producing area, has obtained the organic product certification, the certification of the cultivation base of genuine high-quality medicinal materials (Astragalus root), and 5A-grade astragalus root cultivation base (artificially sown and naturally grown) certification for its Astragalus root products cultivated in simulated wild conditions. Longxi Livzon Shenyuan Medicine Co., Ltd.（隴西麗珠參源藥材有限公司）("Longxi Livzon"), the Company's subsidiary, has obtained the certification of organic conversion and the demonstration base of genuine high-quality medicinal materials (Codonopsis pilosula) certification.

10.6 BIODIVERSITY PROTECTION *(Continued)*

- **Promoting sustainable use of raw materials:** With the technical support from the R&D platforms of medicinal material plantation enterprises under the traditional Chinese medicine business department of the Company and the center for medicinal material resources of our traditional Chinese medicine research institute, we are actively conducting research on the germplasm resources and cultivation technology of medicinal materials, methods and standards for processing in producing areas, full-process information tracing, and comprehensive utilization and development of medicinal material resources, to ensure the quality of medicinal materials and make the most of medicinal material resources, maintain the ecological balance of medicinal materials, and prevent the loss, degradation and overexploitation of ecological resources, thereby ensuring the sustainable use of traditional Chinese medicinal resources and protecting biodiversity.

Case: Protecting the ecological system of the astragalus root and codonopsis pilosula cultivation bases

In order to protect the original ecological environment of the astragalus root bases, minimize the impact on the environment, maintain and promote the sound cycle of natural ecosystem in the astragalus root GAP bases, Datong Livzon, referring to the Regulations on Protection of Wild Medicinal Resources of the PRC, formulated the "Implementation Plan for the Protection and Sustainable Development of Wild Resources and Ecological Environment of Astragalus Root GAP Bases". Datong Livzon's astragalus root GAP bases cover a planting area of approximately 33,000 mu and adopt the wild cultivation model. Astragalus root is grown in a semi-wild ecological environment throughout the growing period, and is cultivated by hand. Without watering, fertilizing, or pesticides, manual operation is utilized whereas large machinery is rarely used, which protects the ecological environment to a greater extent.

In addition, to prevent soil erosion, the bases are artificially terraced and cultivated to reduce rainwater erosion during construction; only manual weeding is carried out in the field management. The grassland is removed in the principle of "removing large and leaving small" to protect the wild resources and the original ecological environment of the bases and thereby preserving biodiversity.

10.6 BIODIVERSITY PROTECTION *(Continued)*

Case: Reducing land use

Each enterprise of the Group has planted a certain amount of trees and lawns in the open space of the plants and arranged staff to carry out daily maintenance. The new P06 workshop of Pharmaceutical Factory adopts a "sponge city" design to increase the green area; some of the parking lots in the plant area adopt grid-mode parking lots and fill the brick holes with humus mixed with soil to help with weed growth; non-hardened paving is used for the landscape roads in the plant area, and the use of hardened materials is minimized to protect the ecological system of the ground and the natural function of air and water permeability.

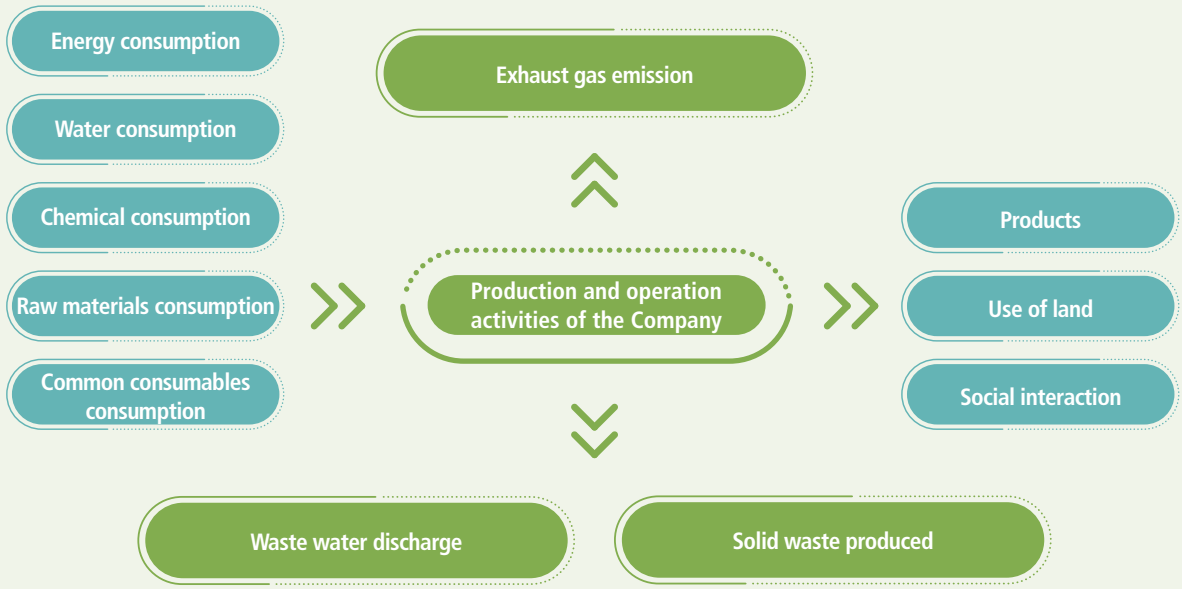
10.7 ENVIRONMENTAL RISK MANAGEMENT

In order to further strengthen the management and control of environmental risk, the Company has formulated internal management systems including the Identification and Assessment Requirements of Environmental Factors and the Guidelines for Management of EHS Changes. Together with the requirements of ISO 14001 Environmental Management System, we regularly identify and review the environmental risk factors. By regulating the daily environmental management, continuously upgrading facilities and equipment used for environmental protection, strengthening emergency response capabilities for environmental incidents, Livzon continuously improves its environmental performance.

10.7 ENVIRONMENTAL RISK MANAGEMENT *(Continued)*

- **Identification of major environmental factors:** by identifying various environmental factors in production and operation activities and evaluating the risk levels with rating methods, the Company formed a list of major environmental factors, and developed corresponding management plan and control measures to reduce environmental risks and prevent environmental risk incidents.

