



麗珠医药
LIVZON

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

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

(Stock code: 1513)

ENVIRONMENTAL, SOCIAL and GOVERNANCE REPORT 2018



* For identification purpose only

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1 ABOUT THIS REPORT

OVERVIEW

This report is the third Environmental, Social and Governance (“ESG”) Report (the “Report”) issued by Livzon Pharmaceutical Group Inc.*, which covers the period from 1 January 2018 to 31 December 2018 to provide the latest ESG performance of Livzon.

BASIS OF PREPARATION

This Report is prepared based on the “Environmental, Social and Governance Reporting Guide” set out in Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited issued by The Stock Exchange of Hong Kong Limited (the “Hong Kong Stock Exchange”), and at the same time, made reference to the Guidelines of the Shenzhen Stock Exchange for the Standardized Operation of Companies Listed on the Main Board issued by the Shenzhen Stock Exchange.

The content of this Report is designed through a systematic process, including identifying and prioritizing important stakeholders, identifying and prioritizing significant ESG issues, determining the scope of the Report, collecting the relevant materials and receipts, preparing report based on materials and reviewing the data herein.

SCOPE AND BOUNDARY OF THE REPORT

The Report discloses the ESG risks and performance of the Company in accordance with the “materiality” principle referred to in the Environmental, Social and Governance Reporting 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 set out in the 2018 Annual Report of the Company and shall be read in conjunction with the 2018 Annual Report of the Company.

EXPLANATION FOR ABBREVIATIONS

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

DATA SOURCE AND RELIABILITY STATEMENT

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

CONFIRMATION AND APPROVAL

The board of directors (the “Board”) and the senior management team of the Company have reviewed this Report and guarantee that there are no false representations, misleading statements or material omissions in this Report.

AVAILABILITY OF THIS REPORT AND FEEDBACK

This Report is available and can be downloaded from the website of the Hong Kong Stock Exchange (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 this Report, please contact the Company by phone at (86) 756-8135888, 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



Chairman of the Board
Mr. Zhu Baoguo

2018 was an extraordinary year that external environment changed rapidly, medical system reform further progressed and pharmaceutical related policy was advancing all the time. Looking back to 2018, all employees of Livzon strived for excellence and forged ahead, and successfully completed the operating targets set for the whole year. This accomplishment is never easy to achieve, and is the result of our perseverance in three aspects: innovation in research and development, operation compliance and fulfillment of responsibility.

Livzon actively responded to the strategy of "Healthy China", adhered to the development promoted by innovative R&D, and continuously introduced domestic as well as overseas experts and innovative talents, and constantly increased the investment in research and development. In 2018, the expenditures related to research and development of Livzon amounted to RMB687.24 million, representing a year-on-year increase of 19.42%, applications for 63 domestic patents were made, and the Company was awarded "2018 Top 10 Biopharmaceutical Research and Development Strengths in China", "2018 Top 20 Comprehensive Pharmaceutical Research and Development Strengths in China" as well as "2018 Top 40 Pharmaceutical Research and Development Strengths of Listed Pharmaceutical Companies in China". Ilaprazole sodium for Injection has been put onto the market, recombinant human chorionic gonadotropin for injection has been reported to the competent authorities for production, the R&D of Triptorelin Microspheres, other chemical drugs, biological medicines, and bulk medicines were conducted in a systematic manner. At the same time, we continuously promoted the layout of each business segment of "precise medical treatment", continuously promoted "patient-oriented" precise medical treatment, and gradually transforming from a comprehensive pharmaceutical enterprise to a domestic leading specialty pharmaceutical enterprise with international standard.

CHAIRMAN'S MESSAGE

Furthermore, we adhered to operation compliance, continuously increased the governance standards from different dimensions such as internal control, production operation, quality control as well as sales and marketing. We continuously promoted quality control system and GMP certification for production capacity of each production unit according to the plan. As at 31 December 2018, a total of 31 production lines of 4 manufacturers of pharmaceutical preparations under the Group passed GMP certification, 28 products of 5 bulk medicine enterprises under the Group passed the GMP certification, and 11 products passed the veterinary GMP certification; in terms of bulk medicines business, 15 products passed the on-site examination for international certifications, 20 international certifications were obtained within the validity period. At the same time, the sales team upheld the sales strategy of "sales based on data, sales based on service and sales based on cooperation", expanded our market share and market coverage, refined our management at all levels of marketing, broadened the sales to lower-end consumers, promoted the low-yielding market, and strived to discover new growth areas for future development.

At the same time, we actively undertake our responsibility, create value for the society and strive for better living standards. We continuously followed the philosophy of "sustainable development", fully implemented the important instructions put forward by the Party and the State on targeted poverty alleviation, we followed the concept of "Targeted Poverty Alleviation+ Huangqi(黄芪) Industry", implemented poverty alleviation model of "Company + Base + Poor households" to encourage the poor households to engage in a Huangqi plantation with reference to the local conditions, and we strived to thoroughly and stably alleviate poverty in 3 poor counties in Shanxi Province for a total of 150 people from 2018 to 2020.

In 2019, we will insist on following the philosophy of "reform, responsibility, innovation and development", focusing on the implementation of talent cultivation, product strategies and market strategies. Development is the ultimate goal of Livzon; responsibility is the core value every Livzon employee should shoulder; and reform and innovation are the means and key to enterprise development. We will continue to adhere to the goal of sustainable development, deepen the "standardized development" by reform, insist on innovation to achieve "transformation and upgrading", continue to create value for the society, take up responsibility, strive to achieve the coordination of economic efficiency, environmental efficiency and social efficiency, and sustainable development.





3 ABOUT THE COMPANY

3.1 THE COMPANY'S BUSINESS

Founded in January 1985 and headquartered in Zhuhai, Guangdong, the PRC, the Company is a comprehensive group company that is principally engaged in pharmaceutical research and development, production and sales. We are among the top 100 Main Board Listed Company by Value and a national technological innovation demonstration enterprise. The A shares of the Company are listed on the Shenzhen Stock Exchange (Stock code: 000513) and the H shares of the Company are listed on the main board of the Hong Kong Stock Exchange (Stock code: 01513).

Currently, Livzon is primarily engaged in the research and development, production and sales of pharmaceutical products. The products of the Group cover drug preparation products, bulk medicines and intermediates as well as diagnostic reagents and equipment. Major products include Chinese and Western drug preparation products such as Shenqi Fuzheng Injection (參芪扶正注射液), Ilaprazole (Ilaprazole Enteric Coated Tablet) (壹麗安(艾普拉唑腸溶片)), the Bismuth Potassium Citrate (麗珠得樂(枸橼酸鉍鉀)) series products, Leuporelin Microspheres for Injection (貝依(注射用亮丙瑞林微球)), 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)), Anti-viral Granules (抗病毒顆粒), Voriconazole for Injection (麗福康(注射用伏立康唑)) and Mouse Nerve Growth Factor for Injection (麗康樂(注射用鼠神經生長因子)); bulk medicines and intermediates such as Mevastatin (美伐他汀), Acarbose (阿卡波糖), Colistin (硫酸粘菌素), Phenylalanine (苯丙氨酸), and Ceftriaxone Sodium (頭孢曲松鈉); and diagnostic reagent products such as HIV Diagnostic Reagents for Antibody (HIV抗體診斷試劑), MYCOII Testing Reagent (肺炎支原體抗體診斷試劑) and TPPA Testing Reagent (梅毒螺旋體抗體診斷試劑).



Product brands of Livzon

3 ABOUT THE COMPANY

The Group adheres to the development target of becoming a high-end specialty pharmaceutical enterprise with the core business philosophy of “innovation and standardization” to constantly improve the efficiency of its management and governance standards, thereby steadily promoting research and development, strengthening the sales marketing layout, and achieving steady growth in performance. The Group’s general core competitiveness is primarily reflected in its diversified product structure and business portfolio, comprehensive marketing system and professional marketing team, mature quality management system, and strong R&D capabilities and global R&D vision.

3.2 THE COMPANY’S MANAGEMENT

The Company carries out its operation in strict compliance with the Company Law of the People’s Republic of China, the Securities Law of the People’s Republic of China, the Stock Listing Rules of the Shenzhen Stock Exchange, the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited, relevant laws and regulation of China Securities Regulatory Commission and the Articles of Association of the Company. The general meetings, meetings of the Board and meetings of the supervisory committee of the Company are convened regularly pursuant to the requirement 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 Livzon, 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 supervision functions. The operating standards were proven to be effective. The special committees of the Board all performed their respective duties.

The Company has set up a corporate governance structure, which is composed of the general meeting, the Board and its special committees, the supervisory committee and the senior management. As at the date of this Report, the Board comprises 11 members, including 3 Executive Directors, namely Mr. Tang Yanggang (President), Mr. Xu Guoxiang (Vice Chairman and Vice President) and Mr. Fu Daotian (Vice President); 3 Non-executive Directors, namely Mr. Zhu Baoguo (Chairman), Mr. Tao Desheng (Vice Chairman) and Mr. Qiu Qingfeng; and 5 Independent Non-executive Directors, namely Mr. Xu Yanjun, Mr. Guo Guoqing, Mr. Wang Xiaojun, Mr. Zheng Zhihua and Mr. Xie Yun.

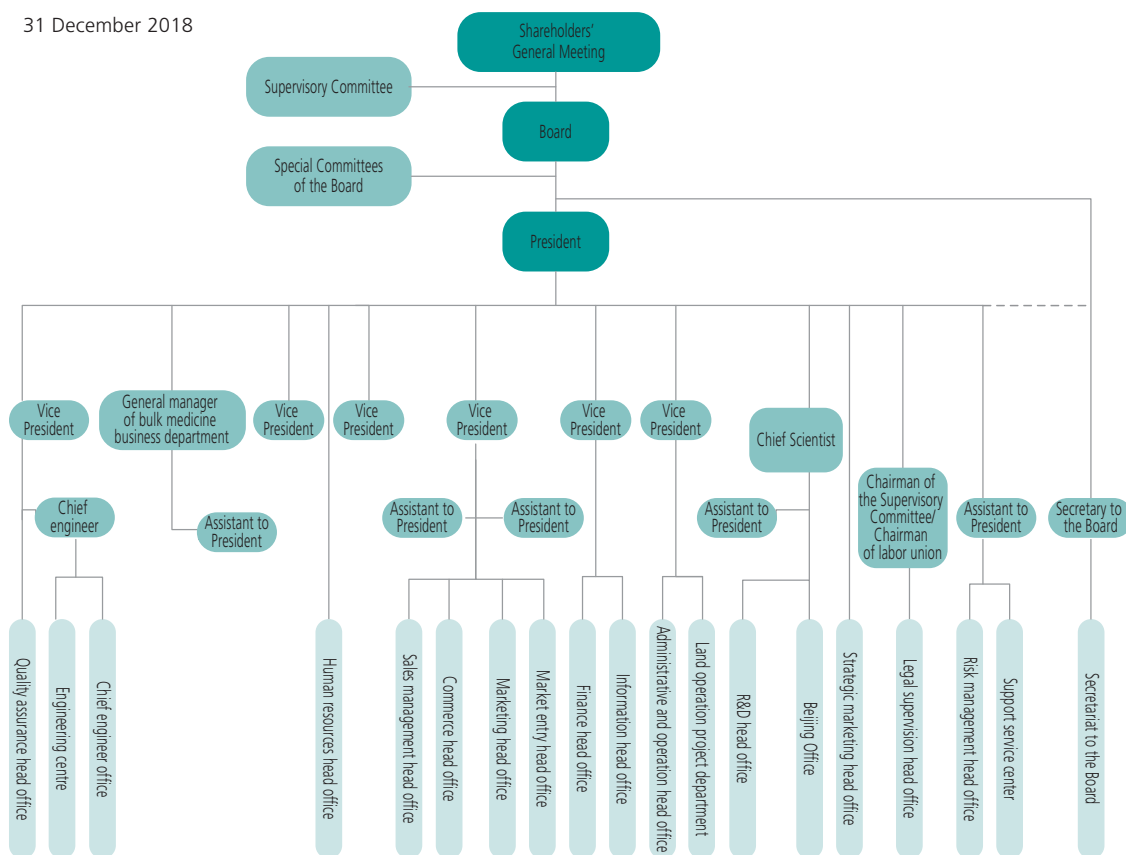


3 ABOUT THE COMPANY

In 2018, there was no material change in Livzon's size, structure, ownership and supply chain as compared to 2017.

Organizational structure of the Group

31 December 2018



Mission, culture and operating philosophy

Mission of Livzon

Livzon, Cultivate Nourished Lives

Spirit of Livzon

Pragmatic, innovative, standardize, efficient

Operating philosophy

Adopt people-oriented strategy, serve with dedication, excel in quality and uphold integrity

Operating philosophy in 2018

Innovation, standardization

4 2018 OVERVIEW

MAJOR HONORS IN 2018

2017 China Outstanding Investors Relationship (IR) the Best Information Disclosure Award

Road Show China
January 2018



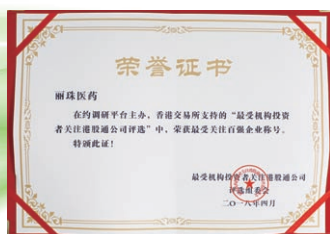
9th Tianma Award for Investor Relations of Chinese Listed Companies "The Best Board of Directors"

Securities Times
April 2018



Medical and Health Industry Investment Award

CHC • CITIC Securities
Medical Health Conference
April 2018



Institutional Investors' Favorite Hong Kong Stock Connect Company Top 100 Enterprises

Yuediaoyan
April 2018



2018 Best Taxpayer in Zhuhai

Zhuhai State Taxation Administration
June 2018



2018 Top 10 Biopharmaceutical Research and Development Strengths in China, 2018 Top 100 Enterprises in Chemical R&D Strengths in China and 2018 Top 20 Comprehensive Pharmaceutical Research and Development Strengths in China

www.yaozh.com, Organization Committee of the China Pharmaceutical R&D and Innovation Summit and China Pharmacy Journal
June 2018



4 2018 OVERVIEW

National Model Enterprise of Intellectual Property Right



State Intellectual Property Office
of the PRC
July 2018



Top 100 Main Board Listed Companies by Value

Securities Times and New Fortune
August 2018



"Shengqi Fuzheng Injection" awarded "Top 10 Leading Brands in China Pharmaceutical Industry"

Office of China Consumer
Economy High-level Forum and
Xiao Fei Ri Bao
September 2018



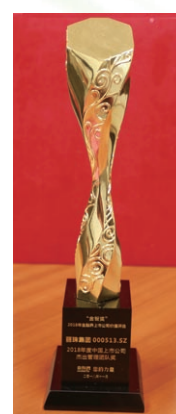
2017 Golden Bull Investment Award

China Securities Journal
November 2018



8th Reputation List of Chinese Listed Companies of the Year 2018-the Best Board of Directors of Listed Companies

National Business Daily
November 2018



Jin Zhi Award and 2018 Outstanding Management Team of PRC Listed Company

JRJ.com
November 2018

4 2018 OVERVIEW

Top 100 Companies in China

China Business Top 100 Forum
November 2018



Livzon Leuprorelin "Leuprorelin Microspheres for Injection" was honored as the Most Innovative Drug Preparation Product of China in 2018

Chinese Pharmaceutical Association
November 2018



8th Golden Bauhinia Award for Listed Companies with Most Investment Potential in China

Hong Kong Ta Kung Wen Wei Media Group
December 2018



2018 Hong Kong Listed Company Golden Lion Award-Listed Company with Greatest Growth Potential

SINA Finance
December 2018

2018 Top 40 Research and Development Strengths of Listed Pharmaceutical Enterprises in China and 2018 Listed Pharmaceutical Enterprises Social Responsibility Award

the Organization Committee of
Smart Food & Drug Expo
December 2018





4 2018 OVERVIEW

ENVIRONMENT

- Intensity of greenhouse gas emissions: 0.5 tonne of CO₂ equivalent/RMB10,000 of operating income

ECONOMY/MARKET

- In 2018, the Group recorded an operating income of RMB8,860.66 million, representing a year-on-year increase of 3.86%. Net profit was RMB1,181.71 million, representing a year-on-year decrease of 73.67%. Net profit attributable to shareholders of the Company was RMB1,082.17 million, representing a year-on-year decrease of 75.56%. Net profit attributable to shareholders of the Company after deducting the extraordinary gain or loss was RMB947.22 million, representing a year-on-year increase of 15.51%.
- In 2018, the Company applied for 63 domestic patents, including 41 invention patents and 2 appearance design patents; obtained 36 authorized domestic patents, including 23 invention patents and 6 appearance design patents; applied for 3 foreign patents, and obtained 3 authorized foreign patents.
- In 2018, the Company's expenditures related to research and development amounted to approximately RMB687.24 million, representing a year-on-year increase of 19.42%. The amount accounted for approximately 7.76% of the Group's total operating income for the year.

