



2018

上海医药企业社会责任报告

SHANGHAI PHARMA
CORPORATE SOCIAL RESPONSIBILITY REPORT
(Stock Code:02607)



上海医药
SHANGHAI PHARMA

Definitions

In this report, unless the context otherwise requires, the following terms shall have the following meanings:

"Shanghai Pharmaceutical Group", "Shanghai Pharmaceuticals Holding", "Shanghai Pharmaceuticals", "the Company" or "We"

Shanghai Pharma

SPH Keyuan

SPH Sine

SPH No. 1 Biochemical and Pharmaceutical

SPH Traditional Chinese Medicine

SPH Changzhou Pharmaceutical

SPH New Asiatic

SPH Zhongxi Sunve

SPH Sales

SPH Techpool

Chiatai Qingchunbao Pharmaceutical

SPH Growful

SPH Research Institute

Vitaco

SPH Herbapex

Huqingyutang Pharmaceutical

SPH Zhonghua

SPH Xiamen Traditional Chinese Medicine

SPH Dong Ying

SPH Medical Instruments

SPH Material Supply and Marketing

China International

SPH Sunway Biotech

SPH Jincun

Shanghai Pharmaceuticals Holding Co., Ltd.

Shanghai Pharma Co., Ltd.

SPH Keyuan Xinhai Pharmaceutical Co., Ltd.

Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd.

Shanghai SPH No. 1 Biochemical and Pharmaceutical Co., Ltd.

Shanghai Traditional Chinese Medicine Co., Ltd.

SPH Changzhou Pharmaceutical Co., Ltd.

Shanghai SPH New Asiatic Pharmaceutical Co., Ltd.

Shanghai Zhongxi Sunve Pharmaceutical Co., Ltd.

Shanghai Pharmaceutical Group Pharma Sales Co., Ltd.

Guangdong Techpool Bio-pharma Co., Ltd.

Chiatai Qingchunbao Pharmaceutical Co., Ltd.

SPH Qingdao Growful Pharmaceutical Co., Ltd.

Central Research Institute of Shanghai Pharmaceuticals Holding Co., Ltd.

Vitaco Health (NZ) Limited

Liaoning SPH Herbapex Pharmaceutical (Group) Co., Ltd.

Hangzhou Huqingyutang Pharmaceutical Co., Ltd.

Shanghai Zhonghua Pharmaceutical Co., Ltd.

Xiamen Traditional Chinese Medicine Co., Ltd.

SPH Dong Ying (Jiangsu) Pharmaceutical Co., Ltd.

Shanghai Medical Instruments Co., Ltd.

Shanghai Pharmaceutical Material Supply and Marketing Co., Ltd.

China International Pharmaceutical (Holding) Corporation Limited

Shanghai Sunway Biotech Co., Ltd.

Shanghai SPH Jincun Pharmaceutical Technology Co., Ltd.

A shares

domestic shares of the Company, which are listed on the Shanghai Stock Exchange and traded in RMB

H shares

overseas shares of the Company, which are listed on the Hong Kong Stock Exchange and traded in Hong Kong dollars

Renminbi

Renminbi, the legal tender of the PRC

The background of the entire image is a clear blue sky with soft, wispy white clouds. Three white doves are in flight. One dove is in the lower-left quadrant, flying towards the right with its wings spread. Two other doves are in the upper-right quadrant, flying towards the left. The text is centered in the middle of the image.

**Dedicated
to Uplifting People's Healthy Living Quality**

CONTENTS

01 - About this Report

03 - Message from the Chairman

05 - Overview of the Company

CHAPTER 1 Strategy and Analysis

- 11 - 1.1 Responsibility management system
- 11 - 1.2 Stakeholders and communication channels
- 12 - 1.3 Substantive analysis of key responsibility issues

CHAPTER 2 Let people take medicine of high quality and make the medicine affordable

- 15 - 2.1 Step up R&D efforts and enhance innovation impetus
- 19 - 2.2 Under all-round management, continuously improve the quality and safety of drugs



CHAPTER 3

Let People Take Medicine with Ease

- 25 - 25-3.1 Create innovative medical and pharmaceutical business models to better serve the patients and consumers
- 27 - 27-3.2 Improve access to drugs for hepatitis B through strategic cooperation
- 28 - 28-3.3 Create a new model for pharmaceutical retail to further consolidate advantageous resources
- 28 - 28-3.4 Build an "Internet + medical health" system to promote Medical Health integration in Yangtze River Delta area
- 29 - 29-3.5 Work with the Affiliated Hospital of Jiangsu University to build the first "Yiyao • Cloud Hospital" in China
- 29 - 29-3.6 Committed to the hot land, Shanghai Pharmaceuticals has undergone glorious 20 years in the spirit of Sudan
- 32 - 32-3.7 Meet the medication needs of special group

CHAPTER 4

Provide Positive Solutions to Assist Resolving Social Problems

- 37 - 4.1 Targeted poverty alleviation widely recognized by the government, society and people
- 40 - 4.2 Forge ahead for love
- 45 - 4.3 Co-establishment of communities

CHAPTER 5

Create Overall Value based on Responsible Operation

- 53 - 5.1 Governance and management and control
- 55 - 5.2 Employee development
- 62 - 5.3 Environment management

CHAPTER 6

Our Responsibility, Our Commitment (2018)



About This Report

Scope

The duration of this report is from January 1, 2018 to December 31, 2018. Unless otherwise stated, the data and cases mentioned in this report are derived from Shanghai Pharmaceuticals Holding Co., Ltd. and its subsidiaries.

Standards for preparation

This report makes reference to the Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI), "Notice on Strengthening the Social Responsibility Commitment of Listed Companies and Promulgating the "Guidelines on Environmental Information Disclosure of Companies Listed on Shanghai Stock Exchange" "promulgated by the Shanghai Stock Exchange, the "Guidelines on Preparation of Corporate Social Responsibility Reporting" and the "Environmental, Social and Governance Reporting Guide", as set out in Appendix 27 of the Rules Governing the Listing of Securities of The Stock Exchange of Hong Kong Limited, and its Main Amendments. In 2018, the Company fully complied with the principles and terms set out in the aforesaid regulations and guidelines.

Content selection

This report makes reference to the principles of GRI's substance, sustainable background, stakeholders' engagement and integrity, and fully takes into account the Company's development strategy and business development initiatives.

Indicator selection

This report primarily takes into consideration the relevance, substance and availability of all specific indicators related to performance disclosure of key issues. We will continue to adjust and optimize the disclosure indicators in future reports.

Form of promulgation

This report is published online. The online version can be downloaded from the Shanghai Stock Exchange website (www.sse.com.cn) and the Company website (www.sphchina.com). For further information on the Company's business, please refer to the 2018 annual report of Shanghai Pharmaceuticals.

Contact us

Tel: 86 21 63730908

Email: sph-csr@sphchina.com



Message from the Chairman

Responsible Shanghai Pharmaceuticals Provides Drugs of High Quality

In 2018, China's pharmaceutical industry underwent a tremendous reform. The rollout of a range of policies on intensive reforms in the pharmaceutical industry highlighted the state's consistent requirements for pharmaceutical enterprises to enhance internal strength, improve efficiency and emphasize quality. To survive over the changing times, Shanghai Pharmaceuticals must be clearly aware that the public's desire for drugs which are of high quality, safe and effective is the foundation of the existence and development of pharmaceutical enterprises. We must adhere to our original will of being a high-quality drug manufacturer, pursue high quality in every aspect of drug production and operation and perform our foremost social responsibility of being dedicated to uplifting people's healthy living quality as a pharmaceutical player to contribute to fulfilment of the goal of public health.

Quality assurance is the precondition

In response to the state's vigorous promotion of consistency evaluation on the quality and efficacy of generic drugs, on the one hand, as soon as relevant policies were introduced, Shanghai Pharmaceuticals started consistency evaluation on the quality and efficacy of generic drugs. It also set up a professional office responsible for gathering internal and external superior resources to fully promote the Company's consistency evaluation on generic drugs. Solid preparation products for which relevant projects were initiated involved more than 70 varieties and 100 strengths. On the other hand, for project products other than major varieties recognized in the industry, we should take into full account the availability of urgently needed clinical drugs and drugs necessary for patients, as well as drug products for exclusive sales or in short supply including Pyridostigmine Bromide Tablets in the project initiation phase. In 2018, the Company completed the application for consistency evaluation on 27 varieties and 32 strengths of solid preparations and ranked the top in the quantity of consistency evaluation initiations and applications for solid preparations, with four varieties passing the consistency evaluation.

To ensure safety and controllability and determinate efficacy of our drug products, we continuously promote the whole industrial chain strategy of traditional Chinese medicine. By starting with standardized planting of genuine medicinal materials, we control the quality from the very source, manage the process and make quality traceable. The establishment of Ningxia Traditional Chinese Medicine Resources Co., Ltd. marked our expansion into Northwest China in respect of traditional Chinese medicinal resources. By investing in Zhejiang Jiuxu Pharmaceutical in support of industrial development, we would build a new model of synergetic development of upstream and downstream sectors.

As a pilot enterprise of the marketing authorization holder system, Shanghai Pharmaceuticals had two product declaration pilot programs approved, and the Group became the drug approval document owner for the first time, which would be conducive to further improving the management of drug safety, efficacy and quality controllability and make us responsible for the quality of drugs for the public.

Innovation is the unfailing driving force to improve quality

Shanghai Pharmaceuticals has spared no effort to promote R&D and innovation in recent years. In 2018, our R&D investments accounted for 7.14% of industrial sales. Shanghai Pharmaceuticals set up SPH Phililab in the US as the overseas high-end preparation R&D platform, which accelerated transformation and upgrading of Shanghai Pharmaceuticals in drug R&D; by establishing San Diego R&D Center, we kept up with international advanced technologies to build biomedical R&D cooperation platform; we worked with the domestic leading high-end preparation team and co-established Shanghai Huiyong Pharmaceutical Research Co., Ltd. which focuses on R&D of new preparations, key equipment and drug delivery devices and pharmaceutical aids; we held signing of strategic cooperation agreement with West China School of Pharmacy Sichuan University and under the agreement, we would cooperate with each other in respect of building of Sichuan Small Molecule Drug Precision Engineering Technology Research Center and open cooperation base and talent cultivation. Over years of efforts, we achieved positive phased results in several antibody biological drugs and innovative chemical drugs under development. We have been making unremitting efforts to help China grow from a pharmaceutical giant into a pharmaceutical power.

Besides, Shanghai Pharmaceuticals signed R&D cooperation agreement with Bracco Imaging S.p.A in Italy to carry out new R&D activities in China; we signed cooperation intention memorandum with Russian BIOCAD, specifying that both parties would fund a joint venture in China which is responsible for R&D, localized production, import registration and sales of macromolecular drugs; we also signed transfer agreement with Mitsubishi Tanabe Pharma and obtained the right to develop and sell innovative chemical drugs under Category I (SPH3127) in major medical markets including the US; we signed an agreement with Tenth People's Hospital of Tongji University, under which we would intensify cooperation in the tumor-treating fields, especially the building of Tongji University Cancer Center and cell therapy; our affiliated Shanghai Traditional Chinese Medicine and Shuguang Hospital jointly established "Shuguang Hospital & Shanghai Leiyunshang Traditional Chinese Medicine Preparation & Innovation Center". Extensive cooperation has enhanced deep industry-university-research-medicine

collaboration collaboration of Shanghai Pharmaceuticals and sped up transformation of technological achievements. We will keep working hard to narrow the gap with developed pharmaceutical countries and let Chinese people have home-made high-quality drugs as soon as possible.

Service is the carrier and extension of quality

Shanghai Pharmaceuticals continuously advances national strategic layout. Integrating Cardinal Health China, establishment of new platforms in Sichuan and Anhui and basic completion of strategic layout in the southwest region have contributed to our broader coverage, continuously meeting end users' urgent demands for service upgrading. Shanghai Pharmaceuticals is actively building domestic leading DTP network to provide patients with convenient services for direct delivery of high-end drugs. Regarding the imported drugs approved to be marketed in China in 2018, Shanghai Pharmaceuticals outshone other domestic peers in the number of drug varieties for exclusive distribution. Our "Yiyao • pharmacy" launched Opdivo®, China's first PD-1 immunotherapeutic drug for cancer and was the first pharmacy selling Aubagio®, China's first innovative drug for oral administration, setting a record of marketing of orphan drugs in China. Our hemodialysis center has won wide acclaim from local patients. Nantong Kidney Disease started operation with a new image. Anhui Tianchang Hemodialysis Center which has been in operation for one year still operates well, providing kidney disease patients with convenient and equalized services. Our medical financial innovation payment mode is bringing more hope for more and more patients.

Shanghai Pharmaceuticals' SPD is exploring and establishing industry standards and expanding into the rest part of China while consolidating existing advantages, providing hospitals with comprehensive solutions for intelligent, efficient and convenient in-hospital drug circulation. Our "Yiyaoquan, extended prescription" service meeting the requirements of comprehensive reform of communities of the municipal government enables citizens to enjoy convenient and safe drug purchase and health consulting services.