Environmental Factors Identification Flow Chart



10.7 ENVIRONMENTAL RISK MANAGEMENT *(Continued)*

Specific measures on risk management and control:

- **Conducting regular environment monitoring:** According to the relevant requirements of the Regulations on the Administration of Pollutant Discharge Permits, the Self-monitoring Technology Guidelines for Pollution Sources – General Rule and the Self-monitoring Technical Guidelines for Pollutant Discharging Units on Chemical Synthesis Pharmaceutical Industry, each manufacturing enterprises of Livzon conducts regular environment monitoring based on their actual conditions to effectively monitor their emission of pollutants and discloses environmental monitoring result in a timely manner and is subject to the examination of administrative authorities and supervision of the public.

- **Continuous guarantee of investment in environmental protection:** Each manufacturing enterprises of Livzon regularly maintains environmental protection facilities to ensure its stable operation. In addition, in order to further enhance environmental performance, Livzon continues to invest in environmental protection by upgrading treatment facilities of waste gas and wastewater and storage facilities of solid waste. In 2021, the Group's total investment in environmental protection was approximately RMB79.7504 million.

- **Strengthening emergency response capabilities:** Each manufacturing enterprises of Livzon has set up an emergency response leading team and working team, formulated the Contingency Plan for Environmental Emergency based on its actual environmental risks, and regularly conducts professional training and emergency response drills in order to ensure that the emergency measures can be quickly initiated and executed in the event of environmental incidents and to improve the emergency response capabilities for crisis events.

11 SOCIAL CONTRIBUTIONS

11 SOCIAL CONTRIBUTIONS

Bearing in mind its public welfare mission, Livzon, in accordance with external regulations and internal rules such as the Management System for Charitable Donation, has consistently fulfilled its social obligations by utilizing its own resources and strengths. In 2021, the Group continued to increase efforts in public welfare activities and proactively carries out public welfare programs. By helping promote rural revitalization, caring for people with chronic diseases, assisting the industries, supporting education, and actively participating in anti-pandemic and disaster-relief actions, the Group made more contributions to a healthy China and the realization of common prosperity. During the Year, the expenditure of charitable donation of the Group amounted to RMB19.45 million, including funds donation of RMB13.50 million and materials donation worthy of RMB5.95 million.

Some cases of Livzon's charitable donations in 2021

Date of donation	Donation recipients	Amount/items donated
January 2021	Education Development Charity Association of Jinwan District of Zhuhai City	Cash of RMB1 million
June 2021	Red Cross Society of Jinwan District of Zhuhai City	Cash of RMB500,000
July 2021	Chinese Red Cross Foundation	Cash of RMB5 million (for flood relief in Henan)
July 2021	Qingyuan Charity Federation	Cash of RMB200,000 (for poverty alleviation and relief)
August 2021	Red Cross Society of Xinzheng City in Henan Province	Drugs worth approximately RMB150,000 in total (for flood relief in Henan)
August 2021	Shenyang Pharmaceutical University	Cash of RMB100,000 (Livzon Scholarship)
August 2021	Sichuan University Education Foundation	Cash of RMB100,000 (Livzon Scholarship)

11 SOCIAL CONTRIBUTIONS

Some cases of Livzon's charitable donations in 2021 *(Continued)*

Date of donation	Donation recipients	Amount/items donated
August 2021	School of Basic Medicine and Clinical Pharmacy of China Pharmaceutical University	Cash of RMB100,000 (Livzon Scholarship)
September 2021	China Primary Health Care Foundation	Cash of RMB193,400
September 2021	Nanjing China Pharmaceutical University Education Development Foundation	Cash of RMB150,000
October 2021	Chinese Red Cross Foundation	Drugs worth approximately RMB5 million in total (for flood relief in Hunan)
October 2021	Red Cross Society of Zunyi City	Testing equipment worth approximately RMB1.50 million in total (for COVID-19 pandemic prevention and control in Zunyi City)
October 2021	Patients with chronic diseases in financial difficulties in Macun District of Jiaozuo City in Henan Province	Drugs worth RMB1 million in total (public welfare program for chronic diseases with 5 drugs for chronic diseases)
October 2021	Patients with chronic diseases in financial difficulties in Huangshan District of Huangshan City in Anhui Province	Drugs worth RMB1 million in total (public welfare program for chronic diseases with 5 drugs for chronic diseases)
November 2021	Patients with chronic diseases in financial difficulties in Suining County in Hunan Province	Drugs worth RMB1 million in total (public welfare program for chronic diseases with 5 drugs for chronic diseases)
November 2021	Patients with chronic diseases in financial difficulties in Fenyi County in Jiangxi Province	Drugs worth RMB1 million in total (public welfare program for chronic diseases with 5 drugs for chronic diseases)
November 2021	Ministry of Health of Malaysia	ICU beds worth US$245,600 in total
December 2021	China Primary Health Care Foundation	Cash of RMB250,000
December 2021	Peking University Education Foundation	Cash of RMB5 million (Development Fund of Medical Education)
December 2021	Guiyang City Public Health Treatment Center, the Fourth People's Hospital of Zunyi City	Medical devices worth RMB1 million in total
December 2021	Zhongnanshan Medical Foundation of Guangdong Province	First-aid kits worth approximately RMB150,000 in total
December 2021	Union Hospital of Tongji Medical College, Huazhong University of Science and Technology	700 COVID-19 protective suites worth RMB140,000 in total

11 SOCIAL CONTRIBUTIONS

11.1 CHRONIC DISEASES CARE AND RURAL REVITALIZATION

In active response to the national rural revitalization strategy, Livzon and its controlling shareholder, Joincare Pharmaceutical Industry Group Co., Ltd. ("Joincare"), have leveraged industrial strengths to continuously promote the "Public Welfare Program for Prevention and Treatment of Chronic Diseases" by donating medicines to patients with chronic diseases in financial difficulties, providing timely medical assistance to low-income people, and relieving the medical burden of patients' families in financial difficulties.