EMPLOYMENT

- Total number of employees was 7,671
- Female employees took up 46%
- Average training hours was 33.5 hours/person

COMMUNITY

- In 2018, the charitable donation expenditures of the Company amounted to approximately RMB3.926 million
- Funds and materials donation amounted to RMB3.355 million and RMB0.571 million respectively; 283 employees participated in voluntary activities

5 RESPONSIBLE GOVERNANCE

5.1 ESG MANAGEMENT STRUCTURE

Pursuant to the “Environmental, Social and Governance Reporting Guide” of the Hong Kong Stock Exchange, the Board is fully responsible for the Company in terms of ESG strategy and reporting. The Board is in charge of assessing the ESG risks to facilitate the formulation of effective ESG risk management and internal control system. It also supervises all relevant departments and subsidiaries of the Company in the implementation of such measures.

The Company has established the ESG working team led by the leadership, and built a multitier top-down ESG management mechanism with the view to further incorporate sustainability in our strategy and decision making, as well as to effectively promote sustainable development and ESG management structure. By creating an environmental and social management system that is in line with our own business development, the Company has clear assignment of responsibility for every level and department in jointly promoting sustainable development and practices.

ESG governance level	Person-in-charge	Specific duties
ESG leadership	The ESG leadership comprises the president and top heads of relevant functions of the Company	<ol style="list-style-type: none">1. Steering of ESG issues2. Formulation of ESG strategies3. Allocation of corporate resources to support ESG initiatives4. Approval of ESG achievements
ESG management	The ESG management is led by the Secretariat to the Board and comprises heads of various departments	<ol style="list-style-type: none">1. In charge of specific ESG management2. Assignment of ESG personnel3. Supervision of ESG progress4. Reporting ESG performance to the leadership
ESG implementation	Functions and departments at head office Wholly-owned subsidiaries and controlling subsidiaries	<ol style="list-style-type: none">1. Collection and reporting of ESG information2. Implementation of specific ESG tasks3. Reporting to the ESG management



5 RESPONSIBLE GOVERNANCE

5.2 COMPLIANCE WITH THE LAW

In 2018, guided by the operating philosophy of “innovation and standardization”, the Company elevated work related to law compliance and anti-corruption to a new level. The Group formally established the “Risk Management Headquarters”, and more focused on standardizing daily operations, preventing and handling internal and external risks during operations. At the same time, through improving system establishment such as establishing internal system and implementing anti-corruption training, we ensured the Company’s compliance operation from multiple aspects and angles.

5.2.1 Strengthening system establishment

The Company maintains strict compliance with the Criminal Law of the People’s Republic of China, the Anti-Unfair Competition Law of the People’s Republic of China, the Company Law of the People’s Republic of China, the Interim Provisions on Banning Commercial Bribery (Order of the State Administration for Industry & Commerce No. 60), the Notice on Serious Investigation and Proactive Prevention of Misconduct in Food and Drug Supervision, and other laws and regulations, while carrying out anti-graft and anti-commercial bribery works.

For establishment of internal system, on top of series of rule systems such as the Anti-corruption and Anti-commercial Bribery Regulations and the Code of Conduct for Sales Personnel, in this year the Company established a series of rule systems to further regulate the behaviour of its employees, clearly conveyed the Company’s requirement of anti-corruption to employees, while preventing and monitoring corruption practices in our production and management process.

For the purpose of continuously standardizing the business procedures of construction project, the Company established “Management Measures for Construction Project Establishment of Livzon Group” and “Implementation Rules of Tender for Construction Projects of Livzon Pharmaceutical Group Inc. (for trial implementation)”. For material procurement, the Company established “Management Measures of Centralized Procurement of Bulk and General Materials of Livzon Pharmaceutical Group Inc. (for trial implementation)”, “Management Measures of Approval Process for Allocation and Written-off of Idle Materials of Livzon Pharmaceutical Group Inc. (for trial implementation)”, “Material Management System of Livzon Pharmaceutical Group Inc.”, “Management Measures of Material Procurement of Livzon Pharmaceutical Group Inc. (for trial implementation)”, etc., to further enhance the standardization and systemization of materials management.

In addition, key employees and partners are required to execute the Undertaking on Anti-corruption and Anti-commercial Bribery according to the actual circumstances. It is also expressly stipulated that employees in breach of the undertaking will be punished by termination of employment contract and serious cases will be reported to law enforcement.

5.2.2 Establishment of internal audit system

In addition to strengthening the establishment of system, the Company also developed the internal audit system in line with corporate development. The Company has set up the Audit and Integrity Department, which is independent of other departments, and put it in charge of the audit of business units of the Group. The Company organized relevant departments to form an audit team according to the audit plan established by the Group’s audit committee, to complete the comprehensive audit and the audit of completion of rectification of the subsidiaries of the Company. In 2018, the Group’s comprehensive audit and project audit and economic liabilities audit of part of the management personnel of the subsidiaries of the Company were completed.

At the same time, the Company prepared comprehensive and project audit reports, continued to improve the Internal Audit Handbook, collated audit files, and participated in some of the tender procurements of the Group and its subsidiaries to standardize and monitor the tender procurement procedures.

5 RESPONSIBLE GOVERNANCE

5.2.3 Enhancing publicity of anti-corruption

In 2018, we targeted the operating team members and person-in-charge of primary department (director/manager/vice manager, etc.) to conduct inspection in respect of cadre office and integrity concerns, and each cadre was rated according to 10 criteria including qualification and integrity and self-discipline, promoting clean and honest administration with a top-down approach.

Case Sharing: Integrity Education on Material and Construction Procurement

From 20 to 21 September 2018, Livzon held the 2018 Integrity Education on Material and Construction Procurement Conference on the third floor of the Group's headquarters building. To further strengthen clean and honest administration, the conference also organized attendees visiting Public Security Bureau to understand the outcomes and mechanism building of integrity education. Through this conference, employees fully understood and learnt the importance of integrity in material and construction procurement, which was beneficial to regulate their business behavior, hence to eradicate incompliance behavior.



The Company achieved outstanding results in anti-corruption governance. There was no litigation regarding corruption against the Company or its employees in 2018.



5 RESPONSIBLE GOVERNANCE

5.2.4 Anti-counterfeiting and right-defending initiatives

The Company continued to monitor the market and conducted inspections to ensure the stability of the Group's sales market, protecting the pricing structure, and safeguarding the proper rights and interests of the sales personnel. In 2018, we conducted market inspections in the markets of Anhui, East Guangdong and Chuanyu area. At the same time, we organized relevant personnel to participate in exchange meetings such as Leadership Exchange Meeting, Food Safety Crime Prevention Training Seminar and Online Food and Drugs Anti-counterfeits Modes Workshop and Expert Panel Meeting of establishment of Big Data Analysis System on Food and Drugs Safety held by Guangdong Honor Enterprises & Anti-fake Association.

Case Sharing: Online Food and Drugs Anti-counterfeits Modes Workshop and Expert Panel Meeting of establishment of Big Data Analysis System on Food and Drugs Safety

On 24 August 2018, the Company participated in the "Online Food and Drugs Anti-counterfeits Modes Workshop and Expert Panel Meeting of establishment of Big Data Analysis System on Food and Drugs Safety" held by Guangdong Honor Enterprises & Anti-fake Association, paid full attention to the issue team's report on the research project and the establishment of Big Data Analysis System, and had in-depth discussion on topics such as innovation of online food and drugs anti-counterfeits mode, big data research and application on food and drugs safety, to further raise the ability and efficiency of the Company for monitoring and implementing anti-counterfeits work.



5 RESPONSIBLE GOVERNANCE

5.3 PARTY-BUILDING WORK

Since its establishment, Livzon has established a Party Organization, integrated the party-building work in its operations, which are crucial for the Group's stable development in over 30 years. Currently, Livzon has 607 Party members, in which 375 Party members are at Zhuhai headquarters district, has built 9 Party branches directly under the Party committee, has 232 Party members at the subsidiaries of other areas and 7 Party Organizations.

For the purpose of creating a healthy and positive organization culture and working atmosphere for Zhuhai Livzon Industrial Park, the Party Committee of Livzon Group established a party activity center, which includes a Party, League and Labor Union activity room of 700 sq.m, a Badminton Stadium of 3,000 sq.m, Livzon Business School of 1,000 sq.m, a standard football pitch of 10,800 sq.m, and a distant education training room; such center becomes an important base for Livzon's Party-building work.

Upon the conclusion of the 19th National Congress, the Party Committee of the Group actively encouraged Party members to learn the spirit of the 19th National Congress, invited the propaganda group of the Party Committee of Zhuhai to promote at the Company, and organized Secretary to the Party Committee to participate in the 19th National Congress Training Course, while repeatedly organized charity events at nursery homes and social welfare centers, which highly honored the Party. Before 1 July 2018, the Group's Secretary to the Organization of the Party Committee and outstanding Party members went to Jinggang Mountains to participate in the education event, "Follow in Red Army's Footsteps, Promote the spirit of Jinggang Mountains". During the event, the Party members shared their opinions and feelings, which deeply rooted the Communist Party's spirit of "not afraid of hardship, arduous struggles and serve the people" inside the hearts of the Communist Party members.

Establishment of a clean and honest Party structure is important for improving the discipline of the Party. The Group's Party Committee fully learnt the important speeches about "close and clear new political and business relationship" by General Secretary Xi Jinping, integrated establishment of a clean and honest Party structure with Party-building events, held clean and honest establishment education event with Zhuhai State Taxation Administration to learn clean and honest establishment experience from each other. The sales branch organized Party members to visit Jinwan District Clean and Honest Education Exhibition Hall to further promote clean and honest practices.

Through rich and colorful Party-building activities, the Group's Party Committee fully leveraged Party members as role models, inspired employees 'heart of craftsmanship, raised the cohesiveness of the Group, and elevated the Party-civilian building to a new level.



5 RESPONSIBLE GOVERNANCE

5.4 IDENTIFICATION AND COMMUNICATION OF STAKEHOLDERS

Based on stakeholders' concern, the Company has established a long-term communication mechanism for stakeholders. We aim to maintain good interaction with all stakeholders and actively respond to their expectations through targeted and diverse communication channels, thereby promoting our sustainable development.

Stakeholders identified	Purpose of communication	Communications channels
Government departments	<ul style="list-style-type: none"> Comply with relevant laws and regulations, and 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 	<ul style="list-style-type: none"> Meetings between the government and the corporate sector Supervision and inspection Work reports and studies
Shareholders	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> General meetings Investor conferences and onsite visits Regular updates on operating information and data Face-to-face interviews, teleconferences and online interactive platform
Employees	<ul style="list-style-type: none"> Safeguard the basic rights of employees Care for employees' physical and mental wellbeing and safety Understand employees' needs and their suggestions to the Company Provide training and career development platform 	<ul style="list-style-type: none"> Staff representative meeting and trade union Staff satisfaction survey Occupational, health and safety training Opinion and feedback platform Daily communication and visits
Consumers	<ul style="list-style-type: none"> Protect consumer rights and uphold business ethics Ensure drug quality and safety, timely recall of defective products Protect the rights of customers and consumers 	<ul style="list-style-type: none"> Product labelling and information disclosure Client visits Consumer satisfaction survey Address complaints and opinions of consumers
Partners and suppliers	<ul style="list-style-type: none"> Maintain good and stable cooperation relationship Operate with integrity and practice contract spirit Timely communication and coordination with upstream and downstream players to achieve mutual benefits 	<ul style="list-style-type: none"> Regular exchange and communication Working meetings, phone calls and correspondences Company website

5 RESPONSIBLE GOVERNANCE

Stakeholders identified	Purpose of communication	Communications channels
Media	<ul style="list-style-type: none"> • Maintain open and transparent information disclosure • Keep good interaction with media 	<ul style="list-style-type: none"> • Phone interview and correspondences • Featured articles
Industry peers	<ul style="list-style-type: none"> • Fair competition among peers to promote healthy industrial development • Sharing of technology and experience among enterprises 	<ul style="list-style-type: none"> • Meetings of industry organizations • Sharing sessions • On-site visits and exchanges
Local community	<ul style="list-style-type: none"> • 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 to reduce pollution 	<ul style="list-style-type: none"> • Participate in community welfare events • Provide regular assistance to the local community • Organize volunteer service

5.5 MATERIAL ISSUES AND LIST

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

Materiality assessment process

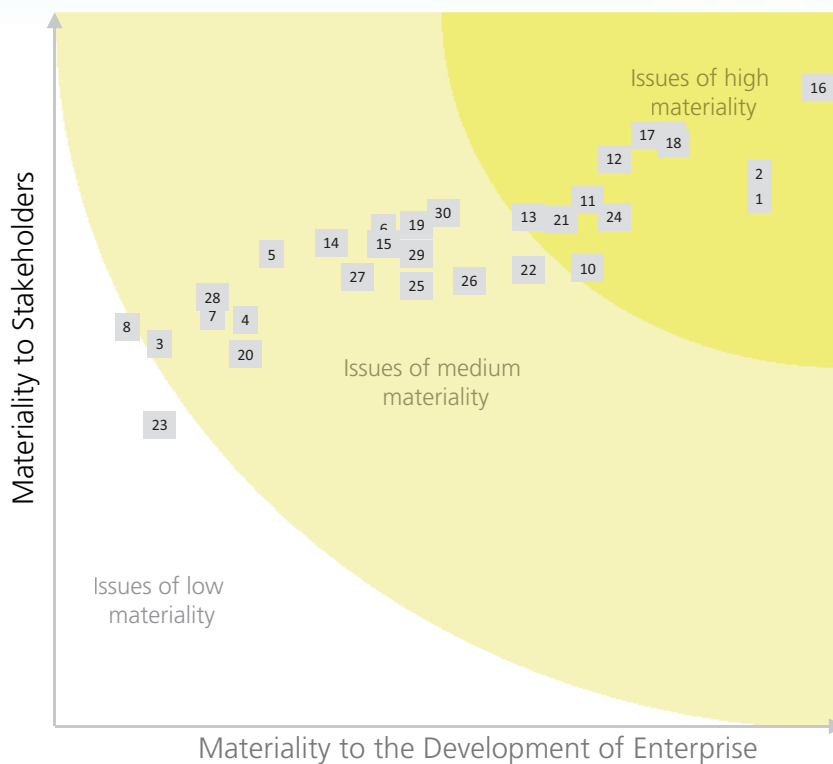
- Review the results of materiality assessment for 2017: evaluate the reasonableness and suitability of the results for 2017 combined with the overall business development of the Company in 2018.
- Formulate and implement the stakeholder engagement program for the year: based on the Company's own circumstances and with reference to the development of the medical sector and the economy and society as a whole in the year, organize communication and studies with major stakeholders to obtain relevant original data.
- Consolidate and quantify the results for two years and perform assessment from two perspectives: taking into account of the results for both years, evaluate each issue from two perspectives, namely the "Materiality to the Development of Enterprise" and "Materiality to Stakeholders", so as to compile the list of material issues.
- Submit the report to the management and obtain approval: submit the report on overall stakeholder engagement and material issues assessment to the management and obtain approval from the management.