In constant pursuit of quality drugs, Shanghai Pharmaceuticals makes every effort to guide the pharmaceutical industry to face challenges and forge ahead in each major reform in light of its own standing and overall industry condition. Pujiang Healthcare Industry & Finance Integration and Innovation Summit in which Shanghai Pharmaceuticals is the sponsor and strategic cooperation unit has been held twice, becoming a landmark event in the innovation field of China's pharmaceutical industry. The first "Drug Union" platform jointly initiated by Shanghai Pharmaceuticals and other pharmaceutical enterprises was established, which would benefit the living of people, facilitate joint development, help the government solve drug shortage problems and safeguard intensive production and supply of minor varieties of drugs (drugs in short supply).

High-quality drugs embody pharmaceutical enterprises' responsibilities and roles, and moreover, Shanghai Pharmaceuticals also fulfills its social responsibilities as a pharmaceutical manufacturer in all other aspects. In respect of environmental protection, Shanghai Pharmaceuticals continuously expands investments in environmental protection and strictly performs its main corporate responsibilities for environmental protection. Relevant enterprises obtained national pollution discharge licenses as scheduled, completed preparation and filing of Emergency Plans for Environmental Accidents according to environmental requirements and carried out continuous clean production review on time. Regarding helping social vulnerable groups, we continued to adhere to our Medical Care Guardian Plan which has been in practice for three years by supporting the construction of rural health clinics, carrying out training of rural doctors and subsidizing children suffering from rare diseases in Yunnan and Guizhou, etc. The further we go, the more deeply we feel the value and significance of what we have done. Our involvement in Shanghai Music in the Summer Air not only helps promote excellent cultural brand of the city but also meets the public's aspiration for high-quality and healthy life.

Shanghai Pharmaceuticals has been always marching ahead toward its established goal. Our achievements have also been recognized by the society. This year, the operating revenue of the Company was RMB15,908,400, representing a YOY increase of 21.58%; net profit attributable to shareholders of the listed company was RMB3,881 million, representing a YOY increase of 10.24%. Our ranking in China's pharmaceutical industry keeps rising and our position in domestic and overseas markets becomes increasingly stable, providing a strong guarantee for us to continuously fulfill our social responsibility of serving public health.

The pursuit for good life is the public's keen hope; producing high-quality drugs is our solemn promise. Adhering to our mission of being dedicated to uplifting people's healthy living quality, Shanghai Pharmaceuticals ensures quality, insists on innovation, takes pride in services and makes all efforts to build itself into a China's leading pharmaceutical industrial group which is competitive on the international arena. Shanghai Pharmaceuticals will walk with you toward fulfilling the dreams.

Chairman of Shanghai
Pharmaceuticals Holding Co., Ltd.:



Overview of the Company

Main businesses covering pharmaceutical R&D and manufacturing, distribution and retail

The main businesses of Shanghai Pharmaceuticals cover pharmaceutical R&D and manufacturing, pharmaceutical distribution and services, pharmaceutical retail and e-commerce. The Company keeps focusing on the core links of the industrial chain and conducts simultaneous development of endogenous development and extension. It is one of the few listed pharmaceutical players holding a leading position in the industry and commerce in China.

The Company's industrial R&D is guided by clinical needs and follows the R&D model which places equal emphasis on generic drugs and innovative drugs and advocates open cooperation. The Company makes energetic efforts to develop high-end generic drugs and innovative drugs and is devoted to providing safe and effective therapeutic drugs for major diseases and chronic diseases. The Company keeps a close eye on the latest movements of international biomedical community, speeds up development of new generation of breakthrough biomedical products, focuses on R&D of innovative drugs in tumor, immunological and cardio-cerebral vascular fields, builds differentiated, competitive and disease-centered innovative product lines, and improves the status of the medical industry by developing innovative drugs. Regarding R&D of generic drugs, the Company shifts its focus from development of common generic drugs to development of drugs which are difficult to imitate and pharmaceutical enterprises scramble for imitating and improved new drugs, accelerates development of high-end generic drugs in cardio-cerebral vascular, psychiatric and neurologic, antineoplastic, digestive and metabolic, immunological, anti-infectious and respiratory fields, speeds up R&D outcome, improves R&D efficiency, expedites consistency evaluation and development of advanced manufacturing technologies, and continuously increases the speed of R&D of generic drugs and enhance competitive advantages in terms of cost and quality. The R&D of traditional Chinese medicine focuses on continuous secondary development of major varieties, deeply explores clinical value of products and actively develops a batch of modern major traditional Chinese medicine products. The Company has built the interactive and integrated R&D system through Central Research Institute and its branch, national enterprise technology center, 10 provincial and municipal enterprise technology centers and overseas R&D centers and established close cooperation with such R&D institutions as Chinese Academy of Sciences, China Pharmaceutical University, Shenyang Pharmaceutical University, The Second Military Medical University, Sichuan University, Mitsubishi Tanabe Pharma Corporation and Shanghai Fudan-Zhangjiang Bio-Pharmaceutical Co., Ltd. The Company insists on intelligent industrial manufacturing, makes positive efforts to build domestic leading and international-oriented advanced drug manufacturing system and speeds up "lean, automatic, informationized, intelligent and green" development.

Centering on East China, North China and South China, the Company's distribution network covers 31 provinces, municipalities directly under the Central Government and autonomous regions in China, 24 of which are directly covered through its subsidiaries. Distribution service is primarily dominated by direct sales to hospitals, covering more than

20,000 medical institutions. The Company also cooperates with numerous transnational pharmaceutical players across the globe and is committed to building efficient, agile and intelligent supply chain management system. The Company excels other domestic peers in SPD, third-party logistics service, DTP, one-stop services for imported drugs, informationized management of drug stores, clinical support service and other innovative business models.

The Company leads the domestic drug retail industry in retail size, with its retail business covering 16 provinces, municipalities directly under the Central Government and autonomous regions in China and the number of chain brand retail pharmacies exceeding 2,000. SPHC is committed to building innovative pharmaceutical e-commerce model based on the transfer of electronic prescriptions and makes energetic efforts to develop prescription-based value-added services, providing patients with professional, safe, efficient and convenient services for purchase of prescribed drugs and comprehensive long-term health management.

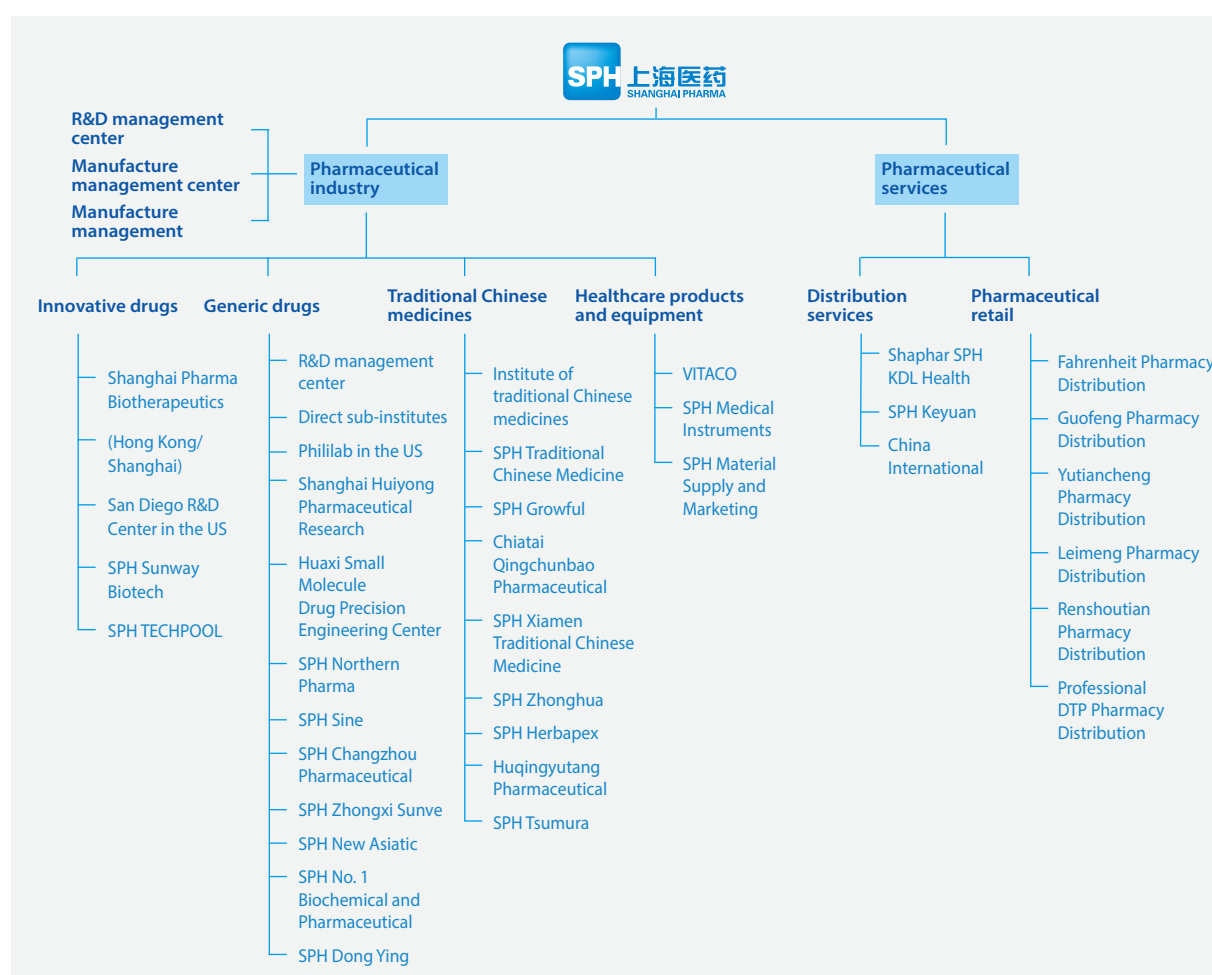
In 2018, the medical health industry in China continued to deepen structural reform, with accelerated reshuffling of the industry pattern. After the establishment of National Healthcare Security Administration, the national new medical insurance regulatory system was set up and various reform policies were promoted and implemented at a faster pace. Efforts were made to promote consistency evaluation of generic drugs and pilot procurement of drugs with target quantity in "4+7" cities and significantly reduce drug prices while ensuring drug quality, which resulted in more intense competition in the generic drug industry. Zero tariff was implemented on imported anti-cancer medicines and import of innovative drugs was encouraged. Besides, the industry sped up examination and approval of new drugs which had been listed overseas and promoted price cut of anti-cancer medicines in order to accelerate industry upgrading in China; improved the policies for drug registration review and approval, shortened the time for clinical examination and approval, witnessed loosened listing standards for R&D pharmaceutical enterprises in the capital market, which was helpful for the pharmaceutical enterprises to conduct R&D and innovation; improved the comprehensive regulation system of the industry and intensified efforts for regulation of product quality, which led to accelerated centralization of the industry. In general, the industry policy reform oriented at innovation, compliance, quality and cost effectiveness will change the traditional game rules of the industry and the upcoming industry reform, restructuring and reshuffle will require enhanced corporate operation. China is on the way of development from a big pharmaceutical country to a pharmaceutical power. In the coming five years, it is expected that the domestic pharmaceutical market will continue to be one of the most attractive markets in the world. The industry will become more internationally-competitive, demanding upgrades and further centralizing through high-quality development. Companies face opportunities and challenges alike in the development.

Looking back on 2018, surrounding the strategic planning of

"Three three three plus one" and the trend of the changes in the industry, Shanghai Pharmaceuticals insisted on the general working policy of "Complying with the changes in the industry, accelerating transformation and development and ensuring leading industrial position". Under the leadership of the Board and the management team, Shanghai Pharmaceuticals sped up the promotion of intensive development, innovation development, international development and combination with production and yielded significant results in a phased manner in R&D innovation, service innovation, network extension, extension merger and international development. The operating results achieved stable growth, robust growth was achieved in the scale of major products, and the Company's profitability, innovative impetus, operating efficiency and our status in the industry continued to rise.

To embrace the new era of industry changes and innovation, the Company launched a new round of strategic development plans in 2018, which pointed out the direction and path for future development. The Company will step up efforts for transformation to a brand pharmaceutical enterprise focusing on high-end generic drugs and innovative drugs in the major therapeutic fields and strive to be a modern healthcare service provider driven by services and technology. The Company will proactively seize the national strategic opportunities, follow the policy of the industry and the trend of industrial changes, deepen reform and innovation and speed up transformation and upgrading to maintain the leading position in the pharmaceutical industry in China and strive to rank in the top 500 enterprises in the world. The Company is fully committed to transforming itself into a leading pharmaceutical group with international competitiveness in China.

Direct corporate structure of Shanghai Pharmaceuticals Holding Co., Ltd.



Our overall strength continues to lead in domestic pharmaceutical industry

In 2018, Shanghai Pharmaceuticals recorded an operating income of RMB159.084 billion, representing an increase of 21.58% on a YOY basis. Net profit attributable to the shareholders of the listed company was RMB3.881 billion, representing an increase of 10.24% on a YOY basis. As at December 31, 2018, the owners' equity of the Company was RMB39.014 billion and its total assets were RMB126.879 billion.