Since late 2018 onwards, the "Public Welfare Program for Prevention and Treatment of Chronic Diseases" was successfully carried out successively in regions including Chaotian District of Guangyuan City in Sichuan Province, Songpan County of Ngawa Tibetan and Qiang Autonomous Prefecture in Sichuan Province, Jiange County and Pingwu County of Sichuan Province, Hunyuan County, Guangling County and Lingqiu County of Datong City in Shanxi Province, Dongxiang County and Tianzhu County in Gansu Province, Xianghai National Nature Reserve in Jilin Province, Chayu County in Tibet Autonomous Region, Macun District of Jiaozuo City in Henan Province, Huangshan District of Huangshan City in Anhui Province, Suining County in Hunan Province, and Fenyi County in Jiangxi Province. We have included more regions in our public welfare program of chronic diseases and will continue our efforts in promoting rural revitalization and contributing to the national strategic goal of achieving common prosperity.

As at the end of the Reporting Period, the Company has donated drugs worth RMB1 million to poor patients in each of the abovementioned regions for the treatment of common chronic diseases, such as hypertension, hyperlipidemia, cardiovascular and cerebrovascular diseases and gastric disease. We aimed to reduce the expenses in chronic disease treatment in the said regions and relieve the medical burden of patients' families in financial difficulties. This long-term drug donation program included donation of 5 kinds of drugs, specifically, Pravastatin Capsules(普伐他汀膠囊), Isosorbide Bononitrate Tablets(單硝酸異山梨酯片), Amlodipine Besylate Capsules(苯磺酸氨氯地平膠囊), Valsartan Capsules(纈沙坦膠囊), and Bismuth Potassium Citrate Tablets(枸櫞酸鉍鉀片).

As at the end of the Reporting Period, the Group has entered into a total of 16 agreements in relation to the Public Welfare Program for Prevention and Treatment of Chronic Diseases (among which, with 14 remote regions in need of support and 1 national natural reserve area), and has helped more than 5,000 registered people in need.

11.1 CHRONIC DISEASES CARE AND RURAL REVITALIZATION *(Continued)*

Livzon and Joincare donated drugs worth RMB1 million to Suining County in Hunan Province

Livzon and Joincare donated drugs worth RMB1 million to Huangshan District in Anhui Province

Livzon and Joincare donated drugs worth RMB1 million to Fenyi County in Jiangxi Province

11 SOCIAL CONTRIBUTIONS

11.2 INDUSTRIAL ASSISTANCE

To fully implement the spirit of "consolidating and expanding the achievements in poverty alleviation and comprehensively promoting rural revitalization", as instructed by the central government, Livzon has formulated and implemented the plan of "Astragalus Root (黃芪) Industry Revitalization". Adopting the model of "Company + Base" and "Company + Specialty Cooperative", we have boosted the local astragalus root cultivation and processing business and accelerated the construction of the "Ecological TCM Base". We have also found new ways to enrich people and built a sustainable astragalus root-based industry adapted to local conditions.

In 2021, Datong Livzon Qiyuan Medicine Co., Ltd. (大同麗珠芪源藥材有限公司) ("Datong Livzon"), a subsidiary of the Company, employed 95 local workers for the self-built base and jointly-built base, including 20 impoverished people, increasing the annual per-capita income by over RMB5,000; meanwhile, we purchased 132.6 tons of fresh local astragalus roots, in an effort to promote the development of the local astragalus root industry. In March 2022, Datong Livzon entered into the "Agreement of Joint Construction by Village and Enterprise" with the village committee of Mazhuang Village in Guan'er Township, Hunyuan County of Datong City in Shanxi Province to carry out joint construction for poverty alleviation at the primary processing stage in the production place of fresh astragalus roots and to enable poor villagers to work in places close to their homes by various methods, which increased the income of both the village and the enterprise and benefitted the poverty alleviation by supporting local astragalus root industry.

In addition, Livzon established a village-enterprise cooperative relationship with Guiyuanlin Village in Yuanhou Town, Chishui City, Zunyi City, Guizhou Province. During the Reporting Period, we made a one-off donation of RMB100,000. We refined our support measures with respect to enhancing industrial cooperation, promoting labor export, strengthening economic development capacity and supporting education, consolidating the achievements of poverty alleviation in conjunction with rural revitalization.

Leaders of Datong Livzon visit people in need


Livzon's industrial cultivation base of astragalus roots in Shanxi

11 SOCIAL CONTRIBUTIONS

11.3 EDUCATION SUPPORT

Education is the foundation of a strong nation and the cornerstone of national vitality and social progress. Livzon has always paid close attention to the working and living conditions of students and teachers in need so as to respond to the national call for supporting high-quality education development. During the Year, we continued to participate in education support. We donated RMB1 million to support the establishment of the Education Development Charity Association of Jinwan District of Zhuhai City. We also made donations to the Peking University Education Foundation, Nanjing China Pharmaceutical University Education Development Foundation, Shenyang Pharmaceutical University, Sichuan University Education Foundation, etc.

Case: Supporting the establishment of the Education Development Charity Association of Jinwan District of Zhuhai City

In January 2021, we donated RMB1 million to support the establishment of the Education Development Charity Association of Jinwan District of Zhuhai City and were elected as the vice president. The charity focuses on providing financial assistance to students in need to complete their studies, assisting teachers in need, and rewarding teachers and students who have made outstanding contributions to teaching and scientific research. During the Reporting Period, we subsidized 42 students in need and awarded 54 outstanding students through the charity, and provided support to 19 outstanding societies and characteristic education programs.

Case: Signed a donation agreement with Peking University Education Foundation

In 2021, the Group signed a donation agreement with Peking University Education Foundation, promising to donate RMB5 million every year for 3 consecutive years from 2021 to 2023 (totaling RMB15 million), and established the "Livzon Pharmaceutical medical development program under the Peking University Health Science Center" in order to support the school's development in aspects of management construction, technology innovation, education, talent training, academic communication, etc.

11 SOCIAL CONTRIBUTIONS

11.4 ANTI-PANDEMIC AND DISASTER-RELIEF

In light of the global pandemic that continues to be severe, Livzon remains concerned about the health of friends around the globe and is willing to provide immediate assistance. In November 2021, we donated 25 sets of ICU beds worth US$245,600 in total to the Ministry of Health of Malaysia.