5 RESPONSIBLE GOVERNANCE

Materiality Matrix

2018 ESG Materiality Matrix of Livzon



5 RESPONSIBLE GOVERNANCE

List of material issues

Issues of high materiality	16	Product quality and safety assurance
	2	Pollutant management (e.g. emission reduction, environmental expenses and environmental monitoring)
	1	Environmental internal governance and environmental risk management
	9	Contingency measures for tackling environmental incidents (e.g. excessive or non-regulated emission)
	18	Information security and privacy protection
	17	Intellectual property protection
	12	Health and safety of employee
	24	Corporate governance
	11	Talent attraction and motivation
	21	Popularize of healthcare and wellness resources (e.g. inclusion of medicines in the Medical Insurance Catalogue)
	10	Internal governance and planning of social responsibility
	13	Employee training and development
Issues of medium materiality	22	Addressing negative opinion from stakeholders
	30	Pursue non-compliance responsibilities
	19	Anti-commercial bribery
	26	Management of investors relationship
	29	Internal control
	6	Management of use of raw-materials (e.g. raw and auxiliary materials and packaging materials)
	15	Supply chain management
	25	Controlling shareholder and general meeting
	14	Prevention of child and forced labor
	27	Composition of the Board and its operation
	5	Use and management of water resources
	4	Management of use of energy
	28	Supervisory Committee's performance
	7	Use of renewable energy
	20	Participation in charity activities and targeted poverty alleviation
	3	Greenhouse gases emissions
Issues of low materiality	8	Protection of biological diversity
	23	Party-civilian building



6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

In 2018, Livzon continued strengthening its innovation in R&D, actively engaged in industrial exchange and facilitated industry-academia research cooperation. Focusing on all upstream and downstream partners, we aimed at creating value for the local economy, industry and partners, thereby achieving win-win outcome.

6.1 VALUE CREATION

Livzon adheres to the development target of becoming a high-end specialty pharmaceutical enterprise with the core business philosophy of “innovative, standardize” to constantly improve the efficiency of its management and governance standards, thereby steadily promoting research and development, improving the sales marketing planning, and achieving steady growth in performance.

In 2018, the major performances of the Company were as follows: operating income amounted to RMB8,860.66 million, net profit was RMB1,181.71 million, Net profit attributable to the shareholders of the Company after deducting the extraordinary gain or loss was RMB947.22 million, and tax paid was RMB1,838.97 million.

Furthermore, Livzon continued promoting the local economic development, was rated as Rank A taxpayer for 3 consecutive years, and was awarded as “2018 Best Taxpayer in Zhuhai” by the Zhuhai State Taxation Administration.

Livzon actively undertakes social responsibility, pays tax in accordance with law, and supports community philanthropy. During the year, Livzon contributed tax income of RMB1,838.97 million to the government, the total wages, bonuses, allowances, compensation, welfare, housing funds and social insurance paid to the employees amounted to RMB876.88 million, interests paid to creditors such as banks amounted to RMB16.77 million, donation amounted to RMB3.93 million, and social contribution per share in 2018 was RMB3.80 per share.



6.2 INNOVATIVE DEVELOPMENT

Under the current trend of upgrade of pharmaceutical products, innovation has become a consensus among pharmaceutical enterprises. Livzon adhered to the development promoted by innovative R&D, and continuously introduced domestic as well as overseas experts and innovative talents, and constantly increased the investment in R&D, at the same time enhanced its R&D management system, continuously strengthened its core competitiveness, and promoted transformation and upgrading development of the Company.

6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

6.2.1 Focusing on independent research and development

Livzon advocates self-development and innovation, maintains strict compliance with the Patent Law of the People's Republic of China, the Intellectual Property Law of the PRC and other relevant laws and regulations, internally established Self-developed Research and Development Project Establishment Procedures, actively applied for patents and intellectual property. In 2018, the Company applied for 63 domestic patents, including 41 invention patents and 2 appearance design patents; obtained 36 authorized domestic patents, including 23 invention patents and 6 appearance design patents; applied for 3 foreign patents, and obtained 3 authorized foreign patents.

Livzon adhered to the transformation strategy of biological pharmaceutical products, it pushed on key projects in a more focused, efficient and standardized manner, strengthened the R&D and quality control system, enhanced the ability of commercialization, continued promoting multiple projects in the R&D channels; properly carried out "consistency evaluation works", where 20 projects under consistency evaluation works had been established and started research. Relevant expenses of R&D for 2018 amounted to approximately RMB687.24 million, representing a year-on-year increase of 19.42%, in which investment in capitalization of R&D accounted for 10.34% of investment in R&D, which in turns accounted for 7.76% of the Group's total revenue for the year.

A summary of the progress of our major R&D in various areas in 2018 is as follows:

(1) Western drug preparations	The high-purity Menotropins for Injection (注射用高純度尿促性素) reached the clinical research stage; Ryanodex for Injection (注射用丹曲林鈉) completed the clinical research stage; Triptorelin Acetate Microspheres for Injection (注射用醋酸曲普瑞林微球) (1 month sustained release) project reached the clinical research stage; Leuprorelin Acetate Microspheres for Injection (注射用醋酸亮丙瑞林微球) (3-month sustained release) project has been reported to the competent authorities for production; Tinidazole tablets (替硝唑片) has been reported to and accepted by Center for Drug Evaluation of the China Food and Drug Administration.
(2) Chinese drug preparations	The Shengqi Fuzheng Injection (參芪扶正注射液) was approved for phase I clinical test by the USA FDA and at present reached the clinical research stage.
(3) Bulk medicines	Moxiktin (莫西克汀) and serratmycin (塞拉菌素) have been approved by the European Union, registration for and research of 13 projects have begun, among which, registration for and research of 3 projects of polypeptide research and development platform, registration for and research of 6 projects of high-end veterinary research platform, 2 projects for new antibiotics and 1 project for psychotropic have begun.



6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

(4) Precise pharmaceutical Livzon MABPharm Inc.

Recombinant biosimilar human chorionic gonadotropin for injection (注射用重組人絨促性素) completed Phase III clinical trial and has been reported to the competent authorities for production;

Recombinant anti-HER2 humanized monoclonal antibody for injection project (重組人源化抗HER2單克隆抗體注射液項目) completed Phase I clinical trial;

Recombinant Anti-IL-6R Humanized Monoclonal Antibody (重組抗IL-6R人源化單克隆抗體) project obtained approval for clinical research and completed preparation for the Phase I clinical trial;

Recombinant humanized anti-PD-1 monoclonal antibody (重組人源化抗PD-1單克隆抗體) reached the final research stage of Phase I clinical trial in China and the U.S., and clinical research work of chemotherapy combined drugs in China has begun;

Recombinant Humanised Anti-tumor Necrosis Factor α Monoclonal Antibody for Injection (注射用重組人源化抗人腫瘤壞死因子 α 單克隆抗體) completed Phase II clinical trial;

Recombinant Human/Mouse Chimeric Anti-CD20 Biosimilar Monoclonal Antibody (重組人鼠嵌合抗CD20單克隆抗體) is undergoing Phase I clinical trial;

Recombinant Anti-RANKL Monoclonal Antibody (重組全人抗RANKL單克隆抗體) reached Phase I clinical trial stage;

The construction of CAR-T technology platform has been completed and multi-target development have also been completed, and actively promoted the clinical research and application for clinical research.

Zhuhai Livzon Diagnostic Reagents Inc.

In respect of gold-labeled reagent, Chlamydia Pneumoniae IgM Antibody (肺炎衣原體IgM抗體), Diagnostics Kit for IgM Antibody to Mycoplasma pneumoniae (Colloidal Gold) (肺炎支原體IgM抗體檢測試劑(膠體金法)) has obtained the Registration Certificate;

In respect of Molecular diagnostic reagents, five products including blood nucleic acid screening (血篩核酸) and DIAS nucleic acid (艾滋核酸) are undergoing clinical phase, BCI Nucleic Acid Molecular Project is in the process of registration;

In respect of chemiluminescent reagents: Tuberculosis γ interferon Chemiluminescence kit (結核 γ 干擾素化學發光試劑) is undergoing the clinical studies, 6 products including Procalcitonin (降鈣素原) and interleukin (白介素) are in the process of registration;

In respect of drug concentration reagents, voriconazole itraconazole (伏立康唑) has obtained the Registration Certificate;

In respect of the equipment: Colloidal gold analyzer (膠體金分析儀), BV full-automatic analyzer (BV全自動分析儀), X-ray blood irradiator (X光血液輻照儀) and 20-speed chemiluminescence analyzer (20速化學發光分析儀) are in the process of registration.

Zhuhai Livzon Gene Detection Technology Co., Ltd.

Completed development and launching of 10 projects, including 2 liquid biopsy projects, 4 tissue gene testing projects, 1 hereditary tumour testing project, 1 lung cancer early screening project, and 2 immunotherapy testing projects.

6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

The Company's overall new R&D power and innovative outcomes were widely recognized in the industry. In 2018, Livzon Leuprorelin (Leuprorelin Microspheres for Injection) was honored as the Most Innovative Drug Preparation Product of China in 2018, "Shengqi Fuzheng injection" was awarded "Top 10 Leading Brands in China Pharmaceutical Industry"; in June 2018, at the 3rd China Pharmaceutical R&D and Innovation Summit, the Company was awarded 2018 Top 10 Biopharmaceutical Research and Development Strengths in China, 2018 Top 100 Enterprises in Chemical R&D Strength in China and 2018 Top 20 Comprehensive Pharmaceutical Research and Development Strengths in China.

Case Sharing: Two projects: Ilaprazole and prolonged-action microsphere successfully passed the inspection

In December 2018, at the Inspection Meeting for Material Project of Zhuhai Strategic Emerging Industry, two projects of Livzon: the R&D and commercialization of innovative drug of Ilaprazole series and the construction of technologies platform of prolonged-action sustain release microsphere and R&D and commercialization of new products successfully passed the inspection.

In which, the Ilaprazole project overachieved all requirements under the contract, acquired 20 investment patents, which put the Company in an international leading position of R&D of Ilaprazole, became the first company to launch Ilaprazole, and the product was highly rated by both doctors and patients, which created huge economic and social benefits.

The prolonged-action microsphere project had constructed the most advance microsphere preparation platform in China, and the establishment of "Long-term Microsphere National and Local Joint Research Center" were approved by National Development and Reform Commission, such platform successfully resolved a series of commonality and key technical problems during the commercialization of microsphere preparations.



6.2.2 Strengthening scientific research management

Livzon places great importance to innovation on R&D, strives to build scientific standardized R&D system, establishes incentive system for innovation of R&D to build a professional and effective R&D team. For this purpose, we internally established a series of internal management systems related to R&D of products, including Management Measures on R&D of New Product, Project Reporting System of Livzon Group, Measures on Performance Assessment Research Department of the Research Institute of Livzon Group, Measures on Innovation Incentive for Research Personnel, Rules Related to the Cultivation of Serving Staff Doctoral Students (or Management Specialty Master Students), Management Measures on Funds of R&D Project of New Products, etc..

Based on a systematic management system, from the aspect of establishment and maintenance of an innovative product system, we established R&D structures of multiple areas and multiple layers according to R&D development strategy and plan; each system was mature, the organization construction was streamlining and reasonable, the incentive mechanism was reasonable and effective; and with close industry-academia research cooperation, the R&D of new technologies of new material products were carried out in order, with focus on innovation of technologies of the existing products.



6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

In 2018, Livzon Research Institute changed its project management structure from a top-down vertical management, reduced management magnitude, to a flat and matrix management mode, to achieve a R&D outcomes-oriented project management system. Through framework optimization, we accelerated the overall construction of R&D system, strengthened the coordination of different departments, realized optimized resources management, promoted growth and development of outstanding R&D talents, laid a solid foundation for the development of consistency evaluation projects and other R&D projects.

At the same time, though means such as proactively introducing domestic and overseas experts and innovative talents and developing overseas strategic alliance, we formed a three levels R&D network taking core R&D institute, pillar R&D institute and cooperation R&D institute as the main subjects.

Core R&D institute	Pillar R&D institute		Cooperation R&D institute
	State-level R&D center	Provincial level R&D center	
Livzon Chemical and Pharmaceutical Research Institute	National Chinese Traditional Medicine Modern Engineering Technology Research Center	High New Technology Enterprise in Guangdong	R&D institute
Livzon Chinese Medicine Research Institute	National-Certified Enterprise Technology Center	Key Engineering and Technology Research and Development Center of Guangdong Province	Joint laboratory
Livzon R&D platform of specialty formulation	National-Local Joint Research Center for Long-term Microsphere	Guangdong Chinese Medicine Digitalized Engineering Technology Research Center	Technology Correspondent Workstation
Livzon MABPharm Inc.		Guangdong Cephalosporin Pharmaceutical Engineering Technology Research Center, etc.	over 30 domestic and foreign R&D organizations
Livzon State-level Postdoctoral Workstation			Expert network system
R&D Center of the bulk medicine business department			
High-end Liquid Drug Research Institute			
Zhuhai Livzon Diagnostic Reagents Inc.			

6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

In recent years, the Group placed great importance to the digitalization of R&D, planned corresponding management system for the whole life cycle of product (pre-clinical, clinical, registration and reporting, after launching, etc.). For the purpose of increasing profit, lowering cost, enhancing the quality and promoting innovation in whole life cycle of products, in 2018, Livzon launched the Oracle Agile Product Lifecycle Management. The system provides data input function regarding the whole life cycle of discovery, pre-clinical, and clinical stage, achieves trans-departmental sharing of product plans, portfolio performance, knowledgebase management, decision-making documents and problem reports; and assists with the stage evaluation procedures, prevention and rectification measures and compliance audit procedures.



6.3 PROFIT-MAKING INDUSTRY

In pursuit of its innovation development, we also seek in-depth exchange and cooperation with local government, partners, industry peers and high schools to promote pharmaceutical products and services. We actively explore opportunities for industrial innovation so that we can achieve mutual prosperity with the PRC pharmaceutical industry.

6.3.1 Popularization of medical product and service

Livzon is committed to human life and health, it strives to provide high quality medical products and services for patients, continues promoting pharmaceutical products and services. Our bulk medicine products have been launched in unstandardized markets such as India, Southeast Asia as well as South America for a long time, and we currently completed the transformation and upgrading from general bulk medicines to high-end specialty bulk medicines, and from unregulated markets to regulated markets, and over 200 registrations have been obtained for 36 products under production in 77 countries (or regions). For overseas sales of pharmaceutical preparations, in 2018, the Group commenced the registration and sales of gonadotropic hormones, gastrointestinal, anti-viral, psychotropic and antibiotics drugs in Pakistan, the countries from the Commonwealth of Independent States, the Philippines, Central America, Sri Lanka, Nigeria, Macau and other countries and regions. In respect of low-end pharmaceutical popularization, the low-end market mainly included OTC products. The development of province regional distribution mode aimed to establish and improve the dedicated sales team targeting low-end medical institutions, supplemented sales of prescribed medicines, such as Shengqi Fuzheng Injection (bag) and Ilaprazole Enteric Coated Tablets, at the same time, strengthened professional academic promotion, established the Livzon Brand in the low-end market. Currently, drugs such as Shengqi Fuzheng Injection, Livzon Bismuth Potassium Citrate and Livzon Bifidobiogen are widely available in low-end pharmaceutical institutions and chain drugstores, and the market coverage of gastrointestinal



6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

drug products such as Ilaprazole in low-end market is increasing annually. As at the end of 2018, the sales of prescribed medicines covered more than 300 cities in 31 provinces to more than 150,000 medical institutions of different level and more than 200,000 drugstores.

Moreover, Livzon actively promoted the inclusion of medicines in the Medical Insurance Catalogue, facilitated the inclusion of self-developed products in the National and Provincial Medical Insurance Drug Catalogues, strived to provide demanding medicines for patients with reasonable prices, and raised the availability of medical and health services. Currently, the Company has 199 products being included in the National Basic Medical Insurance Catalogue, including 96 Class A drugs and 103 Class B drugs.

In the progress of promoting products and services, the Company upheld the sales strategy of “sales based on data, sales based on service and sales based on cooperation”, continued improving its sales system, optimizing the incentive assessment mechanism and strengthening marketing efforts within the academic field as well as to end-users. Through optimization of resources allocation, a more complete marketing system has been gradually established.