Awards and accolades

NO. 2 **Forbes**

Ranking 2nd among Chinese pharmaceutical enterprises on 2018 Forbes Global 2000 by Forbes

NO. 64 **财富 FORTUNE CHINA**

Ranking 64th in Top 500 Enterprises on 2018 Fortune China by Fortune (Chinese Edition)



- Ranking 3rd in top 10 Enterprise Groups in Chinese Pharmaceutical Industry in 2018
- Ranking 2nd in top 100 Industrial Enterprises in Comprehensive Strength in Chinese Chemical Pharmaceutical Industry in 2018
- Ranking 5th in Outstanding Brands in Chinese Chemical Pharmaceutical Industry (Listed Companies) in 2018
- Ranking 14th in Outstanding Brands in Chinese Chemical Pharmaceutical Industry (Export of Preparations) in 2018
- Ranking 8th in Outstanding Brands in Chinese Chemical Pharmaceutical Industry (Export of Active Pharmaceutical Ingredients) in 2018
- Ranking 7th in Outstanding Brands in Chinese Chemical Pharmaceutical Industry (Promotion of Integration of Informatization and Industrialization) in 2018

——by China Chemical & Pharmaceutical Industry Association, China Association of Pharmaceutical Commerce, China Non-prescription Medicines Association and China Pharmaceutical Enterprises Development Promote Association



- Ranking 129th in top 500 Chinese Enterprises in 2018
- Ranking 47th in top 500 Enterprises in Chinese Manufacturing Industry in 2018

——by China Enterprise Confederation / China Enterprise Directors Association



- Ranking 14th in top 100 Shanghai Enterprises in 2018
- Ranking 5th in top 100 Enterprises in Shanghai Manufacturing Industry in 2018

——by Shanghai Enterprise Confederation, Shanghai Entrepreneur Association and Shanghai Federation of Economic Organizations

NO. 5

Ranking 5th in Industrial Enterprises with Drug R&D Product Line in China in 2018 - by China National Pharmaceutical Industry Information Centre

NO. 6

Ranking 6th in top 100 Chinese Enterprises (Pharmaceutical Industry) in 2017 - by China National Pharmaceutical Industry Information Centre



- Ranking 2nd in the top 300 Most Valuable Chinese Brands in 2018
——by Brand Finance, a famous brand value consultancy company in the UK



- Top 10 Most Influential Enterprises in Chinese Pharmaceutical Industry in 2017
——by Rongyao 2017 • Sina Overall Rankings for Medical Industry



- Ranking 3rd in top 100 in Chinese Pharmacy Industry in 2017
——by Medicine Economic Newspaper



- Being awarded as Shanghai contract credit enterprise with the credit rating of grade AAA from 2016 to 2017
——by Shanghai Contract Credit Promotion Association



- One of the 40 model organizations of Chinese corporate culture in the 40 years of the reform and opening-up
——by China Corporate Culture Institute



- Annual capital innovation medal
- Annual medal for the Board of Directors
——by Shanghai United Media Group and Jiemian • Cailianshe

Mission

Perseverance, committed to enhancing people's healthy living quality

Vision

Become a respectful manufacturer with leading brand medicine and a service provider in healthcare field with industry reputation

Core values

Innovation, integrity, cooperation, tolerance, responsibility





1

CHAPTER



Strategy and Analysis

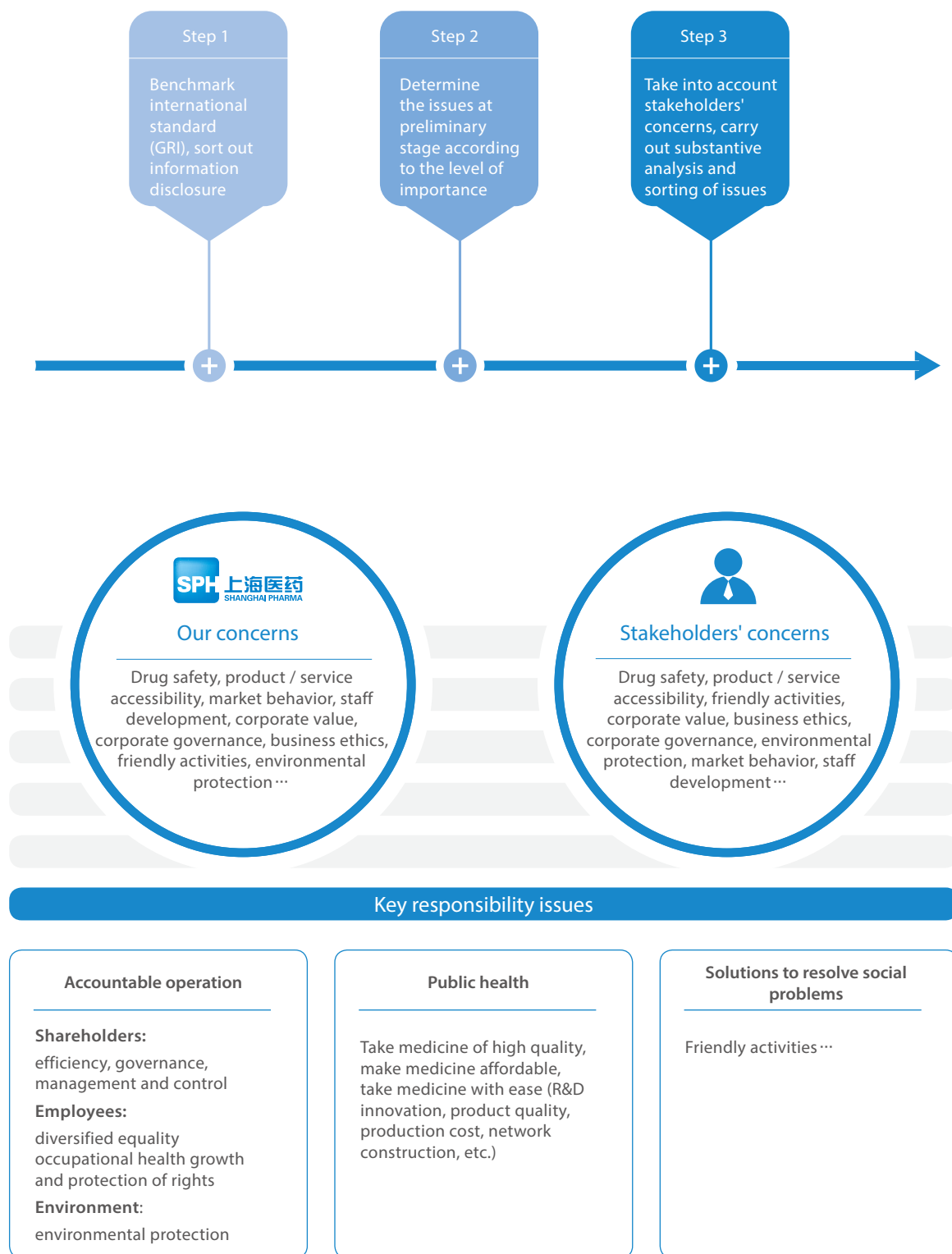
1.1 Responsibility Management System

	Management responsibilities	Management structure
Strategy	Formulation and improvement of corporate social responsibility strategy	Strategy Committee of the Group Strategic Development Department of the Group
Management and practice	To be in line with the business of the Company, our corporate social responsibility practice includes but is not limited to: R&D innovation, lean manufacturing, promotion of access to medicines and services, meeting the medication needs of special groups, providing solutions to resolve social problems, accountable operations, etc. (please refer to relevant sections)	Horizontal: functional responsibility system Vertical: line management system
Communication	Capital market / responsibility brand communication in doctor-patient market, communication with other stakeholders (please refer to relevant sections below)	Board of Directors' Office / Office of the Group Stakeholder Communication Department

1.2 Stakeholders and Communication Channels

Stakeholders	Stakeholders' concerns	Our communication channels
Shareholders	Performance Governance Compliance	Open information disclosure Shareholders' general meeting, investor performance conference, roadshow / reverse roadshow, etc. Investor relations hotline, E interaction, etc.
Clients	Safety / quality Service Price	After-sales service, research on level of satisfaction Academic seminar Rational drug use and popularization Brand communication
Employees	Power enhancement Personal development Protection of rights and interests	Performance management communication Periodic training Workers' congress WeChat, Weibo, BBS, intranet, internal publication
Partners	Supply chain management Cooperation to achieve win-win situation	Industry communication Training Business exchange platform Cooperative assessment
Community and environment	Solutions to resolve social problems Environmental protection	Friendly activities Responsible operation

1.3 Substantive Analysis of Key Responsibility Issues



Our goal

Take medicine of high quality, make medicine affordable

Our management ideology

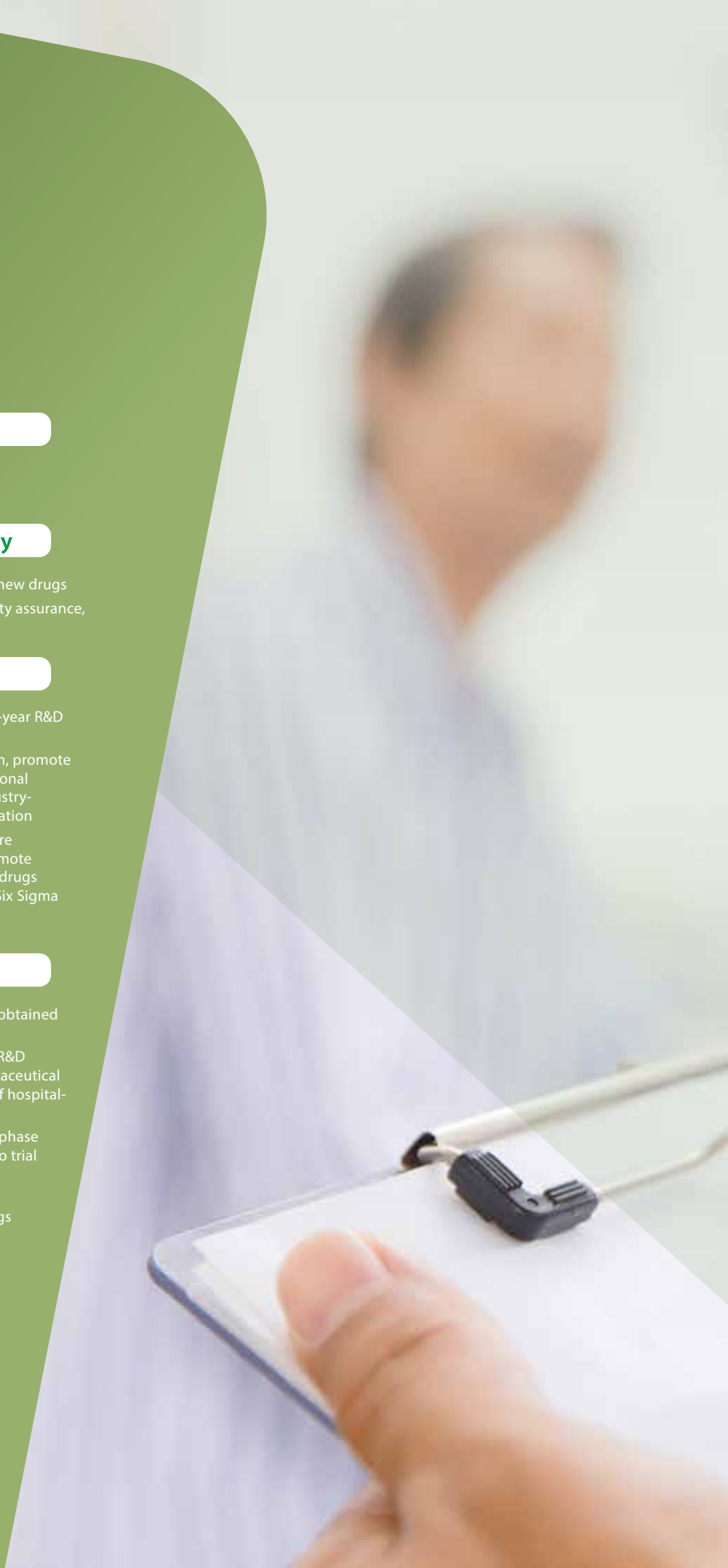
- R&D innovation -- Reliable efficacy of new drugs
- Production process -- Quality and safety assurance, reasonably affordable

Our measures

- Define overall R&D strategy and three-year R&D direction
- Continuously optimize the R&D system, promote innovative development and international development in R&D and deepen industry-university-research-medicine collaboration
- Continuously optimize the manufacture management system, continue to promote the consistency evaluation of generic drugs and implement full coverage of Lean Six Sigma management

Our achievements

- A number of R&D achievements have obtained clinical approvals.
- Expand overseas R&D center, deepen R&D cooperation with transnational pharmaceutical enterprises and develop new modes of hospital-enterprise cooperation
- The R&D industrial pilot base project (phase I) of North Pharmaceutical was put into trial operation
- New progress has been made for the consistency evaluation of generic drugs



2 CHAPTER



**Let people take medicine of
high quality and make the
medicine affordable**



2.1 Step up R&D efforts and enhance innovation impetus

1 R&D comprehensive strength ranks first

Progress in biological antibody drugs in R&D / innovative drug lines			
Treatment field	Clinical studies submitted to CFDA	Clinical phase I	Clinical phase II
Anti-tumor drugs Drugs for digestion and metabolism Immunosuppressors Drugs for treatment of cardiovascular and cerebrovascular diseases	SPH4480	CD30 - DM1 antibody SPH3348 SPH1188-11 Humanized CD 20 antibody HER2 compound antibody T-DM1 Hydroxytryptolide - rheumatoid arthritis Salvianolic acid A for injection	SPH3127 Hydroxytryptolide - AIDS

- Application for biological products - class 2 new drugs "recombinant anti-HER2 humanized monoclonal antibody-MCC-DM1 coupling agent for injection" for therapeutic use obtained clinical approvals.
- Clinical phase II studies for class 1 innovative chemical drugs "16-hydroxytryptolide tablets" obtained approvals.
- Application for class 1 innovative chemical drugs "SPH3348 tablets" obtained clinical approvals.
- Application for biological products - class 1 new drugs "recombinant human-mouse chimeric anti-CD30 monoclonal antibody-MCC-DM1 coupling agent for injection" for therapeutic use was submitted and obtained clinical approvals in the same year.
- Application for class 1 innovative chemical drugs "SPH4480 active pharmaceutical ingredients and tablets" obtained clinical approvals.
- At the 35th session of annual meeting of National Pharmaceutical Industry Information in 2018 sponsored by the China National Pharmaceutical Industry Information Center, the Company was shortlisted by the Ministry of Industry and

Information Technology in the list of the top 100 enterprises in the Chinese pharmaceutical industry in 2017, [ranking sixth]; was selected as the "Top 20 Industrial Enterprise with Drug R&D Product Line in China in 2018", [ranking fifth].