In July 2021, a series of disasters such as severe waterlogging appeared in many places in Henan Province as a result of the extreme and continuous heavy rainfall rarely seen in the history of Henan Province, China. Together with Joincare, Livzon rapidly provided aid to Henan Province, donating cash of RMB10 million and drugs worth RMB10 million through the Chinese Red Cross Foundation, which was used to purchase flood control supplies, daily essentials, power supply equipment for hospitals, etc. We assisted the government and different sectors of society with efforts related to protection of the safety of people in Henan, purchase of emergency relief supplies, and post-disaster reconstruction.

Handover ceremony of Livzon's donation for flood relief in Henan

Livzon firmly believes that fulfilling social responsibilities makes a company more competitive and vital. We will continue our efforts in social and public welfare, spreading the message of warmth and love.

12 APPENDIX

12 APPENDIX

12.1 LIST OF POLICIES

ESG areas	Major laws and regulations observed	Some internal policies of the Company
A1. Emissions	Environmental Protection Law of the PRC Law on the Prevention and Control of Environmental Pollution by Solid Waste of the PRC (Revised) Water Pollution Prevention and Control Law of the PRC Prevention and Control of Atmospheric Pollution Law of the PRC Environmental Protection Tax Law of the PRC Soil Pollution Prevention and Control Law of the PRC Regulations on the Prevention and Control of Environmental Pollution by Solid Waste of Guangdong Province National Catalogue of Hazardous Wastes (Revised) Administrative Regulations for Urban Construction Waste Environmental Impact Assessment Law of the PRC Administrative Rules of Environmental Protection for Construction Projects Technical Specifications of Collection, Storage and Transport for Hazardous Waste Administrative Measures for Hazardous Waste Transfer Standards for Pollution Control on the Storage and Disposal Site for General Industrial Solid Wastes Regulations on the Administration of Pollutant Discharge Permits Guidelines for the Identification of Potential Soil Pollution Hazards in Key Regulatory Units (Interim)	Identification and Assessment Requirements of Environmental Factors Procedures for Air Emission Management Procedures for Noise Emission Management Procedures for Solid Waste Management Procedures for Hazardous Chemicals Management Procedures for Wastewater Management Soil Pollution Potential Hazards Inspection System Guidelines for Management of EHS Changes "Three-waste" and Noise Management System
A2. Use of Resources	Energy Conservation Law of the PRC Recycling Economy Promotion Law of the PRC	Procedures for Resources Management Procedures for Energy Management Energy Management System

12 APPENDIX

12.1 LIST OF POLICIES *(Continued)*

ESG areas	Major laws and regulations observed	Some internal policies of the Company
A3. The Environment and Natural Resources	Environmental Protection Law of the PRC Energy Conservation Law of the PRC Forestry Law of the PRC Regulations on the Implementation of the Forestry Law of the PRC Regulations on Restoring Farmland to Forest Measures for the Administration of Regenerative Felling of Forests Water Law of the PRC	General Requirements of EHS Management System Environmental Hygiene Management Rules for Factory Area Soil Pollution Potential Hazards Inspection System Contingency Plan for Environmental Emergency EHS "Three Simultaneous" Management System for Construction Projects
B1. Employment	Labor Law of the PRC Labor Contract Law of the PRC Labor Right Protection Law Social Insurance Law of the PRC Provisions on the Prohibition of Using Child Labor Tax Law of the PRC Individual Income Tax Law of the PRC	Labor Employment Management System Recruitment Management System Employee Retirement Reward Scheme Code of Conduct of Employees Board Diversity Policy Remuneration Management System Administrative Measures for Remuneration Adjustment Provisions on the Base Salary of Fresh Graduates Administrative Measures for Job Grades Code of Labor Employment and Ethical Conduct Administrative Measures for Technical Sequence

12 APPENDIX

12.1 LIST OF POLICIES *(Continued)*

ESG areas	Major laws and regulations observed	Some internal policies of the Company
B2. Health and Safety	Labor Law of the PRC Labor Contract Law of the PRC Social Insurance Law of the PRC Production Safety Law of the PRC Law of the PRC on the Prevention and Control of Occupational Diseases Fire Prevention Law of the PRC	General Requirements of EHS Management System Administrative Measures for EHS Accidents Regular EHS Meeting and Flight Check Management System Administrative Measures for EHS Information and Communication Administrative Procedures for Internal EHS Audit Hazard Sources Identification and Risks and Opportunities Evaluation Requirements Regulations on Safe Production Penalties Safe Production Training Management System Safe Production Responsibility Management System Administrative Measures for Contingency Plans for Emergency Administrative Procedures for Occupational Health Contingency Plans for Production Safety Accidents Contingency Command Plans for Typhoon Prevention EHS Culture of Livzon Group Management System for Grading and Controlling Safety Risks Management System for Investigating and Managing Accidental Hazards Contractor Safety Management System EHS "Three Simultaneous" Management System for Construction Projects

12 APPENDIX

12.1 LIST OF POLICIES *(Continued)*

ESG areas	Major laws and regulations observed	Some internal policies of the Company
B3. Development and Training	Labor Law of the PRC Labor Contract Law of the PRC Social Insurance Law of the PRC	Training Management System Safe Production Training Management System Rules of the Training of Doctoral Candidate (or Master Degree Candidate in Management) for Permanent Employees Administrative Measures for Administrative and Technical Sequences Administrative Measures for the Performance of Functional Head Offices Quarterly Assessment and Incentive Plan for R&D Units (Interim)
B4. Labor Standards	Labor Law of the PRC Labor Contract Law of the PRC Social Insurance Law of the PRC	Labor Employment Management System Recruitment Management System Code of Labor Employment and Ethical Conduct