The Group had almost 10,000 staff members who served in the marketing management teams of its various segments and provided professional sales services to the Group. The Group has a marketing network covering the majority of leading medical institutions, chain drugstores, disease control centres and health authorities across China.

6.3.2 Promotion of industry development

Livzon actively carries out cooperation with various parties, explores new opportunities in the industry, seeks profit margin in the sector and keeps itself abreast of the latest developments in order to create a better tomorrow for the industry. Livzon upheld the idea of “patient-centered” to provide more personalized and valuable treatment solutions for more patients.

In the year, in order to facilitate the medium and long-term development of the Group’s precise pharmaceutical business, the sector developed the new incentive model and optimized the business structure. Meanwhile, Zhuhai Sanmed Biotech Inc. adjusted the shareholding structure and Livzon MABPharm Inc. underwent reorganization and obtained financing. The Company continued developing business expansion platform for precise pharmaceutical’s clinical application, strengthening the exchange and cooperation with partners, and established the first “Precise Pharmaceutical Center” in 2018.

6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

Case Sharing: Livzon and Jiangmen People's Hospital jointly established the "Precise Pharmaceutical Center"

In July 2018, the "Precise Pharmaceutical Center" jointly established by Livzon and Jiangmen People's Hospital, was successfully opened.

"Livzon-Jiangmen People's Hospital Precise Pharmaceutical Center" is the first precise pharmaceutical center in PRC. It represents another milestone of Livon's precise medical treatment. We will take this opportunity to establish more precise medical centers in the Country to serve more patients.



At the same time, Livzon also actively cooperated with partners such as industry association, professional committee and industry peers, actively carried out academic discussions and exchanges, joined hands on the promotion of the industry's development.

Case Sharing: Livzon co-organized "Internet+ Pharmaceutical Services Innovation Forum"

In August 2018, co-organizers such as Livzon, China Pharmacy Journal and Zhongshan Medical Association co-organized "Internet+ Pharmaceutical Services Innovation Forum". The forum covered topics such as AI, Big Data, internet medical treatment, intelligent pharmacy, audit before prescription and pharmaceutical researches, explored current affairs such as how to leverage the professional value as pharmacists, position of pharmacists and the ways to enhance their work skills in the era of "Internet+".



6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

Case Sharing: Livzon investigated and studied with different associations

In September 2018, being a main member, Livzon participated in investigation for “Research Topic of Risk Management for the Whole Life Cycle of Marketing Authorization Holder”, an technology innovation trustee project entrusted by Guangdong Food and Drug Administration. Together with Guangdong Provincial Food & Drug Assessment & Accreditation Federation of Technology, Guangdong Bio-pharmaceutical Innovat Technology Association, etc., Livzon participated in investigation and studies of Guangdong Pharmaceutical Compliance Promotion Association and Shanghai Food and Drug Safety Research Association, both parties discussed future all-rounded cooperation and reached a consensus.



Case Sharing: Livzon supported holding the R&D of Complicate Preparation for Injection and Consistency Evaluation Forum

As the industry rapidly transforms and upgrades, the Company faces the competition arising from globalization. The innovation of technology and promotion of in-depth R&D are the focuses of this era, and they are the goals Livzon strived to achieve.

From 13 to 15 March 2018, the R&D of Complicate Preparation for Injection and Consistency Evaluation Forum supported by Livzon was successfully held. 19 domestic and foreign heavyweight guests and more than 300 representatives from different sectors discussed hot topics and difficulties in respect of consistency evaluation of complicate preparation for injection.



6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

Case Sharing: Livzon and West China Hospital cooperated to establish innovative R&D platform

In response to the call of national policies, to promote and implement the cooperation with academic institutions in technology innovation, in the afternoon of 24 April 2018, the “West China Hospital-Livzon Group R&D Cooperation Communication Meeting” held by China Precise Pharmaceutical Industry Innovation Alliance, was held at the West China Hospital.

West China Hospital and the Group will actively commence all-rounded cooperation regarding their own advantageous resources, effectively integrate resources of production, academy, research, application, etc.. Through pharmaceutical technology transformation, both parties will enhance their new power in innovation of R&D of pharmaceutical and health area, facilitating the construction of Healthy China.



6.3.3 Facilitating school-enterprise cooperation

School-enterprise cooperation is a new trend for promoting industry development, an important mean to achieve win-win situation for schools and enterprises, and also one of the social responsibilities of enterprises. In 2018, Livzon continued strengthening total cooperation with high schools, and recruiting outstanding talents from different fields, which not only helped Livzon to establish a career ladder for talents, also actively introduced high quality education resources and talents for the industry.



6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

Case Sharing: 2nd "Visit to Livzon by doctoral students of renowned universities"

On 29 June 2018, more than 70 doctoral students being selected from more than 140 candidates from more than 30 renowned universities, visited Livzon Industrial Park, where they had first-hand experience of Livzon's journey over the past three decades. They came from Peking University, Tsinghua University, Shanghai University of Finance & Economics, China Pharmaceutical University, Shenyang Pharmaceutical University, Wuhan University, Zhejiang University, Sichuan University, Sun Yat-sen University, and more than ten universities from America, Britain, Korea, Australia, etc., respectively. The senior management of the Company had in-depth exchange and interaction with the doctoral students.

This was the second time Livzon independently held visit to Livzon by doctoral students of renowned universities, and the event will be held again irregularly. We will continue establishing exchange platform between the students and enterprises in collaboration with the institutes, seeking for more in-depth industry-academia research cooperation, opening up the students' career horizons and cultivating them into talents of the modern pharmaceutical industry.



Case Sharing: School of Pharmacy of Jinan University-Livzon Group Education and Internship Base

On 21 June 2018, the opening ceremony of School of Pharmacy of Jinan University-Livzon Group Education and Internship Base was held at the Livzon Industrial Park, where hundreds of tutors and students of School of Pharmacy of Jinan University witnessed the ceremony. After the ceremony, the students visited the Livzon Group exhibition center, traditional Chinese medicine herbarium and the research institute.

The opening of School of Pharmacy of Jinan University-Livzon Group Education and Internship Base was an effective win-win cooperation method, introduced talents with solid skills, while the university acquired a high quality education internship base. The cooperation of Livzon and Jinan University will further promote industry-academia research's integration development.



6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

6.3.4 Intellectual property protection

Livzon advocates self-innovation, and deeply understood the importance of intellectual property protection. The registered trademark, “Livzon”, was recognized as a China Well-known Trademark by the former State Administration for Industry and Commerce, and was also a Guangdong Well-known Trademark. The Company’s risk management head office leads the intellectual product protection project of all products in sale and products in production, in accordance with the Patent Law of the People’s Republic of China and the Intellectual Property Law of the PRC. The risk management head office sends personnel to inspect different sales markets regularly, who are responsible for cracking-down on counterfeits and infringing medicines to ensure the stability of the sales market and safeguarding the rights and interests of the Group.

In 2018, the Company participated in the Leadership Exchange Meeting and Food Safety Crime Prevention Training Seminar held by Guangdong Honor Enterprises & Anti-fake Association, discussed and exchanged experience of intellectual property protection with industry peers. At the same time, we properly commenced the self-innovative development for patents, proactively promoting the establishment of intellectual property protection mechanism.

Case Sharing: The experts from the National Intellectual Property Administration came to Livzon to conduct investigation, research and guidance work

In July 2018, the experts from the National Intellectual Property Administration came to Livzon to conduct investigation, research and guidance work. The investigation group visited Livzon MABPharm Inc. (“Livzon MAB”), and recognized Livzon MAB’s facilities and its continuous exploration and development in biopharmaceutical area.

The Company will place greater importance on the establishment of management mechanism of intellectual property, self-innovative development for patents and enterprise intellectual property right in future, so as to obtain more high standard patents.





6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

Case Sharing: Livzon was awarded the title of “National Model Enterprise of Intellectual Property Right”

In August 2018, the result of “2018 National Model Enterprise of Intellectual Property Right” was released, the Company was recognized as a “National Model Enterprise of Intellectual Property Right”.

“National Model Enterprise of Intellectual Property Right” is the highest honor granted by the Country in respect of the creation, application, protection and management of intellectual property rights by enterprises, which is the highest rating to the management of intellectual property of enterprise given by the Country.

Such honor will motivate us to go forward, Livzon will continue utilizing its advantage of intellectual property rights, strengthening the improvement and innovation of technology, and enhancing the Company’s core competitiveness.



6.3.5 Establishment of responsible supply chain

Supply chain is an important sector in the Company’s operation, and the quality of the products and services of Livzon is also closely related with the suppliers. We strive to establish long-term and win-win cooperation relationship with suppliers and business partners.

Supplier management system

We established a series of supply chain management system such as Procedure for Standardized Supplier Management, Procedure for Supplier Audit Management, Code of Practice for Onsite Supplier Quality Audit, List of Qualified Material Suppliers and Management Measures of Material Procurement (for trial implementation), in accordance with relevant laws and regulations such as the Company Law of the People’s Republic of China and Contract Law of the People’s Republic of China.

In order to establish a standard management procedure for the audit and approval of materials supplier and to ensure that the purchased materials are in compliance with the standards to secure product stability, the Company established the standard management procedure for suppliers, which is applicable for supplier management in areas of raw materials, packaging materials, reagents and consumables used for production. The procedure stipulates the audit responsibilities of each department, provides detailed classification on suppliers and materials, adds new process for assessment and approval of materials suppliers and sets forth detailed requirements for the preliminary selection, audit, approval, appointment and change of suppliers.

6 INNOVATIVE DEVELOPMENT AND WIN-WIN OUTCOMES

In addition, the Company formulated the Audit and Management Protocol for Suppliers and the Operating Manual for On-site Quality Audit of Suppliers to provide guidance for supplier audit and check, and to ensure that the audit work is scientific and effective and the results of which are reliable. Meanwhile, we have prepared the List of Qualified Material Suppliers and the List of Longlisted Material Suppliers for convenient and effective retrieval and review of supplier information, thereby achieving refined management on supplier portfolio.

According to the principle of the transmission and traceability of the quality system, the Company requires each enterprise to make quality commitment through audit term responsibility with Tier 2 suppliers and downstream suppliers when implementing supplier product quality audit. The enterprise shall maintain relative stable suppliers, when there is a change of sources, technology, supplier, equipment, etc., which affects the quality of the product, the enterprise shall review and investigate and report the supporting information about changes in experiment to the upstream customers.

Responsible procurement system

Recognizing the importance of responsible procurement system, Livzon established the Management Measures on Material Procurement (for trial implementation), which optimizes the selection and approval of procurement method, refines procedures for tender and procurement, introduces application and procurement requirement for fixed assets and production materials, as well as conducts supervision and examination on violations of materials management to prevent corruption and misconduct.

The Company also established the Material Management System, defining the warehouse management requirements for purchased materials and standardizing materials management, so as to ensure product quality and supply and enhance overall corporate economic efficiencies

Management system of supplier information

In 2018, for the purpose of further improving the supply chain management system, the Company spent approximately RMB2 million to launch a Supplier Management and Procurement Information Management System (SRM). On top of the basis of improving supplier audit and onsite-investigation, it increased the performance inspection of suppliers, change of information of suppliers, division of suppliers by scope and the control of the procedure of phasing out suppliers, comprehensively improving credit control level of suppliers and the quality of non-production material, achieving the information collaboration of production, supply and sales, and enhancing the programmability and rigour of the management.

Table: Livzon's Suppliers by Location

Location	Unit	Data for 2017	Data for 2018
South China Suppliers	Percentage	29	28
East China Suppliers	Percentage	39	43
North China Suppliers	Percentage	9	10
Central China Suppliers	Percentage	7	7
Northeast Suppliers	Percentage	2	2
Northwest Suppliers	Percentage	10	6
Southwest Suppliers	Percentage	3	3
Overseas Suppliers	Percentage	1	1
Total no. of Suppliers	Suppliers	1,889	1,836



7 ENHANCING QUALITY AND UPHOLDING SAFETY

In 2018, Livzon continued to uphold the lifeline of product quality and offered effective and supreme products to doctors and patients. Apart from drug quality and user safety, we also place great importance to staff health and safety. We regard production safety as the red line that cannot be crossed and put priority on employees' health and safety.

7.1 ENHANCING QUALITY

Providing better products for customers is a long-standing mission of Livzon. We have established a comprehensive management system for product quality responsibility and exercised strict control over every aspect of pharmaceutical manufacturing. We also give due consideration of customers' needs and optimize the customer service and complaint handling mechanism to deal with clients' feedback and suggestions, so that they can enjoy safe and effective products and services.

7.1.1 Quality assurance

Providing better high quality products for customers is the idea Livzon upholds. We established the Quality Management System, Standard Operating Procedure and other stringent rules in accordance with Drug Administration Law of the People's Republic of China, Good Manufacturing Practices for Pharmaceutical Products, Good Supply Practice for Pharmaceutical Products, Pharmacopoeia of the People's Republic of China, Administrative Measures for Drug Registration and other relevant quality standards, which covered drug R&D, clinical research, commercial production and other aspects. As a result, quality assurance works can be carried out in an orderly manner.

The Company strives to ensure product effectiveness, safety, stability and consistency, and to safeguard medicine safety by the internal quality control system. We fully inspect every product batch for each quality control inspection item. Thus, products are put up for sales only when the quality requirements are satisfied. At the same time, the Company implemented the authorized quality personnel system. The authorized quality personnel is in charge of the release of each product batch and only releases products after reviewing all aspects of product manufacturing process and making sure that the quality of products to be delivered meets the Good Manufacturing Practice and other relevant regulations. The quality assurance head office collects quality information and product quality complaints from all subsidiaries of the Company on a regular basis, and uses such data to form report for submission to the management.

Mature quality control system is an important basis of medicine quality. In 2018, Livzon continued promoting the Good Manufacturing Practices for Pharmaceutical Products (GMP). Currently, 4 preparation enterprises under the Company have 31 production lines passed the GMP certification; 5 bulk medicines enterprises have 28 products passed the GMP certification, and also 11 products passed the GMP certification for veterinary medicines.

Based on the instruction of GMP standards system, through establishing normalized quality audit, the Company continues increasing its quality inspection standards, further safeguarding the quality of the products. On the basis of regular and routine quality audit, the quality assurance head office of the Company carries out spot check audit on normalization of preparation enterprise and special quality audit on consistency evaluation products, new products and major products, which further increases the effectiveness of quality control.

In 2018, the Company carried out 31 audits on each of its subsidiaries, including 12 regular inspections, 9 on spot check inspections, and 10 other inspections. The Company completed the whole coverage of quality audit of its subsidiaries, effectively identified the potential risks the enterprises were exposed to, placed more importance on the discovery, warning and instruction for ratification of high risk area during the monitoring work, further promoting the effective operation of quality control system of enterprises.

7 ENHANCING QUALITY AND UPHOLDING SAFETY

At the same time, based on CNAS-CL01: 2018 “Accreditation Criteria for the Competence of Testing and Calibration Laboratories” and other applicable requirements, the quality laboratories of Livzon Pharmaceutical Factory comprehensively upgraded the operation procedures and equipment and facilities of the laboratories, which passed the regular evaluation of CNAS, ensuring that the Company possessed the technology for carrying out inspection according to internationally recognized standards.

7.1.2 Product responsibility

Livzon places great importance on product quality, and strives to produce specialty medicines that lead in the domestic market and rank among the top in the world. As product quality is the most important inspection criterion for entering standardized markets, the Company upholds the operating idea of “parallelism of three aspects: safety and environmental protection, quality, and cost”, continuously strengthens the establishment of internal quality control system, fulfills the standards of domestic and foreign medicine quality in a timely manner, and proactively commences the reporting of products in standardized markets.

In the year, the quality assurance head office conducted 1 spot check inspection to the bulk medicine production enterprises of the Group, 7 audits in total; conducted 8 spot check inspections and 8 special inspections to the preparation enterprises, 16 audits in total; and conducted 8 inspections on other subsidiaries such as R&D enterprises.

Currently, 15 bulk medicines have passed internationally accredited on-site inspection and obtained 20 internationally accredited certificates (in which: 7 FDA on-site inspection products and 7 CEP certificate products). 36 products completed more than 200 project registrations in 77 countries (regions).