- The Company was shortlisted in the list of "Innovative Pharmaceutical Enterprises in China in 2018"; our subsidiary Guangdong Techpool Bio-pharma Co., Ltd. continued to hold a title of "Innovative Pharmaceutical Enterprise in China in 2018". SPH Traditional Chinese Medicine's saffron and saffron mask projects won a gold award for massive health category invention items in the 46th International Exhibition of Inventions of Geneva.
- The Key Technologies of Quality and Effect Control and Industrialized Application of Natural Active Polysaccharides in which Shanghai Lei Yun Shang Pharmaceutical Co., Ltd. participated was granted the first prize of Shanghai Science and Technology Progress Award in 2017.
- An application for the second prize of Shanghai Science and Technology Progress Award was filed for the Development and Industrialization of Calcium Dibutyladenosine Cyclophosphate of SPH No. 1 Biochemical and Pharmaceutical (shortlisted and published).

2 The Company actively promotes innovative development and international development strategies

- The head office of the Company in Hong Kong commenced business to undertake the four major functions of overseas R&D platforms and implement innovative and international development strategies. The Company will focus on laboratory building and international cooperation and continue to set up branches and R&D laboratories in the world. It will leverage the favourable business environment and abundant innovation platforms and human resources in Hong Kong to promote international development. By taking advantage of the R&D strengths of famous universities and scientific research institutions in Hong Kong and leveraging the unique advantages of Hong Kong Science Park in innovation and scientific and technological development, the head office will integrate the industry resources of Shanghai Pharmaceuticals to jointly promote pharmaceutical innovation and transformation and incubate a "unicorn" company in biomedicine field in the future.
- The Company has set up SPH Phililab in the US as the overseas high-end preparation R&D platform by means of acquisition. SPH Phililab will conduct R&D of featured products, high-tech products and complex preparations by leveraging the US's mature experience in R&D, application, production and sale of generic drugs according to the market prospects of China and the US, in order to meet the dual compliants of the FDA and CFDA as well as clinical needs. This will accelerate the transformation and upgrading of Shanghai Pharmaceuticals in drug R&D and promote the Company's transformation to a globally influential pharmaceutical enterprise.
- By formally initiating the San Diego R&D Center in the US, the Company carried out external cooperation and equity investment in biomedicine in order to keep in line with the international advanced biomedical technologies and improve its overall innovative ability in biomedicine field.
- The Company signed an R&D cooperation agreement with Bracco Imaging S.p.A (a global leader in the imaging diagnosis field) in Bracco Group in Milan, Italy to carry out new R&D activities in China. The two parties will mainly carry out cooperation in the development of Bracco microbubble technology platform to support Shanghai Pharmaceuticals in the development of innovative antitumor drugs. In this R&D cooperation, tumor angiogenesis will be taken as a targeted cancer therapy in an effective and safe manner to expand the application of microbubbles in new fields. Combination of Bracco's innovative treatment monitoring and Shanghai Pharmaceuticals' tumor immunotherapy will produce prominent advantages in the field of pancreatic cancer, thereby meeting more medical needs.
- Shanghai Pharmaceuticals Holding Co., Ltd. signed a cooperation intention memorandum with Russian BIOCAD, specifying that both parties would fund a joint venture in China which is responsible for R&D, localized production, import registration and sales of macromolecular drugs. Products involved in the initial cooperation period including BIOCAD's four blockbuster biosimilars and two biological innovative drugs will mainly be used to treat diseases such as breast cancer, gastric cancer, non-Hodgkin's lymphoma, chronic lymphocytic leukemia, non-small cell lung cancer, cervical cancer and rheumatoid arthritis.
- The Company signed a transfer agreement with Mitsubishi Tanabe Pharma and obtained the right to develop and sell innovative chemical drugs under Category I (SPH3127) in major medical markets including the US.

3 New progress in the consistency evaluation of generic drugs

In 2018, Shanghai Pharmaceuticals completed application for consistency evaluation of 27 varieties and 32 strengths of solid preparations and ranked top in China in the quantity of consistency evaluation initiations and applications for solid preparations. In particular, the four varieties and four strengths of drugs, namely, metformin hydrochloride sustained-release tablets, captopril tablets (12.5 mg), fluoxetine hydrochloride capsules and hydrochlorothiazide tablets passed the consistency evaluation and obtained the Approval Letter of Drug Supplementary Application. Metformin hydrochloride sustained-release tablets and captopril tablets are key products of the Company and fluoxetine hydrochloride capsules and hydrochlorothiazide tablets are the sole among other products of the same variety to have passed consistency evaluation in China.

Besides, Shanghai Pharmaceuticals, as a pharmaceutical enterprise with a strong sense of social responsibility, has always attached great importance to the accessibility of clinically

urgently needed and patients' requisite drugs. So, it fully evaluated and considered the particularity of such products in the initiation phase of consistency evaluation. Among the products for which consistency evaluation has been initiated, pyridostigmine bromide tablets, primaquine phosphate tablets, chloroquine phosphate tablets and thyroid tablets are clinically required unique products. According to national policies and consistency evaluation requirements, the enterprise filed an application for consistency evaluation of the four products at the end of 2018, laying a solid foundation for subsequent supply of these unique products.

Regarding injections, as of the end of 2018, the Company had initiated consistency evaluation for 10 varieties and 20 strengths of injections. In particular, supplementary application had been completed for two varieties and the application for the remaining eight varieties was also advanced in an orderly way.

4 Promote in-depth industry-university-research-medicine collaboration and keep improving the R&D system

The Company keeps optimizing the construction of the R&D system

The Company continued to improve the construction of the R&D management system and further propelled the implementation of the sale-production-research synergy mechanism; implemented strict initiation and schedule management through strengthening information platform construction and management. At the same time, the Company strengthened the open cooperation, optimized the R&D model and actively carried out domestic and overseas R&D layout and cooperation. Shanghai Pharmaceutical Group (Benxi) Northern Pharma Co., Ltd. witnessed trial operation of Phase I project, which undertook the industrial transfer businesses of projects in the Group.

Shanghai Pharmaceuticals joined hands with the Tenth People's Hospital of Tongji University to establish the Cancer Center of Tongji University

On April 4, Shanghai Pharmaceuticals Holding Co., Ltd. formally entered into a strategic cooperation framework agreement with the Tenth People's Hospital of Tongji University. The two parties will conduct an in-depth cooperation in cancer treatment, especially the building of the Cancer Center of Tongji University and cell therapy.

The two parties will be committed to cooperating comprehensively on immunotherapy such as CAR-T, cell therapy, gene therapy, antibody therapy and other tumor therapy researches and working with each other to explore new treatments in the fields of precision medicine and tumor. Precision medicine leads the main development trend of future medicine. The new generation of therapy techniques and drugs represented by immunotherapy is changing the treatment concept of various difficult diseases including cancer. Under the guidance of precision medicine, Shanghai Pharmaceuticals will work with the Tenth People's Hospital to carry out researches on immunotherapy, cell therapy, gene therapy, etc. to promote the rapid development of precision medicine.

Pioneering new pattern of hospital-enterprise cooperation – Inauguration of "Shuguang Hospital & Shanghai Leiyunshang Traditional Chinese Medicine Preparation & Innovation Center"

On September 25, the inauguration ceremony of "Shuguang Hospital & Shanghai Leiyunshang Traditional Chinese Medicine Preparation & Innovation Center" was held at Shanghai Leiyunshang 's Fengpu production base.

As a wholly-owned subsidiary of Shanghai Pharmaceuticals specializing in traditional Chinese medicine, SPH Traditional Chinese Medicine chooses Shanghai Leiyunshang, one of the core Chinese medicine manufacturers, to be responsible for the entrusted processing and manufacturing of classic Chinese medicine preparations of Shuguang Hospital, and conduct scientific and academic promotion and application via the system of Shuguang Hospital. The establishment of Shuguang Hospital & Shanghai Leiyunshang Traditional Chinese Medicine Preparation & Innovation Center will provide a good platform for the two parties to pertinently improve their service capabilities in their respective professions through medical resource sharing. The Innovation Center will focus on better meeting the needs of patients to further satisfy public demand for quality health care services, thereby benefiting the patients in the end.

Industrial chain + innovation chain, cooperation between Shanghai Pharmaceuticals and West China School of Pharmacy

On September 21, Shanghai Pharmaceuticals and West China School of Pharmacy Sichuan University held a signing ceremony of strategic cooperation in Chengdu. The two parties will cooperate with each other in building Sichuan Small Molecule Drug Precision Engineering Technology Research Center and open cooperation base and talent cultivation. Meanwhile, they signed a cooperation agreement on the construction of postgraduate practice base between West China School of Pharmacy and Shanghai Pharmaceuticals.

The strategic cooperation will contribute to organic combination of the innovative ability in precision drug synthesis and delivery of West China School of Pharmacy with the industrial capability of Shanghai Pharmaceuticals to achieve the integration of innovation chain and industrial chain, which will provide a better development space for Shanghai Pharmaceuticals and achieve win-win cooperation.

Improve the Group's high-end preparation R&D platform

The Company worked with the domestic leading high-end preparation team to establish Shanghai Huiyong Pharmaceutical Research Co., Ltd., which focuses on R&D of new preparations, key equipment and drug delivery devices and pharmaceutical aids.



SPH Traditional Chinese Medicine won two international gold awards for its saffron in the International Exhibition of Inventions of Geneva

Shanghai Traditional Chinese Medicine Co., Ltd. subordinate to Shanghai Pharmaceuticals took its saffron and saffron mask to the 46th International Exhibition of Inventions of Geneva. Its saffron received unanimous recognition from the jury and won the gold award in the exhibition for its contribution to the breeding of saffron corm in the world based on its unique, natural, organic and eco-friendly planting pattern. As a high value-added R&D derivative of saffron, the saffron mask not only won high praise from professional evaluation experts but also caught the eyes of audience.

Founded jointly by the World Intellectual Property Organization, the Swiss Federal Government, etc. in 1973, the International Exhibition of Inventions of Geneva is one of the exhibitions of invention in the world with the longest service history and largest size. It is an important exhibition stage for global inventors and an important international platform for transformation of high-tech "industry-university-research" results.