12 APPENDIX

12.1 LIST OF POLICIES *(Continued)*

ESG areas	Major laws and regulations observed	Some internal policies of the Company
B5. Supply Chain Management	Company Law of the PRC E-commerce Law of the PRC Tendering and Bidding Law of the PRC Implementation Guide for Traditional Chinese Medicine Traceability System Traditional Chinese Medicine Traceability Information Requirements – Cultivation of Traditional Chinese Medicinal Materials Traditional Chinese Medicine Traceability Information Requirements – Production of Traditional Chinese Medicine Tablets	Administrative Procedures for Supplier Standard Administrative Procedures for Supplier Audit Code of Practice for On-site Supplier Quality Audit Catalogue of Qualified Material Suppliers Catalogue of Shortlisted Material Suppliers Administrative Measures for Material Procurement Material Management System Administrative Measures for Centralized Procurement of Bulk and General-purpose Materials Implementation Rules for Bidding for Construction Projects Implementation Rules for Bid Evaluation of Centralized Procurement of Construction Projects Operating Guidelines for Tender Announcement of Materials and Service Projects on the Official Website Operating Strategies for Tender Announcement of Materials Operating Guidelines for Internal Mall Procurement Rules Applicable to External Sourcing of Non-Productive Materials and New Product Materials Rules on Integrity in Bid Evaluation Administrative Measures for Joint Audit of Suppliers Administrative Measures for Supplier Entry Administrative Measures for Supplier Classification, Maintenance, Risk Assessment and Annual Appraisal Administrative Measures for Electronic Procurement Supplier Risk Management System Administrative Procedures for Supplier Energy Conservation and Emission Reduction Supplier EHS Audit Management Procedures Supplier Commitment for Operating with Integrity

12 APPENDIX

12.1 LIST OF POLICIES *(Continued)*

ESG areas	Major laws and regulations observed	Some internal policies of the Company
B6. Product Responsibility	Patent Law of the PRC Trademark Law of the PRC Copyright Law of the PRC Drug Administration Law of the PRC Good Manufacturing Practice (GMP) Good Laboratory Practice (GLP) Good Clinical Practice (GCP) Good Supply Practice (GSP) Good Pharmacovigilance Practice (GVP) Pharmacopoeia of the PRC Administrative Measures for Drug Registration Administrative Measures for the Supervision on Pharmaceutical Production Administrative Measures for Drug Recalls Regulations on Protection of Traditional Chinese Medicines Advertising Law of the PRC Implementation Rules on the Drug Administration Law of the PRC Provisions for Drug Package Inserts and Labels Provisions for the Change Management of Post-approval Drugs (Interim) General Data Protection Regulations Administrative Measures for Drug Inspection (Interim)	Procedures for Establishment of Independent Research and Development Projects Quality Management System Pharmacovigilance Management System Procedures for Drug Inspection and Acceptance Administrative System of Quality Enquiries and Quality Complaints User Complaint Management Procedures Unqualified Product Management System Adverse Drug Reaction Reporting and Monitoring Management System Returned Product Management System Drug Traceability Management System Ten Prohibitions on QC Laboratory Management Administrative Measures for Quality Incidents Contingency Handling Procedures for Sampling Inspection Measures for Cross-examinations among R&D Enterprises Measures for Cross-examinations among Drug Preparations Manufacturing Enterprises Management System for Marketing Authorization Holder Administrative Procedures for Quality Internal Audit Administrative Procedures for Quality Complaints Administrative Procedures for Quality Information

12 APPENDIX

12.1 LIST OF POLICIES *(Continued)*

ESG areas	Major laws and regulations observed	Some internal policies of the Company
	Vaccine Administration Law of the PRC	Management Rules for Quality Authorizers
	Personal Information Protection Law of the PRC	Administrative Procedures for TCM Pre-treatment and Extraction Workshop Shared among Enterprises within Livzon Group
	Law of the PRC on Traditional Chinese Medicine	Administrative Measures for Clinical Audit and Procedure
	Technical Guideline for the Revision of Safety Information Items in Package Inserts of Marketed Traditional Chinese Medicines (Interim)	Administrative Procedures for Quality Risks
	Technical Guidelines for the Compilation of Information Related to Children's Drug Use in the Instructions of Chemical Drugs and Therapeutic Biological Products (Interim)	Operating Procedures for Product Recalls
	Regulations on the Supervision and Administration of Medical Devices	Contingency Plans for Material Product Safety Incident
	Regulations on the Administration of Veterinary Drugs	Administrative Measures for Joint Audit on Commissioned Research Institution
	Good Manufacturing Practice for Veterinary Drugs	Administrative Measures for Joint Audit of Material Supplier
	Good Clinical Practices for Medical Devices	Management Procedures for Design, Audit, Purchasing and Use of Package Inserts and Labels
	Administrative Regulations on the Package Inserts and Labels of Medical Devices	Standard Management Procedures for Packaging, Labels and Package Inserts
	Administrative Measures for Veterinary Drug Package Inserts and Labels	Management Procedures for Design, Review and Printing of Product Packaging
	Chinese Veterinary Pharmacopoeia	Administrative System of Quality Enquiry
	Measures for the Registration of Veterinary Drugs	Administrative System of After-sale Quality Complaint
	Administrative Measures for Medical Advertisements	Procedures for Adverse Event Monitoring and Control
	Measures for Drug Advertisement Review	Code of Conduct for Interaction with Healthcare Professionals
	Implementation Measures for Early Settlement Mechanism of Drug Patent Disputes (Interim)	Administrative Regulations on Meetings Related to Healthcare Professionals
	Provisions of the Supreme People's Court on Several Issues Concerning the Application of Law in the Trial of Civil Cases Involving Patent Disputes Related to Drugs of Which Applications for Registration are Filed	Responsible Marketing Policy of the Sales Center of API Business Department
		Workflow for Protection of Drug Clinical Trial Data
		Administrative Procedures for Printing and Packaging Materials
		Patent Workflow Guidelines

12 APPENDIX

12.1 LIST OF POLICIES *(Continued)*

ESG areas	Major laws and regulations observed	Some internal policies of the Company
B7. Anti-corruption	Criminal Law of the PRC Anti-Unfair Competition Law of the PRC Interim Provisions on Banning Commercial Bribery Notice on Serious Investigation and Punishment and Proactive Prevention of Duty Crime in Food and Drug Supervision Audit Law of the PRC Regulations of the Audit Office on Internal Audit Work Labor Law of the PRC Labor Contract Law of the PRC Company Law of the PRC Basic Standards of Internal Control of Enterprises Contract Law of the PRC Corporate Accounting Standards and Application Guideline	Interim Provisions on Anti-Fraud Anti-Corruption and Anti-Commercial Bribery Regulations Code of Conduct for Sales Personnel of Livzon Group Administrative Measures for Construction Project Establishment Administrative Measures for Construction Project Settlement Implementation Rules for Bid Evaluation of Centralized Procurement of Construction Projects Implementation Rules for Bidding for Construction Projects Material Management System Administrative Measures for Material Procurement Administrative Measures for Approval of Allocation and Written-off of Idle Materials (Interim) Administrative Measures for Centralized Procurement of Bulk and General-purpose Materials Professional Code of Conduct for Employees Internal Audit Work System Administrative Measures for Whistleblowing and Complaint Corporate Internal Control Guidelines Code of Professional Ethics for Internal Auditors Staff Commitment for Anti-Corruption and Anti-Commercial Bribery Supplier Commitment for Operating with Integrity Administrative Regulations on Staff Integrity
B8. Community Investment	Charity Law of the PRC	Management System for Charitable Donation