7.1.3 Customer service and feedback

Responsible sales

Medicines are crucial for public health. During the promotion of products or services, Livzon strictly complies with the provisions required by the PRC Advertising Law, Drug Administration Law of the People’s Republic of China, the PRC Implementation Provisions on the Administration of Pharmaceuticals, Provisions on the Administration of Pharmaceutical Directions and Labels, State Food and Drug Administration Decree No. 2 and relevant laws and regulations and standards, established comprehensive internal management system, ensured the promotion of medicines in every channels complied with laws and regulations, ensured the truthfulness, fairness of label contents and make sure they are easy to understand. The Company upholds responsible sales to safeguard medicine safety.

Customer privacy

Livzon strictly protects customer privacy and maintains full compliance with applicable provisions in the Constitution of the People’s Republic of China, the General Principles of the Civil Law of the People’s Republic of China and the Tort Liability Law of the People’s Republic of China regarding protection of personal information. This is to protect customer privacy, defend trade secrets and safeguard clients’ rights. In 2018, there were no complaints on infringement of customer privacy or loss of customers’ information, no complaints from regulators and no complaints on customer privacy received from external individuals or institutions or confirmed by external institutions

Customer feedback

Livzon places great emphasis on complaint and suggestion from the customers, and properly addresses complaints and suggestions from each channel. We established Quality Complaints Management System, personnel of quality control department is in charge of registering, evaluating, investigating and addressing the complaints in respect of quality, and find out the cause in time, at the same time, report the result of the investigation and treatment to the complainant by way of phone call or by post, being responsible to every cases, and make detailed record. In 2018, the Group responded and addressed 100% of complaints from customers.



7 ENHANCING QUALITY AND UPHOLDING SAFETY

At the same time, the Company conducted surveys on its customers, satisfaction in respect of quality of medicines, performance in contract, packaging, staff attitude, etc., according to the internal requirements, comprehensively understanding the suggestions and complaints from customers regarding the Company's products and services from different perspectives. The result of 2018 satisfaction survey shows that the performance of the Company from multiple perspectives increased as compared with previous years, in which satisfaction in work process and staff attitude is 99.5%, and satisfaction in promptness of delivery of goods is 98.9%.

Product recall

The Company is fully aware of the importance of product recall, and has formulated administrative measures such as the Substandard Pharmaceutical Products Management System, the Adverse Drug Reaction Reporting and Monitoring Management System, the Recall Medicine Management System as well as the Medicine Trace back Management System, pursuant to the Administrative Measures for Drug Recalls. We have a three-tier drug recall mechanism in place based on the severity of potential drug safety hazards. Prior to the recall, we will establish a detailed recall plan and inform the sales companies and customers about the suspension of sales and delivery of drugs. At the same time, we quarantine the inventory and report to the drug administrative authorities as required. We also recall the drugs from distribution channels at all level, take stock, inspect and accept the products and return the drugs to the manufacturers pursuant to the product return procedure. In order to ensure the traceability of sold drugs, we establish and maintain complete sales and purchase record. We also actively cooperate with drug manufacturers or drug administrative authorities in the relevant investigation.

During the year, there was no sold product of the Company being recalled because of safety or health risks.

Case Sharing: Reported the voluntary stop of producing Terfenadine Paracetamol and Pseudoephedrine Hydrochloride Tablets in time

On 4 December 2018, the Company announced the "Explanation Announcement Related to Terfenadine Paracetamol and Pseudoephedrine Hydrochloride Tablets", stating that the National Medical Products Administration required stopping the production of Terfenadine Paracetamol and Pseudoephedrine Hydrochloride Tablets for sales, and the Group had voluntarily stopped the production since December 2013, therefore there was no need for product recall.

Case Sharing: the 2018 simulated product recall of Livzon Group Livzon Pharmaceutical Factory

According to the medicine recall management procedure, to ensure the effectiveness of the recall procedures, in December 2018, Livzon Group Livzon Pharmaceutical Factory conducted a simulated recall drill in respect of a batch of Urokinase for Injection. During the recall process, departments such as the production department, the QA department, the quality department, the QC department as well as the supply chain department cooperated together, followed up the procurement and inventory of distributors within 48 hours, ensured the effective tracing and recall of such batch of products by the Company.

7 ENHANCING QUALITY AND UPHOLDING SAFETY

7.2 UPHOLDING SAFETY

Livzon always places great importance to the health and safety of the employees during operation, dedicates to the safety responsibility, continues improving the safety management, creates a work safety atmosphere, reduces the safety risk as much as possible, safeguarding the health and safety of the employees.

7.2.1 Safe production

Livzon strictly abides by requirements of national laws and regulations, including the Production Safety Law of the People's Republic of China and the Law on the Prevention and Treatment of Occupational Disease of the People's Republic of China, launched and revised rule systems such as Overall Requirement of EHS Management System of Livzon Group, Measures for EHS Accident Administration of Livzon Group, Regular EHS Meeting and Spot Check Management System of Livzon Group, Administrative Measures for EHS Information and Communication of Livzon Group and Administrative Procedure for Internal EHS Audit of Livzon Group, which covered the management structure of safety and rules of procedure, contingency plan, inspection method, measures of accountability, etc..

The chief engineer office of the headquarters of the Group established the EHS department, which has dedicated staff for monitoring the management of the occupation health and safety of each enterprise of the Group; each enterprise has an occupational health and safety department in place, which has dedicated staff responsible for the management of safe production and occupational health.

Safe production policy

Livzon adheres to the safe production policy of "safety comes first, prevention as primary concern, integrated governance, total participation, risk control and continuous improvement", upholds the safety management idea of "safety is a must for production and safety promotes production", achieves safety-centered production, improves the on-site management, promotes the standardization of management, enhances the comprehensive qualities of the employees, including safe production into the Company's corporate culture.

Safety risk identification

Livzon formulated the Risk Sources Identification and Opportunities Evaluation Requirements of Livzon Group, which accurately identified the risk sources of occupational health and safety for each unit (including organizations and personnel work on behalf of the Company) in production and operating activities, products and services, assessed the degree of risks and opportunities, formulated the tier control measures, achieved safety management based on risks, effectively prevented incidents related to occupational health and safety.

Safety risk prevention and risk assessment

Livzon requires its subsidiaries to actively establish emergency response plan to strengthen major safety risk control, refine risk control complementary measures, complete the preparation of scenario construction plan covering comprehensive contingency, special contingency and on-site handling; by combining with the actual situation, determine on-site contingency handling template according to Guidelines for enterprises to develop emergency response plan of National Standards, ensure the emergency response plan is target-oriented and effective; and provide training for relevant personnel and conduct emergency response plan drills, strive to achieve a safety control system with diversified joint governance.

At the same time, the Group requires its subsidiaries to conduct regular risk assessment in respect of the production procedure of factories, venue of production, warehouses, construction sites, etc., where risk is found, ratification shall be implemented within the time specified, and subsidiary shall report the progress and result of ratification to the Group for monitor and control.



7 ENHANCING QUALITY AND UPHOLDING SAFETY

7.2.2 Occupational health

Livzon considers the health of employee as precious wealth, if actively adopts measures to lower or reduce the employees' exposure to occupational risks, and provides a healthy and safe working environment for employees.

Occupational health system certification

The Group requires each Second Grade Corporations establish their own EHS management system in accordance to OHSAS180001 Occupational Health and Safety Management system, formulate occupational health policy, protect employees from injuries or health risks, and provide safe and healthy working environment for the employees. As at the end of 2018, 8 enterprises under the Group had passed OHSAS180001 the certification of Occupational Health and Safety Management System.

Enhance safety awareness

The Group continues strengthening the promotion of health and safety and the occupational health and safety training of employees, propagates the health and safety culture, creating a good safe production atmosphere. All new employees are required to participate in safety training; personnel in special position should have professional qualifications or professional institution will be invited to give training; and management personnel should participate in health and safety training regularly. Through promoting safety education for different levels and types of employee, the overall health and safety quality of employees will be enhanced.

Case Sharing: Livzon Hecheng proactively held safe production education training

In 2018, Zhuhai FTZ Livzon Hecheng Pharmaceutical Manufacturing Co., Ltd. ("Livzon Hecheng") established the annual safe production education training program, of which the pass rate of new employee safety education training was 100%, and 100% of the special operational personnel and safety management personnel carried their ID to work. 2 factory-level emergency response drills were carried out, experts of laws and regulations, fire safety and occupational health were invited to provide training for 9 times. Department-level safety trainings for each department/workshop were provided twice a month, and comprehensive education training files were established.



7 ENHANCING QUALITY AND UPHOLDING SAFETY

Case Sharing: The headquarters carried out annual fire safety drill for precaution

In March 2018, the Zhuhai headquarters of the Company carried out annual fire safety drill. In only several minutes, all employees inside the executive, research and development building swiftly rallied at the rally point on the plaza. During the drill, demonstrations and exercises of CPR, wound dressing and fire extinguishing were carried out, providing a safety lesson for employees to learn first aid, self-rescue, and how to properly extinguish fire, let the employees acquired necessary first-aid skills outside their routine hard work, and placed work safety on the top.





8 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

Environmental protection has become a crucial factor to be considered during the development process of enterprises. Livzon strives to uphold the goal of “green production, environmental protection and energy saving”, through more comprehensive environmental protection policies, more optimized production methods and more advanced environmental protection technologies, promoting the harmonious development of both the operations and environment.

8.1 GREEN MANAGEMENT

Livzon and its subsidiaries strictly comply with laws, regulations and standardization documents related to the prevention of air, water, soil and noise pollutions such as the Environmental Protection Law of the People’s Republic of China, the Law of the PRC on Prevention and Control of Pollution from Environmental Noise as well as the Environmental Protection Tax Law of the People’s Republic of China, and also strictly comply with relevant requirements of the environment management system. From the perspectives such as environmental protection organization, environmental protection policy and environmental protection promotion, the Company continuously refining the environmental protection management in the life cycle of industry chain, strengthening the environmental risk prevention and monitor, advocating green development, to ensure the production and operation of the Group comply with the national standards.

8.1.1 Environmental management policy

Livzon took into account of the features of the pharmaceutical industry, formulated the Overall Requirements of EHS Management System of Livzon Group to strengthen the instruction and supervision of the headquarters and the responsibility for materialization of its subsidiaries.

Organizational support

Livzon established EHS management department for overall administration at the headquarters, which has professional dedicated personnel responsible for the EHS work of the Company and its production units. The EHS management department is responsible for system management, supervision and instruction for each production unit in respect of environmental protection work such as energy saving and emission reduction, wastes discharge, environmental protection investment as well as development of environmental protection technology.

Management system

Livzon requires the production units of subsidiaries to strictly execute ISO14001 Environmental Management System, at the same time guided each subsidiary to establish, implement and maintain a standard EHS management system under the plan-do-check-act (PDCA) operating model.

Communication mechanism

Livzon has formulated Administrative Measures for EHS Information and Communication of Livzon Group, regularly collects EHS information of each production unit, understands the operation of occupational health and safety system of each unit, reports EHS incident and other indicator information in a timely manner, identifies EHS risk control, and at the same time, ensures the continuous improvement of the management performance.

8 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

8.1.2 Environmental risk identification and counter measures

The government increased supervision in environmental regulations, in view of more stringent supervision of environmental protection indicators and total pollutants emission permission quota, the Group correspondingly push forward higher standards of environmental risk management and counter measures. We launched the Identification and Assessment Requirements of Environmental Factors of Livzon Group, Measures for EHS Accident Administration of Livzon Group and Guidelines for Change of EHS Control of Livzon, strengthened the monitor of environment and increase the investment in environmental protection, strictly constructed management project for environmental protection, continuously enhancing the prevention standards of environmental risk of the Company

- Identification of environmental risk factors. Subsidiaries accurately identified the environmental factors in production and operation activities, products and services of each unit (including organizations and personnel work on behalf of the Company), assessed the degree of risks and formulate the tier control system to effectively prevent environmental risk accidents.
- Increase of investment in environmental protection. The Company and its subsidiaries increased the investment in building and upgrade and transformation of emission reduction facilities for waste water and air pollutants on the basis of ensuring the normal and effective operation of various existing environmental protection facilities.
- To strengthen the capability to handle emergency situations. Each second grade unit formed its emergency response leading team and work team, held professional training and emergency response drill regularly, enhanced the capability of environmental risk prevention and capability to handle emergency situations. All key pollution emitted units announced by the national environmental protection departments of the Group also upheld the principle of "prevention rather than cure, on-alert; classified management, level-by-level response; cooperation between departments, level-by-level responsibility; prevention by scientific method, effective handling ", prepared Environmental Emergency Response Plan of the Company, ensured the major risk were under control.
- To refine the proposal for the monitor of environment. Key pollution emitted units strictly implemented relevant provisions and requirements of competent authorities of the local government, commenced self-monitor for pollutants according to the actual situation, achieved effective monitor for sources of pollutants; at the same time, disclosed the result of monitor of environment, and were subject to the supervision of administrative authorities of the government and public.

Case Sharing: Cooperation in the drill, enhance risk prevention awareness and capability to handle emergency situation

In 2018, Livzon Hecheng, a subsidiary of Livzon Group, collaborated with relevant government departments such as District Office of Safety Committee, District Office of Emergency Committee, District Party and Government Office, District Safety Bureau as well as Environment Construction and Protection Bureau carried out the comprehensive emergency response and rescue drill for hazardous chemical leakage incident, with the prevention and alert system of the emergency rescue for hazardous chemical production safety incident and organization, leadership, and emergency measures and relief work as major topic. By conducting the drill, the capability of enterprises to self-rescue was increased and will reduce the pollution to the environment.





8 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

In 2018, penalties were imposed on a subsidiary of Livzon for 3 environmental incidents. The subsidiaries concerned resolved the relevant problems and completed comprehensive ratification from perspectives of environmental management system, prevention measures, technology and equipment, strived to avoid recurrence of material environmental incidents.

Case Sharing: Focused on the problem, carried out comprehensive environmental ratification

In November 2018, Pingluo County Environmental Protection Bureau and Shizuishan Environmental Protection Bureau fined Livzon Group (Ningxia) Pharmaceutical Manufacturing Co., Ltd. ("Ningxia Pharmaceutical") RMB 300,000 and RMB 200,000 respectively, and Ningxia Pharmaceutical has fully paid up the fines. Reason of penalty: Methylbenzene containers in Mevastatin project refining workshop of Ningxia Pharmaceutical were on fire. During the fire extinguishment, as diversion channels were not constructed according to the requirements under the environment valuation, the factory did not have leakage prevention measures that part of the sewage containing Methylbenzene flushed into the green area of the factory and leaked into the open space outside of the east wall of the factory, which polluted the soil. After the incident, the contingent plan and related emergency measures were not carried out in time.

Corrective measures: (1) recycle the sewage leaked out of the wall by the sewage recycling system, and entrust qualifying unit to handle the polluted soil with the standard of handling dangerous goods; (2) plan for the constructing of emergency diversion channels in the solvent-using 201 workshop, and use together with the emergency pool of volume of 1,600m³; (3) set up monitor points at the incident location, and monitor the underground water and soil according to the requirement, after one month, the data shows the underground water and soil is not polluted; and (4) revise the contingency plan for environmental emergency incident and carry out training and drills. Result of the corrective measures: data shows the underground water and soil is not polluted; after the construction of the diversion channels, in case of accident, water can all be collected and handled to avoid pollution to the environment.

In December 2018, Shizuishan Environmental Protection Bureau fined Ningxia Pharmaceutical RMB 100,000, and Ningxia Pharmaceutical has fully paid up the fines. Reason of penalty: the average emission of particulate matter is 69.8mg/m³(Standard limit is 30mg/m³), which exceeds the emission limit in the Table 3 of the "Standards for the Emission of Air Pollutants by Boilers" (GB13271-2014) by 1.3 times.

Corrective measures: replaced the damaged de-dusting machine bag, cleaned the stucco deposited in desulfurization tank, and planned for the transformation of the smoke extraction sprinkler system (as the ending part of the desulfurization and de-dusting system). Result of corrective measures: boiler gas particulate matter emitted now can be ensured to meet the emission standard.