The "Hericium erinaceus" project won the first prize of Shanghai Science and Technology Award

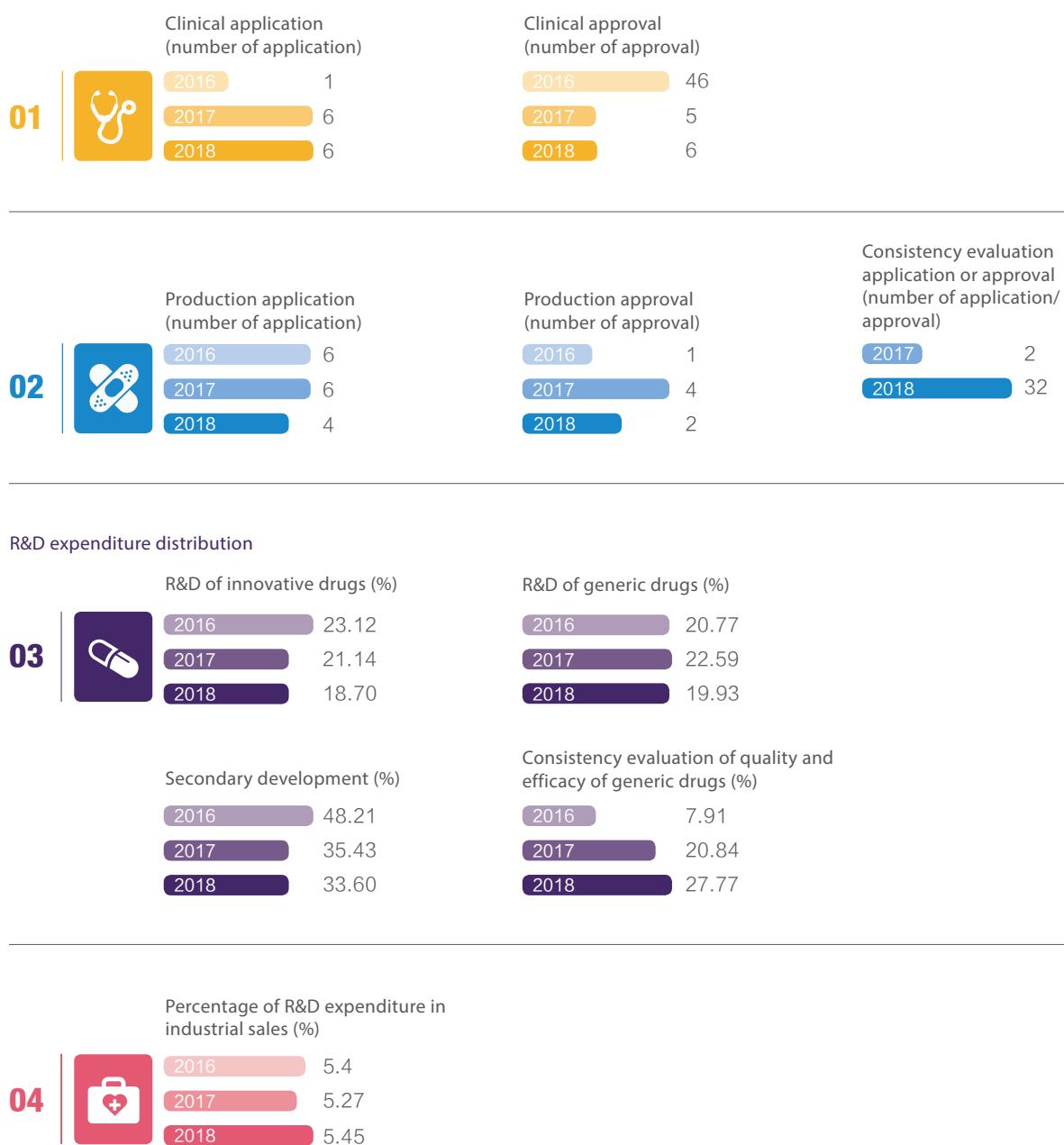
The 2017 Shanghai Science and Technology Award Conference was held in Shanghai. At the conference, the project Key Technologies of Quality and Effect Control and Industrialized Application of Natural Active Polysaccharides led by Institute of Edible Fungi, Shanghai Academy of Agricultural Sciences and assisted by Shanghai Leiyunshang Pharmaceutical Co., Ltd. subordinate to Shanghai Pharmaceuticals won the first prize of Shanghai Science and Technology Award. The research results of "Screening of Fine Strains of Hericium Erinaceus under Solid Fermentation" constitute the core contents and one of successful examples of the award-winning project.

The research project will start mass production after passing production verification as it can significantly improve relevant efficacy concentration of raw materials and products of Hericium erinaceus tablets and their quality control level, which is of great significance to improve the inherent quality of Lei's Hericium erinaceus tablets and ensure its clinical efficacy, and will even promote the application of Hericium erinaceus industry and the sustainable development of health industry.

In 1975, the No. 3 Shanghai Traditional Chinese Medicine Pharmaceutical Factory (one of the predecessors of Shanghai Leiyunshang Pharmaceutical) proposed for the first time to take the mycelium on solid media as drug to research the solid culture method, preparation technology, pharmacology and efficacy of Hericium erinaceus mycelium as drug together with the Institute of Edible Fungi, Shanghai Academy of Agricultural Sciences, Shanghai Institute of Pharmaceutical Industry, Shanghai Xuhui Central Hospital, Shanghai Renji Hospital, etc. They completed the research on and put into production the Lei's Hericium erinaceus tablets in 1977, setting an example of fungus drugs in China. The drug is effective in clinical treatment of gastric and duodenal ulcers, chronic gastritis and gastrointestinal tumors.

In more than 40 years, continuous efforts have been made in increasing the active ingredients of Hericium erinaceus tablet products. In 2016, Shanghai Leiyunshang Pharmaceutical cooperated with Shanghai Academy of Agricultural Sciences for the second time to systematically screen the series Hericium erinaceus strains in recent years. They screened out a fine strain of strong bioactivity and high content of active ingredients out of 12 Hericium erinaceus strains and put it into trial production in two bases producing raw materials of mycelium in the south and north, respectively, fully verifying the superiority of the new strain from such perspectives as output, production techniques, and active ingredient content. Meanwhile, they established internal control standards for quality of raw materials, filling the blank of Hericium erinaceus in the quality of raw materials.

Key indicators



2.2 Under all-round management, continuously improve the quality and safety of drugs



During the reporting period, all 44 drug manufacturers affiliated to the Company passed GMP certification and obtained a total of 117 GMP certificates. By reforming and passing the GMP certification, the Company has comprehensively enhanced its technological equipment, production management and quality management in pharmaceutical manufacturing to ensure continuous and steady production of drugs that meet the intended use and registration requirements.



All 44 drug manufacturers affiliated to the Company passed GMP certification and obtained a total of

117 GMP certificates

1 Implement quality responsibility

The "Quality Manual" is the Company's programmatic documentation on quality management, is the basic rule for the Company to establish, implement and maintain a quality management system, and is also the Company's quality commitment to its customers and the society.

All members of the Company implement the quality policy of this manual in a comprehensive and stringent manner. The manual further regulates the production of drugs, medical equipment and other products, as well as business activities to ensure and maintain the continuous suitability and effectiveness of the quality management system, and to confirm the customers and other relevant parties that the Company has its ability to provide products and services that meet the requirements of applicable laws and regulations as always, and that the Company takes actions to fulfill social responsibility.

In order to implement drug quality management, the Company and 17 drug manufacturers and business enterprises directly affiliated to the Company signed the "2018 letter of responsibility assessment for quality management of drug production and business operations". The Company also held quality regular meetings and conducted special quality inspections to further strengthen the compliance awareness, improve the management system, and enhance the ability to prevent and control quality risks.

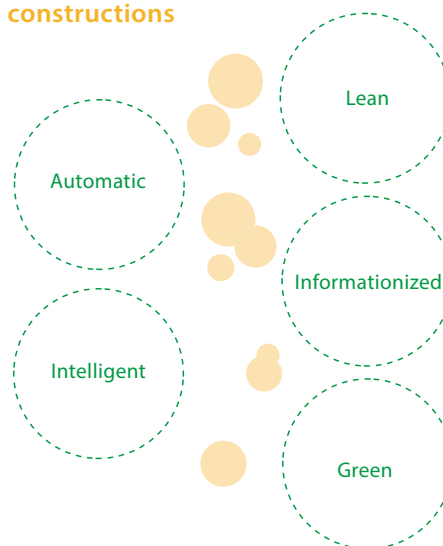
2 Strengthen quality audit

In 2018, the Company conducted special audit on enterprises producing Chinese herbal pieces, Chinese herbal injection, multi-component biochemical drugs and key varieties listed in the national drug sampling list in light of the regulatory focus. In addition, it also conducted pre-inspection before certification for some enterprises, sorted out the implementation of GMP by enterprises, and urged enterprises to carry out risk control and defect rectification. During the reporting period, it has completed special audit and GMP pre-inspection on 17 enterprises, all of which have completed the rectification within one month and submitted written rectification reports.

3 Optimize production layout and manufacturing resources

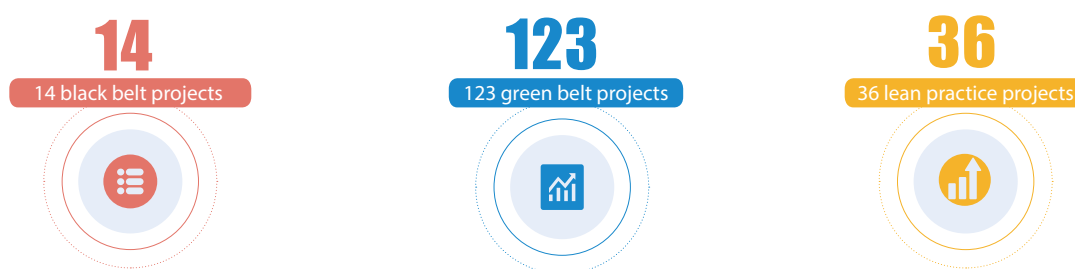
The Company further optimized the production layout, promoted the classification and positioning of production bases and optimized resource allocation to highlight the production characteristics and focuses of the bases; worked out plans for chemical raw medicine and promoted the integrated and intensive development of raw materials + preparations; optimized and integrated the whole Chinese medicine industrial chain and kept quality at source under control from standard planting of traditional Chinese medicine in habitat areas to layout of Chinese herbal piece processing in main production areas of the country to guarantee the quality, safety and traceability in the Chinese medicine manufacturing process; continued to improve the production level of production bases by promoting five constructions, namely "lean, automatic, informationized, intelligent and green" development; established a unified industrial manufacturing index evaluation system to build benchmarks and find out deficiencies and gaps so as to improve the comprehensive operation level of production bases.

Five constructions



4 Lean Six Sigma management

With the continuous and in-depth development of Lean Six Sigma management, the Company supported its business development by applying such elements as performance culture, lean methodology and tool utilization to explore and practice systematic and innovative management models such as operating system construction, lean site management and value stream management of key products; regarding the Lean Six Sigma project, the Company further engaged in the industrial R&D, manufacturing and sales sectors, and selected pragmatic and quality projects. Compared with previous years, the projects it launched were not only superior, meaningful, cost-saving and high-efficiency, but also focused on pain and difficult points of enterprises in their business operations, and improvement of KPI Index and operating process. In the commercial sector, it kept focusing on improving the inventory and operating efficiency, such as improving the inventory level, optimizing the billing period, and improving capital utilization and logistics efficiency. In 2018, the Company had a total of 14 black belt projects, 123 green belt projects and 36 lean practice projects, which trained lean talents. In addition, 38 employees passed the black belt theory assessment, and 219 employees passed the green belt theory assessment, which reserved adequate lean talents.



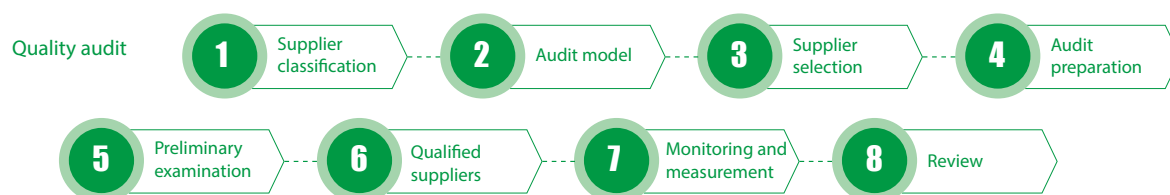
5 Supply chain management

Drug manufacturers subordinate to Shanghai Pharmaceuticals conduct quality audit of suppliers and implement procurement process control to ensure that the procurement of products meets quality standards, and that the procurement process complies with relevant regulations, in order to meet the requirements of product quality and safety.

Through the "Quality Manual", "Supplier quality audit control procedures" and other documents, Shanghai Pharmaceuticals guides the subordinate drug manufacturers to carry out supplier management and procurement process control. Subordinate enterprises formulate the corresponding written documents to standardize the operation of supplier management and procurement process of the enterprises to ensure compliance with the requirements of the "Drug production quality management practices" and other regulations.

For the purposes of ensuring that the procurement of products complies with the requirements of regulations, registration approval and quality standards, enterprises will conduct quality audit for all suppliers purchasing products. What type of quality audit control of the supplier and the purchased product is used depends on the impact of the purchased product on the quality of the final product of the entity and the requirements for risk management.

Generally, the following processes are included: supplier classification, audit model, supplier selection, audit preparation, preliminary examination, qualified suppliers, monitoring and measurement, review, etc. The above processes have a standardized written record.



Enterprises subordinate to the Group strictly manage and require suppliers through the following measures:

1. For supply interruption risk (safety inventory risk, supply channel risk): Based on the characteristics of the long-term sterility test cycle and the weight of the annual plan of the product, the Company combines the full competition of the material market, the supply and demand relationship, and the selective width to set certain safety inventory for products with higher weights, and develop strategic cooperation suppliers. At the same time, it eliminates the exclusive suppliers of non-market factors as far as possible.

2. For material quality risk (quality inspection risk, return risk): Establish a scientific supplier assessment and admittance system, review the authenticity and legitimacy of the supplier's credit standing, determine a list of qualified suppliers, conduct timely on-site audits and sample analysis of significant changes (main equipment, materials and processes), improve inspection methods, set quality management and control, inspection and return terms in the contract and implement supplier assessment, evaluation and elimination mechanisms.

3. For material price risk (price fluctuation risk, bargaining ability risk): Eliminate exclusive suppliers of non-market factors. Track relevant national industrial policies, select appropriate pricing strategies based on different materials (bargaining, tendering, bidding, competitive procurement, etc.), analyze the cost of each material, track the prices of basic raw materials, and control the capacity of leading suppliers in the industry, production rhythms, costs, sales strategies, etc., while using third-party pricing platforms to enhance the transparency of market prices, strengthen market prejudgment, implement strategic procurement, and sign annual contracts to lock down some low-cost materials.