12 APPENDIX

12.2 DATA LIST OF KEY PERFORMANCE INDICATORS

ESG Indicator	Unit	2019	2020	2021
A Environmental[1]				
A1 Emissions[2]				
A1.1 Types of emissions and respective emission data				
Industrial wastewater	tonne	4,368,313.4	4,285,515.0	4,222,683.5
Chemical Oxygen Demand (COD_{Cr})	tonne	343.2	338.5	269.5
Ammonia nitrogen	tonne	19.2	13.0	14.9
Volatile organic compounds (VOCs)	tonne	Not disclosed	Not disclosed	46.4
Nitrogen oxides (NO_X)	tonne	141.1	86.2	135.7
Sulphur dioxide (SO_2)	tonne	76.3	47.8	45.4
Particulate matter	tonne	Not disclosed	Not disclosed	22.9
A1.2 Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions and intensity				
Direct greenhouse gas emissions (Scope 1)[3]	CO_2 equivalent (in tonnes)	183,982.0	30,427.8	193,239.7
Indirect greenhouse gas emissions (Scope 2)[4]	CO_2 equivalent (in tonnes)	407,325.5	543,952.5	342,591.8
Total greenhouse gas emissions	CO_2 equivalent (in tonnes)	591,307.5	574,380.3	535,831.5
Intensity of greenhouse gas emissions[5]	CO_2 equivalent (in tonnes)/RMB10,000	0.6	0.5	0.4

1 Environmental data disclosure covers all manufacturing enterprises of Livzon.

2 Disclosure of major pollutants/emissions and related emission data according to the production characteristics of enterprises.

3 Scope 1 greenhouse gas ("GHG") emissions are mainly derived from direct GHG emissions from the consumption of fossil fuels in the company's operations/production processes (e.g. gasoline, diesel, natural gas, etc.), and the formula used is: CO_2 emissions from fossil fuel combustion = fuel consumption × low level heat generation × carbon content per unit of calorific value × fuel carbon oxidation rate × 44/12.

4 Scope 2 GHG emissions are mainly derived from indirect GHG emissions from purchased electricity and steam consumed by the company's operations/production processes, calculated with reference to the document "Appendix 2: Reporting Guidance on Environmental KPIs" of the Hong Kong Stock Exchange. Among which, the power emission factor for 2019-2020 adopts the weighted average of the power marginal emission factor in the "2017 Annual Emission Reduction Project China Regional Grid Baseline Emission Factor (2017年度減排項目中國區域電網基準線排放因子)", and the power emission factor for 2021 adopts the grid emission factor 0.5810 tCO_2/MWh in the "Corporate Greenhouse Gas Emission Accounting Methodology and Reporting Guide for Power Generation Facilities (企業溫室氣體排放核算方法與報告指南發電設施)" (Huan Ban Qi Hou [2021] No. 9).

5 The intensity in 2020 and 2021 was both calculated based on RMB10,000 of output value, and the intensity in 2019 was calculated based on the RMB10,000 of operating income.

12 APPENDIX

12.2 DATA LIST OF KEY PERFORMANCE INDICATORS *(Continued)*

ESG Indicator	Unit	2019	2020	2021
A Environmental[1]				
A1 Emissions[2]				
A1.3 Total hazardous waste produced and intensity				
Total hazardous waste[6]	tonne	2,583.0	2,980.4	3,237.5
Of which: medical waste (HW02) and waste medicines (HW03)	tonne	1,564.5	1,826.9	1,789.2
Other hazardous waste	tonne	1,018.5	1,153.5	1,448.3
Hazardous waste intensity[5]	kg/RMB10,000	2.8	2.6	2.5
A1.4 Total non-hazardous waste produced and intensity				
Total non-hazardous waste[7]	tonne	99,881.5	55,990.2	118,154.8
Of which: non-hazardous waste (recyclable)	tonne	Not disclosed	Not disclosed	1,853.0
Non-hazardous waste (non-recyclable)	tonne	99,881.5	55,990.2	116,301.8
Non-hazardous waste intensity[5]	kg/RMB10,000	106.4	48.3	92.2

6 The data of total hazardous waste is derived from the disposal volume of hazardous waste of all manufacturing enterprises of Livzon.

7 The data of total non-hazardous waste is derived from the disposal volume of general industrial solid waste of all manufacturing enterprises of Livzon.

12.2 DATA LIST OF KEY PERFORMANCE INDICATORS *(Continued)*

ESG Indicator	Unit	2019	2020	2021
A Environmental[1]				
A2 Use of Resources				
A2.1 Direct and indirect energy consumption by type in total and intensity[8]				
Non-renewable fuel (direct)				
Gasoline	litre	365,628.3	278,223.1	284,665.6
Diesel	litre	362,836.3	356,192.6	328,065.6
Coal	tonne	72,714.2	4,336.5	86,291.0
Natural gas	10,000 cubic meters	1,111.5	917.9	598.6
Liquefied petroleum gas	tonne	Not disclosed	Not disclosed	7.9
Renewable energy (direct)				
Solar power (self-use)	kWh	Not disclosed	Not disclosed	692,280.0
Biomass fuel	tonne	6,466.0	0	14.4
Alcohol based liquid fuel	tonne	18.5	20.2	0.0
Purchase of energy (indirect)				
Purchased electricity	kWh	374,098,694.8	400,450,102.9	398,439,861.9
Purchased steam	tonne	284,016.2	666,196.9	376,140.5
Intensity of purchased electricity[5]	kWh/RMB10,000	398.6	345.6	311.1
Direct energy consumption[8]	MWh	Not disclosed	Not disclosed	572,945.5
Indirect energy consumption[8]	MWh	Not disclosed	Not disclosed	687,587.4
Total energy consumption	MWh	Not disclosed	Not disclosed	1,260,532.9
Intensity of total energy consumption[5]	MWh/RMB10,000	Not disclosed	Not disclosed	1.0

8 Direct energy consumption (unit: MWh) is derived from gasoline, diesel, coal, natural gas and other relevant direct energy consumption; indirect energy consumption (unit: MWh) is derived from purchased electricity and purchased steam, which were calculated by referring to the "General rules for calculation of the comprehensive energy consumption" (GB2589-2020).