8 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

8.2 GREEN PRODUCTION

We always bear in mind not to deplete the resources while using them. In the course of operation, Livzon transformed and upgraded the technologies and updated the environmental protection equipment, through a reasonable emission control and continuous updating of technology, promoted clean production and reduction in energy usage, strived to reduce the impact brought by production and operation on the environment.

8.2.1 Use of energy and resources

Responsible use of resources and continuously increase in efficiency of use of resources are crucial for sustainable development. In accordance with relevant provision as required by Energy Conservation Law of the People's Republic of China, Livzon continuously improves its energy management measures, increases the investment in environmental protection, comprehensively enhances the efficiency of use of energy and resources, and reduces emission of greenhouse gases through improving the management and enhancing innovation in technology.

Improving the management

The Group clearly requires its subsidiaries to establish annual environmental protection target and plan as the main basis for the annual EHS evaluation, to effectively control the use of resources.

Innovation in technology

In respect of use of energy, the Group increases investment in energy saving facilities and introduces green production technology and equipment. We gradually phase out energy-intensive facilities and update energy saving and environmental protection technologies, such as centralized energy supply as well as water cycling, to extensively explore energy saving possibilities and improve the efficiency of energy use in production and operation.

In respect of use of water, the Group mainly uses municipal water, and does not have any problem of acquiring suitable water source. The Group always places great importance on whether the use of water is reasonable. On one hand, the Group plans the use of water starting from the water sources, through measures such as enhancing the efficiency of use of cooling water to reduce the use of water resources. On the other hand, the Group recycles and reuses steam condensate water as well as post-purification primary and secondary concentrated water, enhances the efficiency of recycle and reuse of water, to make good use of water resources.



8 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

Table: Energy and resources consumption of Livzon¹

Indicator	Unit	Data for 2017	Data for 2018
Gasoline	liters	257,034.4	286,800.3
Diesel	liters	1,873,443.6	506,185.9
Coal	tonnes	142,748.0	63,140.0
Natural gas	0'000 cubic meters	748.3	973.9
Steam purchased	tonnes	173,912.4	237,117.8
Electricity purchased	kWh	357,254,498.0	407,384,975.0
Electricity consumption per RMB0'000 of operating income	kWh/RMB0'000	418.8	459.8
Water consumption	tonnes	6,588,021.0	6,416,763.6
Water consumption per RMB0'000 of operating income	tonnes/RMB0'000	7.7	7.2
Paper packaging material used	tonnes	4,523.3	3,331.3
Paper packaging materials per RMB0'000 of operating income	kg/RMB0'000	5.3	3.8

Table: Greenhouse gas emission of Livzon²

Indicator	Unit	Data for 2017	Data for 2018
Total greenhouse gas emission	tonnes of CO2 equivalent	599,464.5	454,715.8
Greenhouse gas emission per RMB0'000 of operating income	tonnes of CO2 equivalent/ RMB0'000	0.7	0.5

Case Sharing: Limin Pharmaceutical recycled and reused water resources

In 2018, Livzon Group Limin Pharmaceutical Manufacturing Factory ("Limin Pharmaceutical"), a subsidiary of Livzon, carried out technological upgrade, targeted water tanks, pipes and valves for storage of condensate water and soft water to recycle and reuse water use in production, and approximately 72,100 cubic meters of water were saved annually. The measures adopted included:

- reuse and recycle the condensate water (temperature of 90°C-100°C) as soft water in boiler, saved water and reduced consumption of natural gases at the same time; and
- substitute pipe water with purified primary concentrated water produced by water purification machine as cooling water; substitute pipe water with purified secondary concentrated water produced from water purification as water use in production, to enhance the amount of water being recycled.

¹ The disclosure scope of energy consumption of Livzon for 2018 is the energy consumption of industrial process of Livzon's manufacturing enterprises.

² The disclosure scope of Livzon's greenhouse gas emission for 2018 is the total greenhouse gas emission of industrial process of Livzon's manufacturing enterprises.

8 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

Case Sharing: Limin Pharmaceutical reduced the use of electricity and steam through technological upgrade project

In 2018, Limin Pharmaceutical, a subsidiary of Livzon, reduced the use of electricity and steam through measures such as increased the number of high performance pressure-regulating heat energy recycle system and recycled equipment and facilities such as storage tanks, pipes and valves. 1,100 cubic meters of steam and 125,000kWh of electricity could be saved annually. The measures included:

- The use of steam for Chinese medicine extraction workshop accounted for more than 50% of the steam used in the factory, and the steam using equipment in the workshop were mainly single effective concentration container. Through adding high performance pressure-regulating heat energy recycle system (HPR) for the steam using equipment, the energy saving efficiency could reach 35-40%; and
- the cooling water for air-conditioning in office was consolidated into the central air-conditioning system to reduce use of electricity.

8.2.2 Emission management

The Group strictly complies with the Atmospheric Pollution Prevention and Control Law of the People's Republic of China, the Water Pollution Prevention and Control Law of the People's Republic of China, Law on the Prevention and Control of Environmental Pollution by Solid Waste of the People's Republic of China and local laws, regulations and standards, strictly implements the "Three-Simultaneity" policy, ensures its subsidiaries to establish sewage treatment facilities and exhaust gas treatment facilities, lower the emission of pollutants to protect the nearby environment.

Exhaust gas management

The Group continuously carries out the reduction of total pollutants, through measures such as renovation of natural gas boilers as well as substitution of bio-fuel boilers with natural gas boilers, it reduces the emission of carbon dioxide, nitrogen oxides and smoke and dust.



8 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

Case Sharing: Dedusting rate of workshop enhanced by promoting new dedusting technology

The antistatic effect of filter bags and filter cartridges was relatively low, the risk of explosion caused by electrostatic existed when large amount of dust accumulated after a long period of operation. In 2018, Livzon Group Livzon Pharmaceutical Factory, a subsidiary of the Company, invested RMB0.383 million to upgrade the debusting system from the original filter cartridges/filter bag dedusting screening system to sintered plate dedusting screening system, which reduced the needs for cleaning and wearing of the filter cartridge dedusting screening system. Moreover, sintered plate dedusting screening system could utilize reverse blowing dedusting to remove dust on the surface of the screening system, reduced dust accumulation and reduced the risk of explosion.



Sewage treatment

The Group continuously improves the renovation of sewage treatment facilities to reduce the emission of water pollutants. In 2018, Shanghai Livzon Pharmaceutical Manufacturing Co., Ltd., a subsidiary of the Company, introduced sewage integrated treatment facilities, greatly lowered the Chemical Oxygen Demand (COD) in the enterprise's water pollutants and the total emission of nitrogen. The average concentration of COD and total nitrogen after the treatment were 96% and 95% lower respectively.

Waste management

The Group strictly complies with requirements under relevant laws and regulations, including Technical Specifications of Collection, Storage and Transport for Hazardous Waste and Administrative Measures on Hazardous Waste, implements measures on preventing solid waste pollution, recycles, treats and handles the solid waste by categories, according to the principle of "reduction, resource utilization, non-hazardous". In respect of hazardous waste, we insist on starting from each sector that produces hazardous waste, effectively control the storage, transfer and transport of hazardous waste through the administrative measures, to ensure the hazardous waste is effectively handled by third party qualifying companies; in respect of non-hazardous waste, we reasonably classify them from the source and utilize reusable resources to enhance the reuse value of the waste and reduce end waste.

8 GREEN PHARMACEUTICAL OPERATION FOR ENVIRONMENTAL PROTECTION

Case Sharing: Consolidated utilizing medicine residue to achieve win-win situation

Limin Pharmaceutical, a subsidiary of the Company, reasonably classified and distributed medicine residue to the nearby farms and residents to let them make good use of the medicine residue. The surrounding farmers utilized Chinese medicine residue to cultivate mushrooms and as fertilizers; the farms utilized Chinese medicine residue as supplements for animals; feedmills utilized Chinese medicine residue to make feeds, etc., which achieved the effective use of medicine residue.

Table: Livzon's pollutant emission³

Indicator	Unit	Data for 2017	Data for 2018
Industrial wastewater	tonnes	4,612,173.0	4,329,594.0
Chemical Oxygen Demand (COD _{Cr})	tonnes	471.6	366.2
Ammonia nitrogen	tonnes	24.1	27.8
Nitrogen Oxides (NO _x)	tonnes	311.7	133.6
Sulphur Dioxide (SO ₂)	tonnes	96.3	91.2
Medical waste (HW02) and waste medicine (HW03)	tonnes	10,476.5	12,646.5
Other hazardous waste	tonnes	290.0	489.3
Total hazardous waste	tonnes	10,766.5	13,135.8
Hazardous waste per RMB0'000 of operating income	kg/RMB0'000	12.6	14.8
Total general industrial waste	tonnes	106,430.7	98,545.9
General industrial waste per RMB0'000 of operating income	kg/RMB0'000	124.8	111.2

³ The disclosure scope of Livzon's pollutant emission for 2018 is the total pollutant emission of industrial process of Livzon's manufacturing enterprises.



9 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

Livzon always upholds the idea of people-oriented mutual development. Since establishment, we have adhered to the employment guidelines of “Learning virtues from others, maintaining harmony despite differences”. We have fully respected the career development of staff, proactively protected their legitimate rights and interests, and continuously improved their working environment. During the year, the Company maintained harmonious relationship with its employees.

9.1 PEOPLE-ORIENTED DEVELOPMENT

Livzon actively expands development channels for employees and shows them the occupational development targets. We have established a united and standardized occupation system, established different promotion and development channels for different employees, fully considered factors such as employees’ talent, background as well as preference, to let employees feel a sense of belonging and trust. At the same time, the Company has combined the requirements of strategic development and organizational capability, established a mature training management system, and established “Livzon Business School”, which aims to provide all-rounded training for employees.

9.1.1 Recruitment and labour

In respect of recruitment, Livzon strictly complies with relevant laws and regulations, including the Labor Law of the People’s Republic of China, the Labor Contract Law of the People’s Republic of China as well as Provisions on the Prohibition of Using Child Labor, and formulated management regulations rules such as the Basic Standards of Employment Management System as well as Recruitment Management System of Livzon Pharmaceutical, signed labor contract with employees in accordance with the law, adhered to legal employment, upheld the principles of “anti-discrimination” and “diversity”.

Prohibition of child labor and forced labor

In order to ensure no child is employed, applicants are required to produce their identification documents for verification. During the year, all employees of the Company were in compliance with the minimum employment age stipulated in laws. There was no child labor or forced labor.

Anti-discrimination

We treat all employees equally in terms of recruitment, remuneration and promotion, regardless the ethnicity, race, marital status, gender, region and religion. Employees are entitled to equal rights

Diversity

Our employees are of different ethnicities and come from different regions. They have diverse educational background and there is no gender and age requirement.

9 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

Basic standards of employment system

The basic standards of employment management system of the Company are as follow:

1. The Company informs the job applicants of the job duties, condition, location, occupational hazards, details of production safety, remuneration and other information at request during recruitment.
2. The Company does not employ job applicants with subsisting employment contract with other employers and those whose health condition, working attitude, professional technical level and working performance do not meet the employment requirements.
3. The Company enters into the employment contract with the employee within the first 30 days of employment pursuant to the Labor Law.
4. During the probationary period, employees are entitled to wages no less than 80% of the amount agreed in the employment contract and not lower than the local minimum wage.
5. The Company treats all employees equally. Their employment, remuneration and promotion are not biased against ethnicity, race, nationality, gender, religion, age, sexual orientation, political alignment and marital status.
6. The Company does not engage in forced labour by means of violence, threat or illegal restriction of personal freedom, or endanger the personal safety of employees by instructing and ordering them to carry out dangerous operation in breach of regulations.
7. The Company offers employees monthly salary, year-end double pay and allowances. We also pay housing funds and social insurance for those who have signed employment contracts, and distribute welfare fund to employees, such as festive allowance on the festival and birthday allowance on their birthday. Festival holidays, annual leaves, sick leaves, personal leaves and marital leaves are all in compliance with the requirements of the PRC.
8. In respect of incentive measures, besides publishing recognition essay and awarding honor certificates, the Company distributes discretionary economic or welfare incentives to the employees and records in their profiles. In respect of the penalty measures, the Company gives warning, demerit and major demerit to and terminates employment contract with those violating organizational discipline and hampering operation management.
9. The Company provides evidence for release or termination of an employment contract at the time of such release or termination.



9 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

In 2018, the Company, its wholly-owned subsidiaries and controlling subsidiaries had a total of 7,671 employees.

Table: Livzon's employment data⁴

Category	Indicator	Unit	Data for 2017	Data for 2018
By gender	Male employees	persons	3,902	4,177
	Female employees	persons	3,061	3,494
By age	30 and below	persons	3,003	3,344
	31-49	persons	3,521	3,906
	50 and above	persons	439	421
By region	Mainland China	persons	6,951	7,654
	Hong Kong, Macau, Taiwan	persons	1	2
	Overseas	persons	11	15
Total number of employees		persons	6,963	7,671
Employee turnover rate ⁴		percentage	19	19.25

9.1.2 Remuneration and promotion

In respect of remuneration, to reflect incentive remuneration, employee remuneration comprises of two portions: fixed income and variable income. Variable income was affected by performance of the Company and individual performance, which has fully boosted the morale and initiative of staff so as to achieve the Company's goal of promoting sustainable development.

During the year, the total wages, bonuses, allowances, compensation, welfare, housing funds and social insurance paid to the employees by the Group amounted to RMB876.88 million (31 December 2017: RMB657.14 million).

In respect of promotion, Livzon adheres to the principles of open competition and talent mobility in an orderly manner. The Company formulated the Measures of Management of the Administrative and Technical Personnel Ranking System, which established the dual development channels for administrative personnel and technical personnel, expanded the promotion channel for employees and enabled employees to give full play to their strengths. Adopting the merit-based approach, we promote competent employees and replace underperforming ones in accordance with the rotation and elimination mechanism. Management resources are shared within the Group for orderly mobilizing of management members and business development needs.

Furthermore, to further establish and improve the Company's long-term incentive mechanism, attract and retain outstanding employees, fully motivate the directors, senior management, mid-level management and relevant core personnel of the Company and effectively integrate Shareholders' interests, the Company's interests and individual interests of the core team members, on 5 September 2018, the Company held a general meeting to consider and approve the 2018 Share Options Incentive Scheme (Draft) of the Company and its summary (the "2018 Share Options Incentive Scheme"). And on 11 September 2018, 17.4755 million share options ("First Grant") were granted to 1,050 incentive participants at an exercise price of RMB47.01 per A Share. On 28 September 2018, the First Grant has completed registration. The incentive participants under the First Grant were directors, senior management, mid-level management and relevant core personnel of the Company.

⁴ Calculation of employee turnover rate: employees turnover/(total number of employees at the beginning of the period+new recruits)

9 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

9.1.3 Development and training

In respect of development and training, Livzon has established Training Management System of Livzon Group to standardize the training management, enabled the systemization and institutionalization of employee training, to ensure the effective implementation of talent strategy of the Group.

In 2018, the Company continued to place great importance on the development and cultivation of talents of the Company, developed the diversified and all-rounded training system with Livzon Business School as the core. By fully integrating internal and external resources, our training system motivated and encouraged staff to learn, while boosting their belongingness. This facilitated the full and comprehensive development of our human resources and equipped our talent pool with greater competitiveness.

Being a cradle for cultivation of Livzon's talents, Livzon Business School holds training program annually to explore and promote a large amount of management talents for the Company. In 2018, on top of the mature training system, Livzon Business School particularly launched the "training camp" project, combined theories and practices, through providing systematic periodic offline management skill learning, at the same time established online learning platform, provided diversified learning channels for trainees, further strengthened the operating idea of mid and high-level management, and enhanced the Group's consolidated management capability for high potential talents, which was beneficial to the development of talents of Livzon.