4. For warehouse management risk (inventory backlog risk, overdue inventory risk); plan control risk (plan formulation risk, implementation change risk): Sell according to the market demand, at the same time combining the production equipment and other current conditions, formulate a reasonable immediate and rolling sales plan; the production planning department formulates the production plan according to the immediate and rolling sales plan and production site conditions; the procurement department formulates the procurement plan according to the inventory; implement the orders and contracts after approval according to the stipulated privilege and procedures, and coordinate and arrange the progress of procurement. Resolutely eliminate unnecessary and over-planned procurement; reduce and eliminate the costs of disposal of expired materials and solid hazardous wastes.

5. For supplier audits and self-inspections: The production plants, procurement centers and quality management departments jointly conduct on-site audits of raw material suppliers, accessories suppliers and packaging material suppliers, and do a good job in quality assessment of existing suppliers; organize special self-inspection of compliance with GMP and related laws and norms on the entire process of drug manufacturing including supplier audit, raw material drug procurement, quality inspection, material release, production management, etc.; for non-conformities found during self-inspection, formulate rectification measures to ensure the orderly operation of the quality system.

Case: Shanghai Pharmaceuticals expanded the layout of traditional Chinese medicine resources into northwest China by establishing SPH (Ningxia) Traditional Chinese Medicine Resources Co., Ltd.

Shanghai Pharmaceuticals has witnessed accelerated development of the whole industrial chain of traditional Chinese medicine. On August 18, SPH (Ningxia) Traditional Chinese Medicine Resources Co., Ltd. was established, which will promote the implementation of the "Base for Cultivation and Processing of Chinese Herbal Medicines" signed between Longde County and SPH Traditional Chinese Medicine.

SPH (Ningxia) Traditional Chinese Medicine Resources Co., Ltd. was incorporated with the funds from SPH Traditional Chinese Medicine and Ningxia Health Career Investment Co., Ltd., of which SPH Traditional Chinese Medicine took 80% shares. Committed to developing the whole industrial chain of genuine medicinal materials in Liupan Mountain, the company will take advantage of the genuine medicinal material resources in Liupan Mountain to set up high-quality raw material bases, with the focus on the building of a base for standardized cultivation of such genuine medicinal materials as astragalus and dangshen. Under the guidance of the philosophy of "producing quality medicinal materials through ecological agriculture" of SPH Traditional Chinese Medicine, the company will improve the quality of medicinal materials through modern agricultural technologies and mechanized cultivation and processing techniques, so as to provide Shanghai Pharmaceuticals with quality raw materials and boost the development of pharmaceutical industry in Longde County.

The company will build ecological brands for genuine medicinal materials in Liupan Mountain, carry out studies on plantation-medicine intercropping, set up bases cultivating bupleurum, gentiana macrophylla and other traditional Chinese medicines in imitated wild conditions and standardized, modernized and intelligent logistics bases for Chinese herbal medicines, and create a Longde-centered ecosphere with a 500km radius for genuine medicinal materials in northwest China. The company will also make more efforts in scientific research and further study the genuine medicinal materials in Liupan Mountain from such aspects as resources protection, introduction and acclimatization, standardized cultivation, processing in producing areas and product development, thereby building itself into a modernized whole-industry-chain science park for Chinese herbal medicines integrating seedling breeding, cultivation, scientific research, processing and marketing. In addition, the company will lead farmers in Longde County to shake off poverty and get rich through building a Chinese herbal medicine-based industrial complex organically integrating seedling breeding, green cultivation, standard processing, marketing and technology service based on innovative development models, flexible operating mechanisms and its "exemplary cultivation + technology training + order collection".





Our goal

Take medication with ease

Our management ideology

- Promote online and offline access to medicines / services
- Commercial model innovation
- Business model innovation
- Improve drug access
- Meet the needs of special group

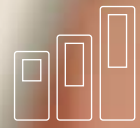
Our measures

- Continue to expand the layout of nation's commercial network
- Improve the service capacity of SPHC
- Enhance community drug service capabilities
- Designated production

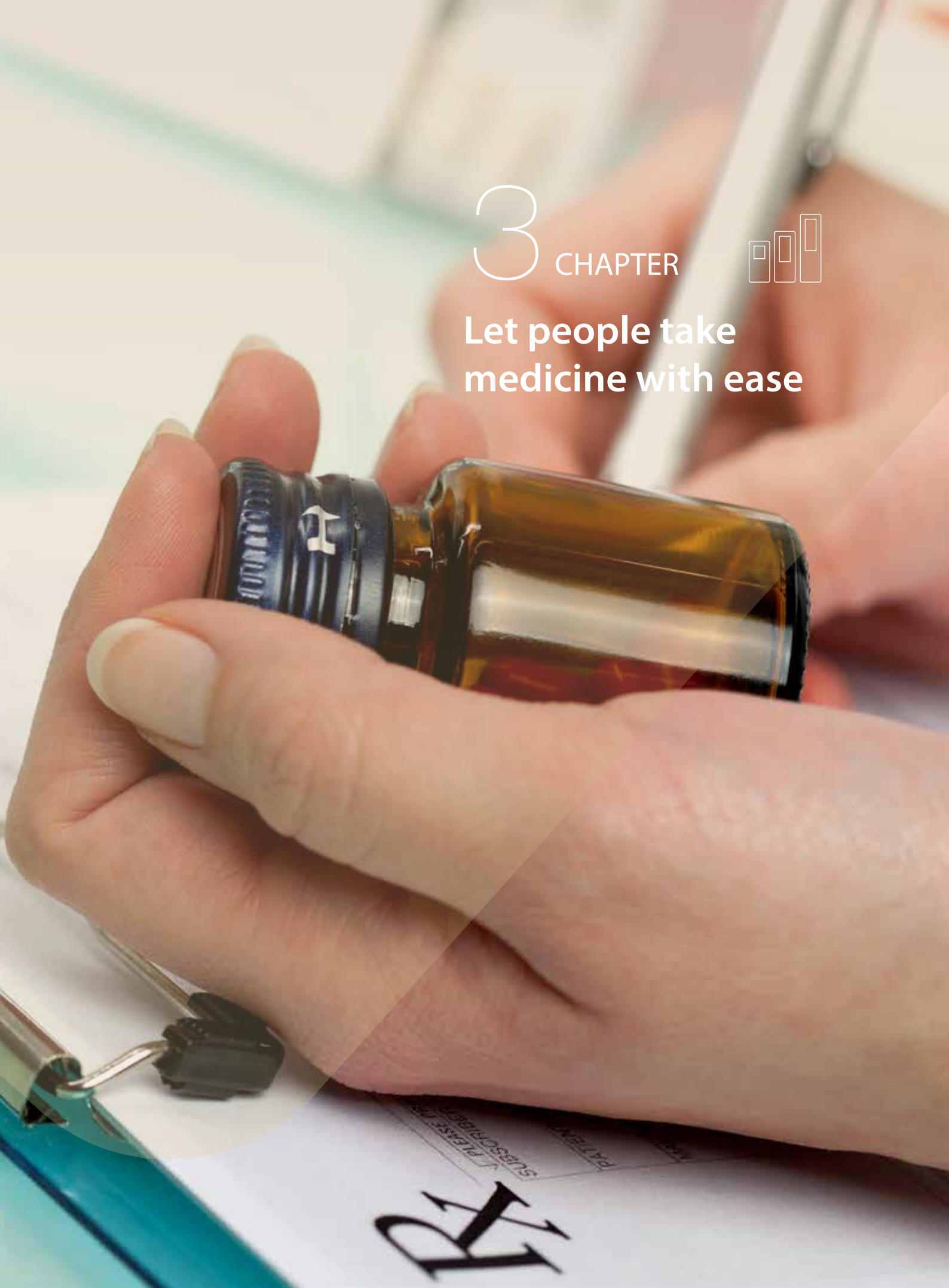
Our achievements

- Expanded the commercial network to fill the blank provinces
- "Yiyao" services meet the requirements of comprehensive reform of communities
- Strategic cooperation improves service capabilities
- Ensure the normal supply of drugs in short supply

3 CHAPTER



Let people take
medicine with ease



Create innovative medical and pharmaceutical business models to better serve the patients and consumers



On February 2, 2018, Shanghai Pharmaceuticals announced the acquisition of the 100% shares of Cardinal Health (L) Co., Ltd. in cash through its subsidiary Century Global Thus, Century Global held 100% shares in Cardinal Health (L) Co., Ltd. and indirectly controlled all the businesses of Cardinal Health China. Shanghai Pharmaceuticals and Cardinal Health, Inc. will carry out various strategic cooperation based on the respective advantages of both parties and jointly develop the huge business opportunities in the global pharmaceutical and medical equipment industry, including creating innovative medical and pharmaceutical business models to better serve the patients and consumers.



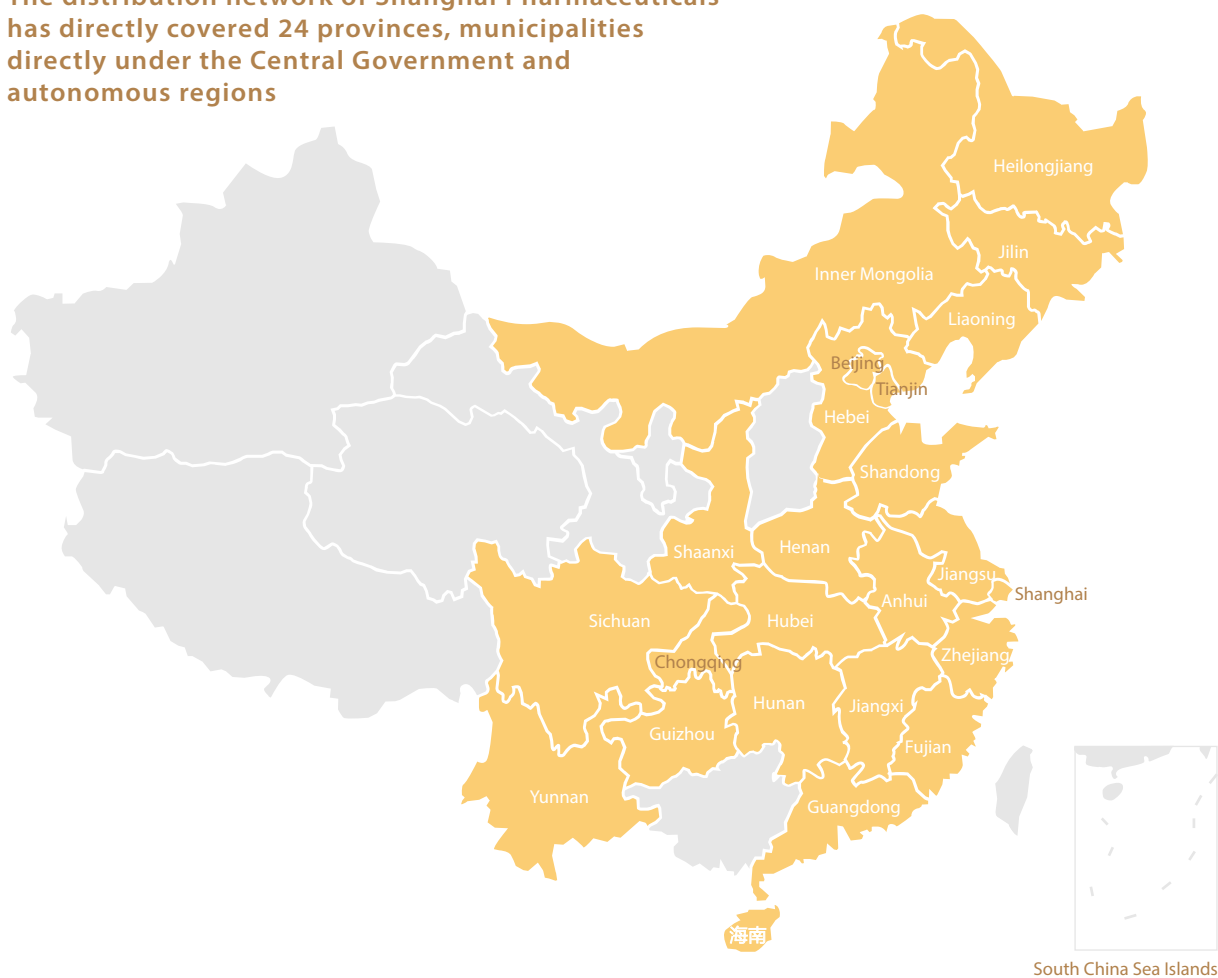
Through the post-acquisition integration and collaboration, not only will the overall competitive landscape and industrial advantages of Shanghai Pharmaceuticals' distribution business be significantly enhanced, but also Shanghai Pharmaceuticals will further consolidate its leading edge in multiple segments of business and innovation, and accelerate the realization of its overall strategic goals. In respect of distribution, the Company will complete its network layout in 24 provinces and areas in China. Particularly, it will improve the coverage and permeability of terminal hospitals in major cities; leap to the top of the industry in the varieties of imported drugs which it distributes as a general agent by consolidating its competitive strengths in east China through enriching the varieties it distributes; and apply technology-driven solutions and carry out end-to-end supply chain management, enabling Shanghai Pharmaceuticals to expand its scale and enrich its characteristics in the distribution of medical equipment and specialty drugs. As for the retail sector, adhering to the overall trend of forbidding hospitals from selling medicine, the Company will step up the building of the nationwide leading online and offline pharmacy network for prescription drugs. Besides, the Company will also enhance its ability in information and logistics management and keep innovating its service model, so as to meet terminals' urgent demand for service upgrading.