12 APPENDIX

12.2 DATA LIST OF KEY PERFORMANCE INDICATORS *(Continued)*

ESG Indicator	Unit	2019	2020	2021
A Environmental[1]				
A2 Use of Resources				
A2.2 Water consumption in total and intensity				
Fresh water consumption	tonne	6,385,615.3	6,264,353.1	6,096,512.8
Recycled water volume	tonne	Not disclosed	Not disclosed	2,400.0
Intensity of water consumption[5] (fresh water)	tonne/RMB10,000	6.8	5.4	4.8
A2.5 Total packaging material used for finished products and with reference to per unit produced				
Paper packaging material	tonne	3,095.7	3,628.1	3,791.5
Other packaging material	tonne	Not disclosed	Not disclosed	6,370.8
Total packaging material used	tonne	3,095.7	3,628.1	10,162.3
Intensity of packaging material used[9]	kg/RMB10,000	3.3	3.1	7.9

9 The intensity in 2020 and 2021 was both calculated based on RMB10,000 of output value, and the intensity in 2019 was calculated based on the RMB10,000 of operating income; significant increase in volume and density was recorded in 2021 due to expansion of packaging material statistics to include all types of packaging material used in finished goods.

12 APPENDIX

12.2 DATA LIST OF KEY PERFORMANCE INDICATORS *(Continued)*

ESG Indicator		Unit	2019	2020	2021
B Social					
B1 Employment					
B1.1 Total workforce by gender, employment type, age group and geographical region					
Total number of employees		person	9,019	8,367	8,580
Gender	Male	person	4,796	4,392	4,492
	Female	person	4,223	3,975	4,088
Employee category	General manager level and above	person	Not disclosed	73	84
	Director level	person	Not disclosed	201	182
	Manager level	person	Not disclosed	900	850
	Other employees	person	Not disclosed	7,193	7,464
Age	30 and below	person	3,780	3,303	3,191
	31-49	person	4,838	4,651	4,931
	50 and above	person	401	413	458
Geographical region	Mainland China	person	9,012	8,353	8,569
	Hong Kong, Macau and Taiwan of China	person	1	4	2
	Overseas	person	6	10	9
B1.2 Employee turnover rate by gender, age group and geographical region[10]					
Total employee turnover rate[11]		%	16.81	14.80	19.95
Of which: Employee voluntary turnover rate[11]		%	16.81	14.80	11.11
Gender	Male	%	Not disclosed	14.59	20.73
	Female	%	Not disclosed	15.02	19.08
Age	30 and below	%	Not disclosed	19.22	21.66
	31-49	%	Not disclosed	12.60	18.44
	50 and above	%	Not disclosed	4.12	21.78
Geographical region	Mainland China	%	Not disclosed	14.79	19.91
	Hong Kong, Macau and Taiwan of China	%	Not disclosed	25.00	40.00
	Overseas	%	Not disclosed	20.00	37.50

10 Calculation of employee turnover rate: employees who left employment (in the specified category) / [total number of employees at the beginning of the period (in the specified category) + new recruits (in the specified category)].

11 In 2019 and 2020, the statistics coverage of Livzon's number of employee turnover was based on the number of permanent employees who leave employment voluntarily, and the employee voluntary turnover rate in 2021 calculated based thereon was 11.11%; in 2021, according to the Guide of the Hong Kong Stock Exchange, the Company optimised the statistics scope of employee turnover by including "the number of permanent and probationary employees who leave employment with the Group voluntarily or due to dismissal, retirement or death in service during the reporting period", resulting in a year-on-year increase in the total employee turnover rate of the Year.

12 APPENDIX

12.2 DATA LIST OF KEY PERFORMANCE INDICATORS *(Continued)*

ESG Indicator		Unit	2019	2020	2021
B Social					
B2 Health and Safety					
B2.1 Number and rate of work-related fatalities occurred in each of the past three years (2019-2021)					
Number of work-related fatalities		person	0	0	0
Rate of work-related fatalities		%	0	0	0
B2.2 Lost days due to work injury					
Lost days due to work injury		day	547	155	180
B3 Development and Training[12]					
B3.1 Percentage of employees trained by gender and employee category					
Percentage of total employees who took part in training		%	Not disclosed	99.56	100
Gender	Male	%	Not disclosed	52.12	52.35
	Female	%	Not disclosed	47.88	47.65
Employee category	General manager level and above	%	Not disclosed	0.35	0.98
	Director level	%	Not disclosed	1.94	2.12
	Manager level	%	Not disclosed	7.03	9.91
	Other employees	%	Not disclosed	90.67	86.99
B3.2 Average training hours completed per employee by gender and employee category					
Average training hours per employee		hour	65.0	42.3	76.2
Gender	Male	hour	70.0	42.4	76.2
	Female	hour	59.4	42.2	76.2
Employee category	General manager level and above	hour	Not disclosed	7.7	16.9
	Director level	hour	Not disclosed	23.9	52.6
	Manager level	hour	Not disclosed	23.4	56.2
	Other employees	hour	Not disclosed	45.5	79.7

12 The calculation methodology of the training data of B3 refers to the document "Appendix 3: Reporting Guidance on Social KPIs" of the Hong Kong Stock Exchange.