According to the strategic needs of the Group and the classification of talents, the training system of the Company adopts a diversified online and offline combined training method:

- In respect of offline training, Livzon Business School established 3 new branch schools in 2018. Currently there are 9 branch schools in total, which basically achieved the full coverage of subsidiaries, organized various offline training events:
 - organize visit for management to role model enterprises, human resources training camp, seminar for explanation of government policy and application of internet office system;
 - work-related master (doctoral) degree studies, various professional continuous education and seminars organized in collaboration with relevant universities; and
 - Training for fresh graduates and new employees such as induction training, safety training and training related to laws and regulations.
- In addition to offline programs, in 2018, Livzon also strengthened the development of online programs, provided various diversified management training courses for management of different level, effectively enhanced the efficiency and effect of learning. In 2018, we organized 20 compulsory online courses, mainly by means of videos and animations, the curriculum covered categories such as leadership, self-management, communication, team management as well as innovative management, and the completion rate of the courses were 99.5%. Currently there are more than 2,000 online courses, covered categories such as leadership, management skills, professional skills, industry knowledge, communication and business etiquette, mental and intellectual developments as well as career path planning.



9 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

In 2018, Livzon also carried out all-rounded upgrade in training for new employees. We published new employee guide book, ensured new employees to receive comprehensive tutorial since the beginning of the employment. At the same time, through classifying the trainees, we increased the variety of training courses, invited internal and external good tutors and experts of different fields to give lectures in respect of quality control, production control, safety and environmental protection, financial policy, human resources policy, administration policy as well as information system to new employees, enabled new employees to have a comprehensive understanding of the corporate culture of the Group, learnt professional skills and knowledge and formed a sense of team spirit.

To conclude, currently the Company has developed a diversified and all-rounded employee training system with Livzon Business School as the core.

Table: Data of Development and Training for employee organized by Livzon

Category	Indicator	Unit	Data for 2017	Data for 2018
Total training participants		persons	4,525	5,331
By gender	Male employee	persons	2,560	3,101
	Female employee	persons	1,965	2,230
By gender	Training percentage of male employees	percentage	56.6	58.2
	Training percentage of female employees	percentage	43.4	41.8
Total training hours		hours	194,605	257,088
By gender	Training hours of male employees	hours	106,625	136,257
	Training hours of female employees	hours	87,980	120,831
Average training hours per employee		hours	27.9	33.5
By gender	Average training hours per male employee	hours	27.3	32.6
	Average training hours per female employee	hours	28.7	34.6

Case Sharing: Livzon Business School organized visit to role-model enterprise

In April 2018, Livzon Business School organized two groups of mid and high-level management to visit Alibaba Group, learnt the corporate culture of Alibaba and participated in the seminars with Alibaba's senior staff. Both parties exchange opinions on topics such as integration of pharmaceutical industry and internet and mobile network office. The visit broadened the horizon of Livon's mid and high-level management, absorbed new management idea and method for the Group and enhanced the Group's capability of innovation of management.



9 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

Case Sharing: Meeting with the senior management-orientation training for fresh graduates

On 26 July 2018, the fresh graduates had face-to-face interactions with senior staff in the Livzon grand hall. Senior management such as Mr. Tang Yanggang, the President of the Company, had candid exchange with fresh graduates. They also told interesting workplace stories, gave career tips and shared office advice, which enabled new employees to learn from their insights.



Case Sharing: Livzon Business School organized human resources training camp

In November 2018, Livzon Business School organized the senior management, the director of each unit and the director of human resources to hold the two-day "human resources management training camp". Mr. Fan Xingdong, the expert of industry was invited to be the keynote speaker to give comprehensive and vivid lecture on corporate human resources management, in respect of aspect such as "selection, cultivation, assignment and retaining of talents"

In the training camp, Mr. Tang Yanggang, the President of the Company, pointed out that Livzon was at the critical stage of upgrade development, management of each level should strengthen the introduction of talents, enhanced the training of talents, and properly "kept an accurate inventory of talents", and introduced talent competition mechanism and effective incentive mechanism.



9.2 PEOPLE-ORIENTED LIFESTYLE

Livzon promotes work life balance to the employees, in addition to supporting the employees' career development and safeguarding their legitimate interests and rights, we also organized a series of employee events, and established a wide variety of benefits to attract, motivate and retain talents.

9.2.1 Caring for staff

The Company promotes the interests of employees through staff wellbeing initiatives, Livzon has established and continuously improving a competitive overall benefit system. Our trade union presents birthday and festive allowances every month. Moreover, female employees are entitled to statutory maternity leaves. The Company provides standardized annual health check for employees to let them understand their health status; provides allowances for employees' family member funeral, and provides allowances for employees in need during the Chinese New Year. The Company also provides assistance to disadvantaged and physically-challenged employees through charity fund-raising and earmarking labor union funds. We keep close tab and follow up on them as well.



9 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

To recognize the long-term service of the Group's employees, Livzon also established the Reward scheme for retirement of employee of Livzon Pharmaceutical Group Inc.. For employees who have served the Group for more than 10 years and conducted retirement procedures at the Group, they are entitled to receive a certain reward according to their length of service. The scheme is applicable to all employees of the headquarters of the Group, the Group's wholly-owned subsidiaries established in Zhuhai, Livzon MAB and Livzon Group Vaccine Engineering Inc..

Creating a joyful life for employees and sharing the development outcomes of the Company are always Livzon's development strategies. Livzon places great importance on introduction and retaining of talents, introduced a large amount of top international experts from the industry, and unitedly applied public housing qualification for employees in 2017, successfully applied 31 public housing flats for 31 employees in Zhuhai Jinwan district, aided the employees to enjoy the best housing policy.

In 2018, we expanded the channels to care for employees and promote their interests. In which, the Company presented retirement reward; provided allowances for all employees injured during employment, including allowances for passing away of next of kin, and granted new year subsidies to 24 employees; and presented solatium amounting to RMB110,000 for 2 retired soldiers in need. These actions significantly strengthened the centripetal force and corporate cohesion of the Group, and promoted the continuous development of the Group.

Case Sharing: Donation for soldiers-built up the bonding between army and civilians

On 6 September 2018, at the donation ceremony of the Zhuhai China Association for the Promotion of Patriotism and Support for the Armed Forces, Livzon donated RMB110,000 for two retired soldiers in need. The donation not only showed the caring for soldiers, also embodied the close relationship between army and civilians, also promoted social positive energy, which were beneficial to the construction of a harmonic society.



9.2.2 Cultural and sports activities

Livzon actively and efficiently carries out staff caring events, sincerely cares for employees, provides energetic atmosphere for employees, and enriches their cultural and mental life. In 2018, in order to enhance the cohesion and sense of belonging among staff members, the Group held a number of sports competitions and activities such as joining carnival, which effectively relieved the stress of staff, enriched their life outside work, facilitated the bonds between staff members and created a harmonious working atmosphere.

9 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

Case Sharing: diversified sports events

In 2018, Livzon continued to utilize the organization function of the Group's youths, actively organized a series of events such as male basketball competition, badminton competition, table tennis competition, soccer competition, mountain climbing competition, photography society as well as beauty club, to create a diversified cultural life for the employees.



Case Sharing: Joining carnivals and visiting parks

In 2018, Livzon held a series of carnival events, more than 3,000 employees from subsidiaries in cities such as Shanghai, Ningxia, Fuzhou, Qingyuan, Shaoguan and Pengzhou participated in the activities. At the headquarters in Zhuhai, the outstanding employees from different parts of the Country, the colleagues from marketing department and assisted reproduction department also joined the team of more than a thousand people, which consisted of the employees from the headquarters of the Group and several subsidiaries in Zhuhai, to visit the park together and welcome the new future. Furthermore, the family members of the employees were also invited to participate in all events of "Open Day of Livzon", enjoyed this joyful day with Livzon.

The carnival promoted the work and living mode of "happy working, healthy life", which was beneficial to maintain an optimistic, active and health mind of employees.





9 PEOPLE-ORIENTED MUTUAL DEVELOPMENT

9.2.3 Staff communication

As always, Livzon adheres to the corporate spirits of “practicability, innovation, standardization, efficiency”, and promotes the management philosophies of mutual growth of employees. Through a variety of channels and forms, including corporate magazine, forum, website and WeChat, we promoted corporate culture and value, expanded communication channels for staff and enhanced employees’ wellbeing.

The Company established the Livzon Industrial Park Logistic Management System, formed comprehensive policy and requirements for the management of accommodation, canteen, safety, greenery, cleaning and vehicles, aimed to create a healthy working and living environment for employees, strengthen the communication with employees, standardize the work and enhance the work efficiency.

The Company organized the Workers’ Congress on a regular basis. The congress facilitated timely disclosure of the Company’s operation and system establishment to staff, allowed us to respond to and understand employees’ needs and served as a platform for resolution of corporate system.

In order to improve the communication mechanism for our staff, in 2018, the Company launched a public online account of the support service center to establish a new communication platform to communicate with employees. Through promoting good Samaritans, promoted positive energy of the support service center, fully utilized the platform to collect opinions, and added functions such as food pre-order in the public account; as for offline activities, the Company actively carried out events to collect reasonable suggestions for support service, raised the satisfaction of employees, and at the same time provided powerful aids and support for exploring area to increase efficiency and reduction in energy consumption of the Company.

Case Sharing: Learnt from role model-continued to raise the quality of service

On 26 April 2018, the support service center team of the Company visited the Zhuhai Kingsoft Software Park to absorb management experience, enhanced the quality of support service of Livzon Industrial Park.

After the visit, the support service center team of the Company met with the support management team of Kingsoft Software Park and carried out deep communication and exchanged opinion and experience in respect of support services such as meeting arrangement, employee complaints management, accommodation management, greenery management, canteen management and client reception, which provided good ideas for the upgrade of quality of support service of the Company.



10 TAKE ACTION FOR LOVE, DO GOOD FOR COMMUNITY

Livzon always upholds the principles of “first, follow the policy of the government and utilizing the resources for charity use, supplement with the enterprises, individuals, funds and promotion”, fulfills social responsibilities that an excellent ethnic pharmaceutical enterprise should bear, strives to social welfare and the human health, repay the society with actions, embodies the love and responsibilities of Livzon to the society.

In 2018, based on the previous charity work, Livzon further improved the charity donation policy, established 2018 Social Charity Donation Plan of Livzon Group as well as Management System of Charity Donation, standardized the use of funds and audit of funds, implemented management and coordination, continuously strengthened the planning, system and sustainability of the charity work, and carried out more standardized and more responsible charity work.

Livzon actively participates in community charity business, always cares for the living of civilians and repays the community, determines to fulfill social responsibility. In 2018, Livzon bore the responsibility of poverty alleviation in the community, actively donated to soldiers, implemented poverty alleviation plan, and actively aided the community with the abundant resources platforms of the pharmaceutical system.

In response to the poverty alleviation policy of the government, and also for fulfilling the social responsibility, in 2018, Livzon actively assisted with the implementation of poverty alleviation mainly with its own industry.

In respect of poverty alleviation, in 2018, the traditional Chinese medicine planting base of the Group in Shanxi Datong aided the receipts of aid for RMB0.2128 million through industry aiding. In the same year, the Group established traditional Chinese medicine planting and processing enterprise in Yunnan Nujiang to assist in tackling the unemployment and poverty alleviation.

In respect of charity donations, Livzon makes donations and donates items to poor region through various channels and method in a timely manner. In 2018, the Company donated RMB0.61 million to regions and organization such as Guangdong Yangjiang, Yunnan Nujiang, Guangdong Xinyi as well as Guangdong Qingyuan Charity Trade Union for poverty alleviation. Furthermore, Livzon also implemented commercial poverty alleviation to Guangdong Sunyi through ways such as procurement, proxy sales as wells entrusted processing, increased the income of farmers, thus improved their living standards.

In respect of social responsibility, in 2018, Livzon donated medicines amounting to more than RMB0.5 million to Shangdong Shouguang immediately on hearing the news that suffered from natural disaster.



10 TAKE ACTION FOR LOVE, DO GOOD FOR COMMUNITY

Case Sharing: poverty alleviation by Huangqi (黃芪) industry-bore the responsibility of poverty alleviation

Livzon fully implemented the important instructions put forward by General Secretary Xi Jinping on strengthening poverty alleviation work. We establish the concept of "Targeted Poverty Alleviation+ Huangqi (黃芪) Industry", promoted the integration of poverty alleviation policy, industry development projects and occupational skills training, and implement poverty alleviation model of "Company + Base + Poor households", encouraging the poor households to cultivate and process Huangqi and develop a Huangqi industry with reference to the local conditions, which become a pillar industry for poverty relief in the long-term. The company will explore the development of Huangqi Industry based on the local resources characteristics to achieve poverty elimination and the construction of "Chinese Medicine Ecological Base".

In 2018, 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 around 80 workers for the self-built base and jointly-constructed base, including around 20 poor people (workers at the base and processing staff at the workshop); Datong Livzon has conducted poverty alleviation for around 10 poor households who worked for Huangqi plantation and provided assistance in pest control, which avoided a loss of 2000 mus of Huangqi.

Through linking up "people" and "money", Livzon ensured the poverty alleviation measures were effective for poverty households and poverty population. According to the general objectives and requirements of poverty alleviation of the Group and Datong Livzon, Datong Livzon will implement the targeted poverty alleviation for 2018 to 2020 as follows:

- ① Datong Livzon will provide employment posts for 150 poor people to increase their income and provide learning opportunities on Huangqi plantation and processing technology at the bases in Hunyuan, Tianzhen in Shanxi province and Zizhou in Shaanxi province
- ② Datong Livzon will enter into agreements with more than 10 poor Huangqi growers for the joint establishment of Huangqi base to provide them with technical support. Meanwhile, Datong Livzon will enter into the purchase agreements with the poor Huangqi growers in order to ensure a sales channel for their Huangqi.
- ③ Datong Livzon will perform collaboration with specialised farmers cooperatives and poverty households to promote the development of local Huangqi industry, which will continuously optimise the promotion mechanism of industrial development, enhance industrial development level, capitalize on the "Teaching, Assistance and Guidance" functions and influence of the demonstration base, cultivating the poverty households into experts for the development of Huangqi industry and performing poverty alleviation for 150 poverty households, as well as improving the Huangqi production conditions in poverty-stricken areas and achieving the poverty elimination.
- ④ Providing trainings on cooperation, production order and orientation to around 50 people, with a focus on the Huangqi production staff, technical support servicing staff, rural operation leader and poverty households, in order to perform Huangqi plantation technology trainings for "new type of professional farmers" and enhance the establishment of Huangqi poverty alleviation technology services team.

10 TAKE ACTION FOR LOVE, DO GOOD FOR COMMUNITY

Case Sharing: Visited countryside-opened up the door to health

In 2018, Livzon held “Aiding the Precise Poverty Alleviation, Raising the Health Standards of People”, a charity event for poverty alleviation at countryside. Activities included presenting solatium to poor household, providing free diagnosis and medicine for the community, holding quiz with rewards, promoting health knowledge as well as performing community show. Donations amounted to RMB19,200 and items donated of RMB92,000.

Livzon upheld the social responsibility and moral responsibility, through such charity event, enhanced the awareness of medicine safety, seeking for medical treatment and health lifestyle of ordinary people.

Livzon planned to continue using “Aiding the Precise Poverty Alleviation, Raising the Health Standards of People” as the theme of event, establish hundreds of charity pharmaceutical poverty alleviation station, to commence the charity event of “Providing Medical Treatment and Medicine for Country People”.





10 TAKE ACTION FOR LOVE, DO GOOD FOR COMMUNITY

Case Sharing: Aided the disaster area to stand with the victims

Affected by typhoon, Shandong Shouguang had heavy rains for days, which caused great loss in vegetable plantation industry in Shouguang, with more than 500,000 victims and more than ten thousands of buildings were collapsed. After the management of Livzon learnt about the situation, they actively contacted with the Red Cross to express their wish to aid the people in the disaster area. On 27 August 2018, Livzon donated medicines amounted to more than RMB500,000 to the disaster area of Shouguang, and held the start-up of love ceremony with Red Cross at the high-bay storage of Livzon Industrial Park. In front of disasters, Livzon will always stand together with the victims.