The successful completion of the acquisition is another important milestone in the flourish development of Shanghai Pharmaceuticals. Facing the continuous deepening of medical reform in China and people's escalating demand for medical service at present, Shanghai Pharmaceuticals, after acquisition, will provide hospitals and patients with a greater diversity of drugs and more efficient and thoughtful professional services, and will step up its transformation and upgrading to a modern healthcare service provider. Consequently, it is a solid step ahead toward becoming a comprehensive pharmaceutical group with international competitiveness.

Thanks to the integration of Shanghai Pharmaceuticals and Cardinal Health China, Shanghai Pharmaceuticals' layout of super-large service network for new special drugs under "Yiyao • pharmacy" brand will be further expanded. As an "Internet +" development platform for new retail of prescription drugs under Shanghai Pharmaceuticals, SPHC, to which DTP system under "Yiyao • pharmacy" subordinates, is currently actively preparing its new round of financing and introduction of more strategic investors, seeking to expand its application.



The distribution network of Shanghai Pharmaceuticals has directly covered 24 provinces, municipalities directly under the Central Government and autonomous regions



3.2 Improve access to drugs for hepatitis B through strategic cooperation.



In 2018, Shanghai Pharma and GlaxoSmithKline (GSK) China held the Signing Ceremony for Strategic Cooperation on New Retail of Prescription Drugs cum Opening Ceremony of "Star Plan" Program, at which both parties signed an agreement on the strategic cooperation on "Heptodin and Viread" in non-targeted pharmacies to improve access to drugs for hepatitis B. Aiming at further expanding the coverage of "Heptodin and Viread" in retail market, the cooperation agreement gave play to Shanghai Pharma's strengths in professional service, helped GSK China with its analysis and coverage of retail market, so that the two parties could jointly cope with opportunities and challenges and achieve sustainable development and win-win situation.



Viread, a new nucleoside reverse transcriptase inhibitor, is a drug included in the first national drug price negotiation. It is widely applied to treat diseases caused by infection of such viruses as human immunodeficiency virus (HIV) and hepatitis B virus (HBV).

Heptodin (Lamivudine) applies to adult chronic hepatitis B patients with elevation of alanine transaminase [ALT], active virus reproduction and hepatic compensation.

There are nearly 90 million hepatitis B virus carriers in China, including approximately 28 million chronic hepatitis B patients who need take antivirals correctly in a timely manner for a long time. Given increasingly difficult access to hospital market, it is imperative to break down channel barriers, give play to the overall strengths of pharmaceutical market and improve access to quality products. Heptodin and Viread under GSK (the industrial leader in anti-hepatitis B virus) have been widely acknowledged for many years in the medical field.

In 2018, as a prescription drug included in the first national negotiation, Viread witnessed continuously rapid growth in sales volume. Facing patients' urgent demands, Shanghai Pharma established a strategic partnership with GSK China on "Heptodin and Viread" in retail market to promote their coverage to more pharmacies and patients. Currently, with a nationwide retail network covering 667 key chain retailers, Shanghai Pharma has confidence and ability in sending relevant drugs to patients in a more efficient and convenient manner and better serving patients through the cooperation.



3.3 Create a new model for pharmaceutical retail to further consolidate advantageous resources

On March 16, 2016, Shanghai Pharmaceuticals Grand Health Cloud Commerce Co., Ltd. and ZhongAn Online P&C Insurance Co., Ltd. signed a comprehensive strategic partnership agreement. Adhering to the aim of "medical finance enabling the development of new pharmaceutical retail", both parties will enter into further strategic cooperation in such fields as medical financial innovation payment mode and grand health management and discuss the establishment of a joint venture by MediTrust Health under SPHC and ZhongAn Micro Loan.

SPHC and ZhongAn Insurance will further explore the deep integration of medical service and finance and carry out comprehensive strategic cooperation on medical finance, health insurance and new pharmaceutical retail. Leveraging ZhongAn Insurance's strengths in such aspects as financial innovation and insurance, SPHC will comprehensively dock with ZhongAn Insurance's resources in financial instalment, health insurance, big data-based risk control and other aspects, and further strengthen the establishment of a medical finance model and its abilities to build a leading brand for medical finance in China. On this basis, focusing on "innovative payment", SPHC will take advantage of the network layout of DTP pharmacies to provide patients with new prescription retail experience, so as to set an example for "new retail" of medicine.



3.4 Build an "Internet + Medical Health" system to promote medical health integration in Yangtze River Delta area

On July 3, 2018, SPHC and the government of Jingkou District signed a strategic cooperation agreement, according to which both parties will build an "Internet + Medical Health" system to promote medical health integration in Yangtze River Delta area.

In 2018, SPHC set up "Yiyao • pharmacy" (DTP platform for anti-tumor and special drugs) and provided home delivery service for free. After signing the agreement, the Company will establish an intelligent central pharmacy "Yiyao • Cloud Pharmacy" in Zhenjiang to build a new comprehensive business pattern in HPSC's ecosphere for new retail of prescription drugs based on the innovative "electronic prescriptions + Cloud Hospital + Cloud Pharmacy". At that time, the Company will introduce the services of extended prescription and home delivery provided by community hospitals and launch the pilot service of Cloud Pharmacy-based overall planned payment through medical insurance. In addition, the Company will develop "Cloud Hospital" together with local medical institutions, with the aim of providing safer and more comfortable medical service.



3.5 Work with the Affiliated Hospital of Jiangsu University to build the first "Yiyao • Cloud Hospital" in China



On December 28, 2018, Shanghai Pharmaceuticals Grand Health Cloud Commerce Co., Ltd. ("SPHC") and the Affiliated Hospital of Jiangsu University held the signing ceremony for establishment of "Yiyao • Cloud Hospital-Online Jiangbin Hospital", and officially launched the project. This is SPHC's first "Yiyao • Cloud Hospital" which, directly connected with "Yiyao • Cloud Pharmacy", provides whole-process services, including online pre-diagnosis, online consultation, classified diagnosis and treatment, health management, unified payment and home delivery, and contactless medicare card-based online/mobile payment channels based on "Internet +".



Since Internet medical care is an important measure for promoting "Healthy China 2030" plan, the state has issued a series of policies for the development of "Internet + medicine". Particularly, in the Opinions on Promoting the Development of "Internet + Medical Health" issued this April, the state clearly proposed to promote the integrated development of Internet and medical health service from several aspects, including development of "Internet +" medical service, innovation in "Internet +" public health service, improvement of "Internet +" drug supply guarantee service and promotion of "Internet +" medical insurance settlement service. The "Yiyao • Cloud Hospital-Online Jiangbin Hospital" established jointly with SPHC will further improve the service of cooperative hospitals, diversify patient's drug use services, practice contactless medicare card-based payment and settlement, leverage the strengths of all parties to provide the masses with more convenient and preferential diagnosis and drug use experiences.



3.6 Committed to the hot land, Shanghai Pharmaceuticals has undergone glorious twenty years in the spirit of Sudan



2018 marked the 20th anniversary of Shanghai-Sudan Pharmaceutical Co., Ltd. (Shanghai-Sudan Pharmaceutical), the first China-Sudan pharmaceutical joint-stock enterprise established in 1998 which symbolized Shanghai Pharmaceuticals' first step to Africa. During the twenty years, the staff in Shanghai Pharmaceuticals opened up a unprecedented territory in Africa with their arduous efforts in the sandy desert.



Currently, Shanghai-Sudan Pharmaceutical has launched the fourth generation of anti-malarial products and achieved localized production of anti-malarial products in Sudan, having cumulatively saved tens of millions of people. With major products covering drugs for anti-malaria, anti-infection, diabetes, cardiovascular system, digestion system and nervous system, Shanghai-Sudan Pharmaceutical has had a local drug production license and certificate for agenting registration of imported drugs for more than 50 products including injections and such solid oral preparations as tablets, capsules and granules.

The twentieth year is a new start rather than an end. In the next ten years, Shanghai-Sudan Pharmaceutical Co., Ltd. will continue to broaden cooperation. The new injection production workshop, whose building has been included in the plan, will contribute to Shanghai-Sudan Pharmaceutical's localized production of hydro-acupuncture preparations, power injection preparations and more injection drugs, which will not only solve the problem of dependence on imports of injections in the Sudanese medical market but also provide more possibilities for Sudanese to choose drugs.



Case 1: Yiyao • pharmacy, preferred DTP network for new special drugs in Chinese market

New drugs appear on the market at a fast pace in the age of innovative drugs in China. In merely a month from August to September 2018, "Yiyao • pharmacy" released the first Keytruda®, Lynparza® and Opdivo® in China and received the first order of Aubagio® in Shanghai, which provided patients with quality "Yiyao"-branded service and improved access to various new special drugs and rare disease drugs.

First Lynparza® of "Yiyao • pharmacy" in China on September 20, 2018

The first PARP inhibitor Olaparib (Lynparza®) in China, a targeted drug for ovarian cancer, came into the market on September 20, 2018, which filled the gap of nearly 30 years in targeted therapy of ovarian cancer in China. It is first sold in China on "Yiyao • pharmacy" under SPHC. At 21:09 on the date on which it was put into the market, "Yiyao • pharmacy" – Zhongxie Pharmacy at Zhongshan West Road in Shanghai completed the whole-process service for the first prescription and order of Olaparib (Lynparza®).



First Opdivo® of "Yiyao • pharmacy" in China on August 28, 2018

Opdivo® (O drug), which appeared on the market on August 28, is the first PD-1 immunotherapeutic drug for cancer in China currently approved to be applied to adult patients with terminal or metastatic non-small cell lung cancer. Soon after O drug was approved, "Yiyao • pharmacy" was recognized as its designated sales and service network in Chinese market, and provided patients with drug sales and other professional drug services in several cities to help patients with long-term disease management and improvement of life quality.

According to incomplete statistics, "Yiyao • pharmacy" – Zhongxie Pharmacy at Zhongshan West Road" had provided service to more than 500 patients and their families who went there to buy the drug in merely 20 days after O drug entered the market, and its customer center also received more than 1700 consultations about O drug. It is expected that O drug will benefit more patients through charitable drug donation service of "Yiyao • pharmacy" after the execution conditions for charitable drug donation are further confirmed in the future.

First order of Keytruda® of "Yiyao • pharmacy" in east China

on September 22, 2018

K drug approved to be sold on the market is currently the only PD-1 inhibitor approved to be applied to patients with unresectable or metastatic melanoma who failed first-line treatment in China. On September 22 when K drug entered the market, six stores of "Yiyao • pharmacy" simultaneously sold the first batch of such drugs and offered professional pharmacists providing a series of services caring for patients with special diseases. "Yiyao • pharmacy" in other places of China will also successively provide K drug-related service in the future.

First order of Aubagio® of "Yiyao • pharmacy" in Shanghai on



September 19, 2018

Aubagio® is the first innovative oral drug approved to be used to treat the rare disease relapsing multiple sclerosis, a disabling progressive neurological disease difficult to be cured and requiring patients to take medicine for a long time. As the only designated store of Aubagio • Shanghai, "Yiyao • pharmacy" first started its selling on September 19, setting the fastest time-to-market record of rare disease drugs in China, i.e. 58 days. The "fast time-to-market" manifested the state's policy support for the treatment of rare diseases and drew widespread attention from all walks of life, as evidenced by the themed reports of Dragon Television, STV and other media.



Case 2: A race against time: Staff in Shanghai Pharmaceuticals hurried to send drugs overnight to save dozens of poisoned people who were in jeopardy due to drug shortage in rescue

On the evening of March 13, 2018, Fujian Pharmaceutical Co., Ltd., a holding enterprise of Shanghai Pharma, hurried to send drugs, helping the dozens of poisoned people who were in jeopardy due to drug shortage in rescue in Gutian County, Ningde City, Fujian Province get out of danger.

At about 22:00 on 13, dozens of people in Gutian County, Ningde City, Fujian Province were poisoned and sent to Ningde Municipal Hospital for treatment. Due to the unexpected incident with so many patients, the hospital was in shortage of sodium hyposulfite, a crucial drug for emergency. As a result, patients fell into a life-threatening situation.

At 22:59, the hospital drug store contacted an account executive of Fujian Pharmaceutical who reported the

emergency to relevant leaders immediately, and the company promptly initiated an emergency plan. As sodium hyposulfite was rarely used, the stocks of the company could not meet the hospital's demand. After receiving the instruction, purchasers searched in many ways and found that its subsidiary Quanzhou Zhong Bang Company had sufficient stocks. With quick and collaborative efforts in drug transfer, the first-aid drug was loaded and departed Quanzhou Company at 23:30.

After the distribution vehicle reached the place appointed at 1:40 am on 14, the warehouse promptly completed delivery and a series of other necessary procedures. At 3:50 am, the first-aid drug arrived at Dongqiao Branch, Ningde Municipal Hospital safely.

Case 3: Obtaining ISO27001 certification after passing the onsite inspection, Shanghai Pharma reached international standards in information security management

After a two-day information security inspection, Shanghai Pharma passed ISO27001 certification in June 2018 and obtained CNAS and UKAS Certificates, which marked a big step on its implementation of information security management system and mechanism in line with international standards.