12 APPENDIX

12.2 DATA LIST OF KEY PERFORMANCE INDICATORS *(Continued)*

ESG Indicator		Unit	2019	2020	2021
B Social					
B5 Supply Chain Management					
B5.1 Number of suppliers by geographical region[13]					
Total number of suppliers		number	Not disclosed	Not disclosed	2,055
Geographical region	Percentage/number of Southern China	%/number	31%	36%	689
	Percentage/number of Eastern China	%/number	41%	38%	837
	Percentage/number of Northern China	%/number	9%	9%	196
	Percentage/number of Central China	%/number	8%	7%	148
	Percentage/number of Northeastern China	%/number	1%	1%	30
	Percentage/number of Northwestern China	%/number	7%	5%	99
	Percentage/number of Southwestern China	%/number	2%	2%	47
	Percentage/number of overseas	%/number	1%	1%	9
B6 Product Responsibility					
B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons					
Percentage of such products to total products sold and/or shipped		%	0	0	0
B6.2 Number of products and service related complaints received					
Product-related complaints		time	121	137	142
Medication queries		time	8	8	9

13 The number of suppliers by geographical region in 2019-2020 is expressed by percentage, while the number of suppliers by geographical region in 2021 is expressed by actual number.

12 APPENDIX

12.2 DATA LIST OF KEY PERFORMANCE INDICATORS *(Continued)*

ESG Indicator	Unit	2019	2020	2021
B Social				
B7 Anti-corruption				
B7.1 Number of concluded legal cases regarding corrupt practices brought against the Company or its employees during the reporting period and the outcomes of the cases				
Number of brought and concluded legal cases regarding corrupt practices	case	0	0	0
B7.3 Anti-corruption training provided to directors and staff				
Number of directors attended anti-corruption training	person	Not disclosed	Not disclosed	8
Total number of hours of anti-corruption training provided to directors	hour	Not disclosed	Not disclosed	11.5
Number of employees attended anti-corruption training	person	Not disclosed	Not disclosed	8,580
Total number of hours of anti-corruption training provided to employees	hour	Not disclosed	Not disclosed	35,375.9

12 APPENDIX

12.2 DATA LIST OF KEY PERFORMANCE INDICATORS *(Continued)*

ESG Indicator	Unit	2019	2020	2021
B Social				
B8 Community Investment				
B8.2 Resources contributed to the focus areas				
Funds donation	RMB10,000	154.2	714.6	1,349.8
Materials donation value	RMB10,000	220.4	366.4	595.4
Total charitable donation	RMB10,000	374.6	1,081.0	1,945.2
Of which: Investments in health	RMB10,000	Not disclosed	Not disclosed	154.4
Investments in education	RMB10,000	Not disclosed	Not disclosed	645.0
Investments in industry assistance	RMB10,000	Not disclosed	Not disclosed	240.2
Investments in anti-pandemic and disaster relief	RMB10,000	Not disclosed	Not disclosed	885.1
Investments in other areas	RMB10,000	Not disclosed	Not disclosed	20.5

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13 CONTENT INDEX OF "ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE" OF THE HONG KONG STOCK EXCHANGE

Subject Areas, Aspects, General Disclosures and Key Performance Indicators ("KPI")		Corresponding sections
A. Environmental		
Aspect A1: Emissions	General disclosure	10, 12.1, 12.2 (During the Reporting Period, the Group did not experience any environmental pollution incidents or environmental administrative penalties)
	KPI A1.1	10.3, 12.2
	KPI A1.2	10.4, 12.2
	KPI A1.3	10.3, 12.2
	KPI A1.4	10.3, 12.2
	KPI A1.5	10.2, 10.3, 10.4
	KPI A1.6	10.2, 10.3
Aspect A2: Use of Resources	General disclosure	10, 12.1, 12.2
	KPI A2.1	10.4, 12.2
	KPI A2.2	10.4, 12.2
	KPI A2.3	10.2, 10.4
	KPI A2.4	10.2, 10.4
	KPI A2.5	10.4, 12.2
Aspect A3: The Environment and Natural Resources	General disclosure	10, 12.1
	KPI A3.1	10
Aspect A4: Climate Change	General disclosure	10, 12.1
	KPI A4.1	10.5
B. Social		
Employment and Labour Practices		
Aspect B1: Employment	General disclosure	9, 12.1, 12.2
	KPI B1.1	9.1, 12.2
	KPI B1.2	9.1, 12.2
Aspect B2: Health and Safety	General disclosure	9, 12.1, 12.2
	KPI B2.1	12.2
	KPI B2.2	12.2
	KPI B2.3	9.4
Aspect B3: Development and Training	General disclosure	9, 12.1, 12.2
	KPI B3.1	12.2
	KPI B3.2	12.2

13 CONTENT INDEX OF "ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE" OF THE HONG KONG STOCK EXCHANGE

Subject Areas, Aspects, General Disclosures and Key Performance Indicators ("KPI")		Corresponding sections
B. Social		
Employment and Labour Practices		
Aspect B4: Labour Standards	General disclosure	9, 12.1 (During the Reporting Period, the Group has complied with laws and regulations that have significant impacts on labour employment of the Company, including the prevention of child labour, forced labour, etc.))
	KPI B4.1	9.1
	KPI B4.2	9.1
Operating Practices		
Aspect B5: Supply Chain Management	General disclosure	8, 12.1, 12.2
	KPI B5.1	8, 12.2
	KPI B5.2	8.1, 8.3
	KPI B5.3	8.1, 8.3, 8.4, 8.5
	KPI B5.4	8.5
Aspect B6: Product Responsibility	General disclosure	5, 7, 12.1, 12.2
	KPI B6.1	7.5, 12.2 (During the Reporting Period, the Group did not recall any products due to safety and health reasons)
	KPI B6.2	7.5, 12.2
	KPI B6.3	5.3 (During the Reporting Period, the Group strictly complied with laws and regulations related to intellectual property rights protection)
	KPI B6.4	7
	KPI B6.5	5.1, 5.2, 7.5 (During the Reporting Period, the Group strictly complied with laws and regulations related to protection on consumer data and privacy)
Aspect B7: Anti-corruption	General disclosure	5, 8, 12.1, 12.2 (During the Reporting Period, the Group did not experience any legal cases regarding corruption, bribery, extortion, fraud and money laundering)
	KPI B7.1	5.1, 12.2
	KPI B7.2	5.1, 8.3
	KPI B7.3	5.1, 12.2
Community		
Aspect B8: Community Investment	General disclosure	6, 11, 12.1, 12.2
	KPI B8.1	6, 11
	KPI B8.2	11, 12.2

麗珠世界 生命常青

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