Case Sharing: Donation for cataract surgery for patients in Tibet

On 1 February 2018, Livzon donated RMB100,000 to Tibet for subsidizing cataract surgery, to aid poor patients to seek medical treatment in time. The Company upholds the responsibility of health poverty alleviation, through its abundant resources platform of the pharmaceutical system, the Company actively commences aiding and providing free diagnosis for poor population, aids the poor population to seek medical treatment for serious disease and chronic disease in time.

Case Sharing: Educational donations for universities

In 2018, Livzon donated educational funds amounting to RMB100,000 to West China School of Pharmacy, Sichuan University, and annual donations of RMB100,000 will be continued until 2028; educational funds amounting to RMB100,000 were donated to School of Basic Medicines and Clinical Pharmacy of China Pharmaceutical University, and annual donations of RMB100,000 will be continued until 2025; it also donated educational funds amounting to RMB150,000 to School of Science of the China Pharmaceutical University, and annual donations of RMB150,000 will be continued until 2026.

The aforesaid donations were used for establishing scholarships for students and tutors, and providing funds for overseas exchange programs, aimed to support the development of university, promote the development of pharmacy schools, strengthen the cooperation and exchange between universities and enterprises, broaden the international view of pharmacy students, enhance their comprehensive quality and capability, recognize tutors with material contributions, and provide powerful support for the development of pharmaceutical education in the PRC.

Table: Data of Livzon's Community Investment

Indicator	Unit	Data for 2017	Data for 2018
Money contributed	RMB0'000	1,105.0	335.5
Materials contributed	RMB0'000	153.5	57.1
Number of volunteers	persons	291	283

11 OVERVIEW OF SUSTAINABILITY PERFORMANCE

11.1 LIST OF POLICIES

List of policies and indicators ESG areas	Main laws and regulations we are subject to	Examples of the Company's policies
A1. Emission	Environmental Protection Law of the People's Republic of China Law on the Prevention and Control of Environmental Pollution by Solid Waste of the People's Republic of China Water Pollution Prevention and Control Law of the People's Republic of China Atmospheric Pollution Prevention and Control Law of the People's Republic of China Environmental Protection Tax Law of the People's Republic of China Law of the People's Republic of China on the Prevention and Control of Soil Pollution Regulations on the Prevention and Control of Environmental Pollution by Solid Waste of Guangdong Province National Catalogue of Hazardous Wastes	Identification and Assessment Requirements of Environmental Factors of Livzon Group Procedure for Exhaust Gas Emission Management Procedure for Noise Emission Management Procedure for Solid Waste Management Procedure for Hazardous Chemicals Management Procedure for Wastewater Management
A2. Use of Resources	Energy Conservation Law of the People's Republic of China	Procedure for Resources Management Procedure for Energy Management
A3. The Environment and Natural Resources	Environmental Protection Law of the People's Republic of China Energy Conservation Law of the People's Republic of China	Overall Requirement of EHS Management System of Livzon Group Environmental Hygiene Management System for Factory Area
B1. Employment and Labour Practices	Labor Law of the People's Republic of China Labor Contract Law of the People's Republic of China Labour Right Protection Law of the People's Republic of China Social Security Law of the People's Republic of China Provisions on the Prohibition of Using Child Labor Tax Law of the People's Republic of China	Employment Management System of Livzon Group Recruitment Management System of Livzon Pharmaceutical Group Reward scheme for retirement of employee of Livzon Pharmaceutical Group Inc.
B2. Health and Safety	Labor Law of the People's Republic of China Labor Contract Law of the People's Republic of China Social Security Law of the People's Republic of China Production Safety Law of the People's Republic of China Law on the Prevention and Treatment of Occupational Disease of the People's Republic of China	Overall Requirement of EHS Management System of Livzon Group Measures for EHS Accident Administration of Livzon Group Regular EHS Meeting and Spot Check Management System of Livzon Group Administrative Measures for EHS Information and Communication of Livzon Group Administrative Procedure for Internal EHS Audit of Livzon Group Risk Sources Identification and Opportunities Evaluation Requirements



11 OVERVIEW OF SUSTAINABILITY PERFORMANCE

List of policies and indicators		
ESG areas	Main laws and regulations we are subject to	Examples of the Company's policies
B3. Development and Training	Labor Law of the People's Republic of China Labor Contract Law of the People's Republic of China Social Security Law of the People's Republic of China	Measures of Management of the Technical Personnel Ranking System Training Management System of Livzon Group
B4. Labor Standards	Labor Law of the People's Republic of China Labor Contract Law of the People's Republic of China Social Security Law of the People's Republic of China	Employment Management System Recruitment Management System of Livzon Pharmaceutical Group
B5. Supply Chain Management	Company Law of the People's Republic of China Contract Law of the People's Republic of China E-commerce Law of the People's Republic of China	Procedure for Standardized Supplier Management Procedure for Supplier Audit Management Code of Practice for Onsite Supplier Quality Audit List of Qualified Material Suppliers List of Longlisted Material Suppliers Management Measures of Material Procurement (for trial implementation) Material Management System Management Measures of Material Procurement Management Measures of Centralized Procurement of Bulk and General Materials Implementation Rules for Tender of Construction Projects
B6. Product Responsibility	Patent Law of the People's Republic of China Trademark Law of the People's Republic of China Copyright Law of the People's Republic of China Drug Administration Law of the People's Republic of China Good Manufacturing Practices for Pharmaceutical Products (GMP) Good Supply Practice for Pharmaceutical Products (GSP) Pharmacopoeia of the People's Republic of China Administrative Measures for Drug Registration Measures for the Supervision and Administration of Pharmaceutical Production Administrative Measures for Drug Recalls Regulations on Protection of Traditional Chinese Medicines The PRC Advertising Law Drug Administration Law of the People's Republic of China The Implementation Provisions on the Drug Administration Law of the People's Republic of China Regulations for Drug Packaging and Label Instruction (The State Drug Administration Decree No.24)	Procedure for Establishment of Self-developed Projects Quality Management System Standard Operating Procedure Procedure for Drug Inspection and Acceptance Quality Enquiries and Quality Complaints Management System User Complaint Management Procedure

11 OVERVIEW OF SUSTAINABILITY PERFORMANCE

List of policies and indicators		
ESG areas	Main laws and regulations we are subject to	Examples of the Company's policies
B7. Anti-corruption	Criminal Law of the People's Republic of China Anti-Unfair Competition Law of the People's Republic of China Interim Provisions on Banning Commercial Bribery	Employment Management System Anti-corruption and Anti-commercial Bribery Regulations Code of Conduct for Sales Personnel Undertaking on Anti-corruption and Anti-commercial Bribery Management Measures for Construction Project Establishment of Livzon Group Implementation Rules of Tender for Construction Projects of Livzon Pharmaceutical Group Inc. (for trial implementation) Management Measures of Centralized Procurement of Bulk and General Materials of Livzon Pharmaceutical Group Inc. (for trial implementation) Management Measures of Approval Process for Allocation and Written-off of Idle Materials of Livzon Pharmaceutical Group Inc. (for trial implementation) Material Management System of Livzon Pharmaceutical Group Inc. Management Measures of Material Procurement of Livzon Pharmaceutical Group Inc. (for trial implementation)
B8. Community Investment	Charity Law of the People's Republic of China	2018 Social Charity Donation Plan of Livzon Group Management System of Charity Donation



11 OVERVIEW OF SUSTAINABILITY PERFORMANCE

11.2 LIST OF DATA

ESG Indicator		Unit	Data for 2017	Data for 2018
A. Environmental				
A1. Emissions				
A1.1	Types of emissions and emissions data			
	Industrial wastewater	tonnes	4,612,173.0	4,329,594.0
	Chemical Oxygen Demand (COD _{Cr})	tonnes	471.6	366.2
	Ammonia nitrogen	tonnes	24.1	27.8
	NO _x	tonnes	311.7	133.6
	SO ₂	tonnes	96.3	91.2
A1.2	Greenhouse gas emissions and intensity			
	Total greenhouse gas emissions	tonnes of CO ₂ equivalent	599,464.5	454,715.8
	Greenhouse gas emissions per RMB0'000 of operating income	tonnes of CO ₂ equivalent/RMB0'000	0.7	0.5
A1.3	Hazardous waste produced			
	Medical waste (HW02) and waste medicine (HW03)	tonnes	10,476.5	12,646.5
	Other hazardous waste	tonnes	290.0	489.3
	Total hazardous waste	tonnes	10,766.5	13,135.8
	Hazardous waste per RMB0'000 of operating income	kg/RMB0'000	12.6	14.8
A1.4	Non-hazardous waste produced			
	Total general industrial waste	tonnes	106,430.7	98,545.9
	General industrial waste per RMB0'000 of operating income	kg/RMB0'000	124.8	111.2
A2. Use of Resources				
A2.1	Total energy consumption and intensity			
	Gasoline	litres	257,034.4	286,800.3
	Diesel	litres	1,873,443.6	506,185.9
	Coal	tonnes	142,748.0	63,140.0
	Natural gas	0'000 cubic meters	748.3	973.9
	Steam purchased	tonnes	173,912.4	237,117.8
	Electricity purchased	kWh	357,254,498.0	407,384,975.0
	Electricity consumption per RMB0'000 of operating income	kWh/RMB0'000	418.8	459.8
A2.2	Water consumption and intensity			
	Total water consumption	tonnes	6,588,021.0	6,416,763.6
	Water consumption per RMB0'000 of operating income	tonnes/RMB0'000	7.7	7.2
A2.5	Packaging material used			
	Paper packaging materials	tonnes	4,523.3	3,331.3
	Paper packaging materials per RMB0'000 of operating income	kg/RMB0'000	5.3	3.8

11 OVERVIEW OF SUSTAINABILITY PERFORMANCE

ESG Indicator		Unit	Data for 2017	Data for 2018
B. Social				
B1. Employment and Labour Practices				
B1.1	Total workforce by gender, employment type, age group and geographical region			
	Total number of employees	persons	6,963	7,671
Gender	Male	persons	3,902	4,177
	Female	persons	3,061	3,494
Age	30 and below	persons	3,003	3,344
	31-49	persons	3,521	3,906
	50 and above	persons	439	421
Geographical region	Mainland China	persons	6,951	7,654
	Hong Kong, Macau and Taiwan	persons	1	2
	Overseas	persons	11	15
B1.2	Employee turnover rate by gender, employment type, age group and geographical region			
	Overall employee turnover ⁵	Percentage	19	19.25
B3. Development and Training				
B3.1	Employees trained			
	Total number of employees trained	persons	4,525	5,331
	Number of male employees trained	persons	2,560	3,101
	Number of female employees trained	persons	1,965	2,230
	Percentage of male employees trained	Percentage	56.6	58.2
	Percentage of female employees trained	Percentage	43.4	41.8
B3.2	Training hours of employees			
	Total training hours of all employees	hours	194,605	257,088
	Total training hours of male employees	hours	106,625	136,257
	Total training hours of female employees	hours	87,980	120,831
B3.2	Average training hours per employee			
	Average training hours per employee	hours	27.9	33.5
	Average training hours per male employee	hours	27.3	32.6
	Average training hours per female employee	hours	28.7	34.6
B5. Supplier Management				
B5.1	Number of suppliers			
Region	Southern China	percentage	29	28
	Eastern China	percentage	39	43
	Northern China	percentage	9	10
	Central China	percentage	7	7
	Northeastern China	percentage	2	2
	Northwestern China	percentage	10	6
	Southwestern China	percentage	3	3
	Overseas	percentage	1	1
B7. Anti-corruption				
B7.1	Number of proposed or concluded corruption case	cases	0	0
B8. Community Investment				
B8.2	Resources devoted to focus areas			
	Money contributed	RMB0'000	1,105.0	335.5
	Materials contributed	RMB0'000	153.5	57.1
	Number of volunteers	persons	291	283

⁵ Calculation of employee turnover rate: employees turnover/(total number of employees at the beginning of the period+new recruits)



12 “ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE” CONTENT INDEX

Aspects, General Disclosures and Key Performance Indicators (KPIs)	Description	Corresponding section
Aspect A1: Emissions		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	8 Green Pharmaceutical Operation for Environmental Protection
KPI A1.1	The types of emissions and respective emissions data.	8 Green Pharmaceutical Operation for Environmental Protection
KPI A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity.	8 Green Pharmaceutical Operation for Environmental Protection
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity.	8 Green Pharmaceutical Operation for Environmental Protection
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity.	8 Green Pharmaceutical Operation for Environmental Protection
KPI A1.5	Description of measures to mitigate emissions and results achieved.	8 Green Pharmaceutical Operation for Environmental Protection
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	8 Green Pharmaceutical Operation for Environmental Protection
Aspect A2: Use of Resources		
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	8 Green Pharmaceutical Operation for Environmental Protection
KPI A2.1	Direct and/or indirect energy consumption by type in total and intensity.	8 Green Pharmaceutical Operation for Environmental Protection
KPI A2.2	Water consumption in total and intensity.	8 Green Pharmaceutical Operation for Environmental Protection
KPI A2.3	Description of energy use efficiency initiatives and results achieved.	8 Green Pharmaceutical Operation for Environmental Protection
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	8 Green Pharmaceutical Operation for Environmental Protection
KPI A2.5	Total packaging material used for finished products and, if applicable, with reference to per unit produced.	8 Green Pharmaceutical Operation for Environmental Protection

12 “ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE” CONTENT INDEX

Aspects, General Disclosures and Key Performance Indicators (KPIs)	Description	Corresponding section
Aspect A3: The Environment and Natural Resources		
General Disclosure	Policies on minimising the issuer’s significant impact on the environment and natural resources.	8 Green Pharmaceutical Operation for Environmental Protection
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	8 Green Pharmaceutical Operation for Environmental Protection
Aspect B1: Employment and Labour Practices		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	9 People-Oriented Mutual Development
KPI B1.1	Total workforce by gender, employment type, age group and geographical region.	9 People-Oriented Mutual Development
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	9 People-Oriented Mutual Development
Aspect B2: Health and Safety		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	9 People-Oriented Mutual Development
KPI B2.1	Number and rate of work-related fatalities.	Not disclosed
KPI B2.2	Lost days due to work injury.	Not disclosed
KPI B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	7 Enhancing Quality and Upholding Safety
Aspect B3: Development and Training		
General Disclosure	Policies on improving employees’ knowledge and skills for discharging duties at work. Description of training activities.	9 People-Oriented Mutual Development
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	9 People-Oriented Mutual Development
KPI B3.2	The average training hours completed per employee by gender and employee category.	9 People-Oriented Mutual Development
Aspect B4: Labour Standards		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	9 People-Oriented Mutual Development
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	9 People-Oriented Mutual Development
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	9 People-Oriented Mutual Development



12 “ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE” CONTENT INDEX

Aspects, General Disclosures and Key Performance Indicators (KPIs)	Description	Corresponding section
Aspect B5: Supply Chain Management		
General Disclosure	Policies on managing environmental and social risks of the supply chain.	6 Innovative Development and Win-win Outcomes
KPI B5.1	Number of suppliers by geographical region.	6 Innovative Development and Win-win Outcomes
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	6 Innovative Development and Win-win Outcomes
Aspect B6: Product Responsibility		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	7 Enhancing Quality and Upholding Safety
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons	The Company did not recall any products this year due to safety and health reasons
KPI B6.2	Number of products and service related complaints received and how they are dealt with.	Details of complaint handling are set out in “7 Enhancing Quality and Upholding Safety”. Number of complaints received for this year is not disclosed
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	6 Innovative Development and Win-win Outcomes
KPI B6.4	Description of quality assurance process and recall procedures.	7 Enhancing Quality and Upholding Safety
KPI B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	7 Enhancing Quality and Upholding Safety
Aspect B7: Anticorruption		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	7 Enhancing Quality and Upholding Safety
KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	5 Responsible Management
KPI B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	5 Responsible Management
Aspect B8: Community		
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities’ interests.	10 Take Action for Love, Do Good For Community
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	10 Take Action for Love, Do Good For Community
KPI B8.2	Resources contributed (e.g. money or time) to the focus area	10 Take Action for Love, Do Good For Community



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