As a typical information security management standard most widely used in the world, ISO27001 certification is an important manifestation of information security standards of modern IT enterprises as well as one of the most important standards in information security management. The most authoritative certificates for the ISO27001 certification include CNAS Certificate recognized by Certification and Accreditation Administration of the People's Republic of China and the globally accepted UKAS Certificate, both of which are in bilingual formats.

Shanghai Pharma finally passed the certification after efforts of 8 months from project establishment in October 2017 to the end of information security inspection. The

certification, requiring consideration over the enterprise's current internal conditions, implementation of requirements for security and compliance and compliance with requirements for information development of Shanghai Pharma, involved 14 safety control measures, hundreds of articles for implementation, 28 system documents, 48 forms at four levels and every aspect of information work. While implementing the project, IT Department took the lead in relevant investigations, with the active support of various departments. They repeatedly considered relevant system documents and gave full play to team strengths.

After two onsite inspections, the three professional DNV judges unanimously affirmed that there was no nonconformity and proposed suggestions for improvement of the enterprise's information security management. Thus, the Company successfully obtained CNAS and UKAS Certificates. The Certificates are subject to annual review, so that Shanghai Pharmaceuticals will keep improving its system and provide safer security measures.



■ Case 4: Shanghai Pharma built a "Cloud Pharmacy" to facilitate dispensing of drugs, so that drugs could be delivered to the patients' home on the day when the hospital made a prescription

On May 29, 2018, SPHC and Yukang Hospital officially launched the "Home Delivery Service via Cloud Pharmacy". Through this service, patients can get drugs of most class 3 hospitals at Yukang Hospital without having to pay for registration and consultation. As long as the prescription is made before 16:30, the drugs can be delivered to the patients' home in Pudong on the same day.

The drug delivery service of Yukang Hospital, which follows the concept of "extended prescription" of Shanghai Pharma, enables patients to get the medicine at their doorstep. At present, there are few varieties of self-owned drugs in community health centers, and the "extended prescription" model can provide drugs of most class 3 hospitals for patients who have signed the family doctors in the community hospitals.

The "Cloud Pharmacy" provides an effective support for the implementation of the "extended prescription" model. Shanghai Pharma, SPHC and Yukang Medical Development signed a tripartite cooperation framework agreement. As such, in addition to the nearly 2,000 self-owned drugs of Yukang Hospital, patients also have access to the about 2,000 drugs in the "Cloud Pharmacy" of SPHC. The drugs are well prepared in the "Cloud Pharmacy" when the doctor makes a prescription in the hospital, and are delivered to the patient's home by JD express.

SPHC takes electronic prescription as its core business. On the basis of the innovative retail model of prescription drugs, and with "Yiyao • Cloud Pharmacy" as the carrier, SPHC has launched the home delivery services for 70% community health centres, most class 3 hospitals and hospitals of other grades in Shanghai, so as to provide patients with the convenient "one-stop" drug purchasing experience.

3.7 Meet the medication needs of special group

1 Perseverance, ensure normal supply of cheap drugs in short supply

For the purpose of solving the problem of shortage of cheap drugs, the "Focused direction of industrial revitalization and technological transformation in 2015" issued by the Ministry of Industry and Information Technology proposed 17 varieties of drugs in short supply, of which 10 varieties are produced by Shanghai Pharma to ensure the normal supply.

Varieties of shortage drugs	Manufacturers
Corticosteroid	
Dobutamine	SPH No. 1 Biochemical & Pharmaceutical Co., Ltd.
Tannic acid	
Oxytocin	
Promethazine	SPH No. 1 Biochemical & Pharmaceutical Co., Ltd., Shanghai Harvest Pharmaceutical Co., Ltd.
Lobeline	
Norepinephrine	
Isoproterenol	
Dopamine	Shanghai Harvest Pharmaceutical Co., Ltd.
Digoxin	
	Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd.

Shanghai Pharmaceuticals designated production varieties

Designated production varieties	Treatment area / Coverage	Manufacturer	Supply situation
Lobeline Hydrochloride Injection	Mainly used for neonatal asphyxia, asphyxia caused by carbon monoxide poisoning, poisoning due to inhalation anesthetics and other central inhibitors (such as opioids, barbiturates), as well as respiratory failure caused by pneumonia, diphtheria and other infectious diseases	Shanghai Hefeng Pharmaceutical Co., Ltd.	Timely delivery, no feedback from medical institutions on shortage and late delivery

Shanghai Pharmaceuticals designated production base

Designated production base	Main production varieties	Treatment area / Coverage
Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd.	Methotrexate, digoxin	Digoxin: Hypertensive patients with valvular heart disease, congenital heart disease, chronic heart failure patients, etc. Methotrexate: acute leukemia, malignant lymphoma, head and neck cancer, lung cancer, etc.

Case 1: SPH participated in the establishment of the first "Drug Union", and small varieties of drugs (drugs in short supply) are expected to be intensively produced to ensure supply

On July 19, 2018, the first "Drug Union" platform was established, which would help ensure the production & supply of small varieties of drugs (drugs in short supply). The "Drug Union" was initiated by the Ministry of Industry and Information Technology, sponsored by the National Health Commission, the National Development and Reform Commission and the Food and Drug Administration, and organized by SPH Sine and other enterprises under the direction of Shanghai Pharmaceuticals. The first members consist of 24 companies, including Zhejiang Haizheng, Changzhou Yabang, Huzhou Zhanwang Pharmaceutical, etc., which can guarantee the supply of 57 small varieties of drugs (drugs in short supply), including 47 drugs in short supply under the "139" Drug List and 10 provincial and regional varieties.

On the day of the establishment of the "Drug Union", a seminar on the construction of production bases for small varieties of drugs (drugs in short supply) was held in Shanghai. As the first centralized production base for small varieties of drugs (drugs in short supply), SPH Sine introduced in the seminar the construction plan and implementation scheme of the base, as well as the establishment process and working mechanism of the "Drug Union".

Due to such factors as raw materials supply, pricing mechanism and poor information, the clinically important drugs in some areas are in tight or even short supply from time to time, which may affect the treatment of patients. To relieve drug shortage, the varieties of drugs in short supply

are often first screened by a dynamic screening system, and policies are developed to encourage enterprises to actively produce relevant drugs. The problem can be solved through the new platform "Drug Union" after its establishment.

The "Focused direction of industrial revitalization and technological transformation in 2015" issued by the Ministry of Industry and Information Technology proposed 17 small varieties of drugs (drugs in short supply), of which 10 varieties are produced by Shanghai Pharmaceuticals. SPH Sine has obtained approval for manufacturing 49 varieties of drugs under the 139 Drug List.



Case 2: "Yiyao • pharmacy" set a precedent in medicare reimbursement for the rare disease "phenylketonuria" in Zhenjiang, Jiangsu

In September 2018, as per the Notice on Medical Insurance for Children with Phenylketonuria and the Comprehensive Strategic Cooperation Agreement between the People's Government of Jingkou, Zhenjiang and Shanghai Pharmaceuticals Grand Health Cloud Commerce Co., Ltd. on "Internet + Medical Health", "Yiyao • pharmacy" – Zhenjiang SPH Zhongxie Pharmacy Co., Ltd., together with Zhenjiang Medical Insurance Center, Jiangsu Province, carried out intensive interactions with BioMarin International Limited (manufacturer of Kuvan® (sapropterin dihydrochloride), the only therapeutic drug for phenylketonuria), and successfully introduced Kuvan® into "Yiyao • pharmacy" – Zhenjiang SPH Zhongxie Pharmacy Co., Ltd. to ensure its supply for patients with phenylketonuria in Zhenjiang. Meanwhile, to effectively reduce the financial burden of patients, SPHC actively communicated with the government and, by dint of its own supply capacity, brand effect and professional management system, made the costs for purchasing the therapeutic drug for this rare disease in Yiyao • pharmacy to be refunded to the patients, which greatly reduced the economic burden of patients with phenylketonuria and improved the accessibility of drugs for rare diseases.



Case 3: "Yiyao • pharmacy" guaranteed stable supply of orphan drug "Xiaoming" for the rare disease myasthenia gravis

In February 2018, "Yiyao • pharmacy" obtained the franchise of Pyridostigmine Bromide Tablets (commonly known as "Xiaoming"). "Xiaoming", as the only drug that can be used to improve symptoms of myasthenia gravis, has been out of stock all over the country for a variety of reasons. Today, "Xiaoming" is in abundant supply in "Yiyao • pharmacy", which greatly reduces the pains and worries of patients with myasthenia gravis.

"Yiyao • pharmacy" focuses far beyond the supply of drugs for the rare disease myasthenia gravis. In September, dozens of stores across the country, headed by "Yiyao • pharmacy – Kangdele pharmacy", and Tencent 99 Public Welfare Day joined hands with Beijing Aili Myasthenia Gravity Care Center to carry out the "Delivery of Love for Aili" activity, to raise funds for Aili Care Center.

2 Provide professional pharmacy services to meet the needs of special group

Direct To Patient (DTP):

over 70 stores distributed in 51 cities in 22 provinces

Drug reserves:

In accordance with the measures for the administration of reserve commodities at the municipal level of Shanghai this year, 78 varieties are included in the municipal-level major commodity reserves, amounting to a total of more than RMB20.66 million, of which 70 varieties are emergency western medicine, and eight varieties are emergency Chinese medicine; mainly antibiotics, transfusion medicine, antiviral drugs, detoxification and emergency rescue drugs for radiation damage, which are stored by Shanghai Pharma, SPH Traditional Chinese Medicine and SPH Sine. In accordance with the requirements of the Shanghai Reserve Commodity Management Office, the enterprise medical reserve management network operates normally, its three storage enterprises implement 24-hour duty system to ensure the quality and transportation of the municipal reserve medicine commodity.

In addition, since 2007, the Company has begun to organize and implement drug storage on behalf of the military combat. The amount was more than RMB15 million, and Shanghai Pharma was the storage enterprise while other subsidiaries acted as emergency units.

Our goal

Effective solutions to resolve social problems

Our management ideology

Closely integrated with its core resources

Our measures

- Targeted poverty alleviation
- Practice public welfare
- Community investment

Our achievements

- More social recognition, public image enhanced
- Clearer social welfare ideology, focused resource allocation



4 CHAPTER



Positive Solutions to Assist Resolving Social Problems

4.1 Targeted poverty alleviation widely recognized by the government, society, and people

1 Targeted poverty alleviation



Full participation of the society is required to help the dream of "Live in dignity and a healthy China" to become true. Shanghai Pharmaceuticals has always focused on close integration between its own core resources and social needs, in order to create a more comprehensive value. In accordance with the spirit of important speech on poverty alleviation work from General Secretary Xi Jinping, the Company, in conjunction with the advantages of its own resources, gradually and orderly carries out the work of targeted poverty alleviation.



In 2015, the Company and the China Youth Development Foundation officially launched the "Shanghai Medical Care Guardian Plan", and the first phase of the special fund for the plan was RMB10 million, which was the first social welfare Foundation for the purpose of improving rural medical care. The fund will be used to build rural health clinics in remote mountain areas, subsidize rural patients suffering from rare diseases, and train rural doctors in three years 2016-2018), and to integrate with relevant medical resources to carry out activities such as "free medical consultation in the countryside", and implement health education and serve the local public. While promoting medical equality in remote and impoverished areas and accessible health poverty alleviation, efforts are made to combine their own businesses to carry out industrial poverty alleviation and address the status quo of the poor from the source.

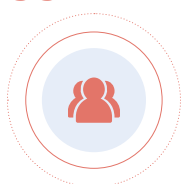


2 Overview of annual targeted poverty alleviation

For health and poverty alleviation, in accordance with the "Shanghai Medical Care Guardian Plan", the Company mainly focused on the construction of hope clinics in remote mountain areas, training rural doctors, funding for rare diseases and other aspects of work in 2018. For example, for the construction of hope clinics, as of December 2018, the "Shanghai Medical Care Guardian Plan" special funds were used to build 19 hope clinics in Jianchuan County, Dali Prefecture in Yunnan Province, Heqing County, Qiubei County in Wenshan Prefecture, Jinping County in Honghe Prefecture, Zheng'an County, Zunyi City in Guizhou Province, and other state-level poverty counties, accumulatively covering more than 58,000 people in poor areas. Moreover, 10 hope clinics were under construction in Yunnan, Guizhou and Anhui. The construction of hope clinics will not only become a standardized Town clinic capable of fulfilling preventive health care, medical services, and health administration functions, but will also become a communication platform for health culture and become a mutual support between urban and rural areas. Three sessions of rural doctor trainings were held in 2018, one in Honghe (Yunnan) in June and two in Zunyi (Guizhou) in July and October, with a total of 197 people trained; three free medical consultations were held in 2018, specifically, the free medical consultation for children with congenital heart diseases in June, and free medical consultations for rheumatism in July and October, benefiting a total of 215 people. Among them, 155 were diagnosed with rheumatism, and more than 30 children were diagnosed with congenital heart disease and received medical assistance.

For industrial poverty alleviation, the Company has established a base for the cultivation of Chinese herbal medicines and the acquisition of medicinal materials in conjunction with the traditional Chinese medicine sector, which has stimulated the development of the traditional Chinese medicine industry in poverty areas such as Yunnan and Hunan where the Company is located, helping more poor

Accumulatively covering more than
58,000 people in poor areas



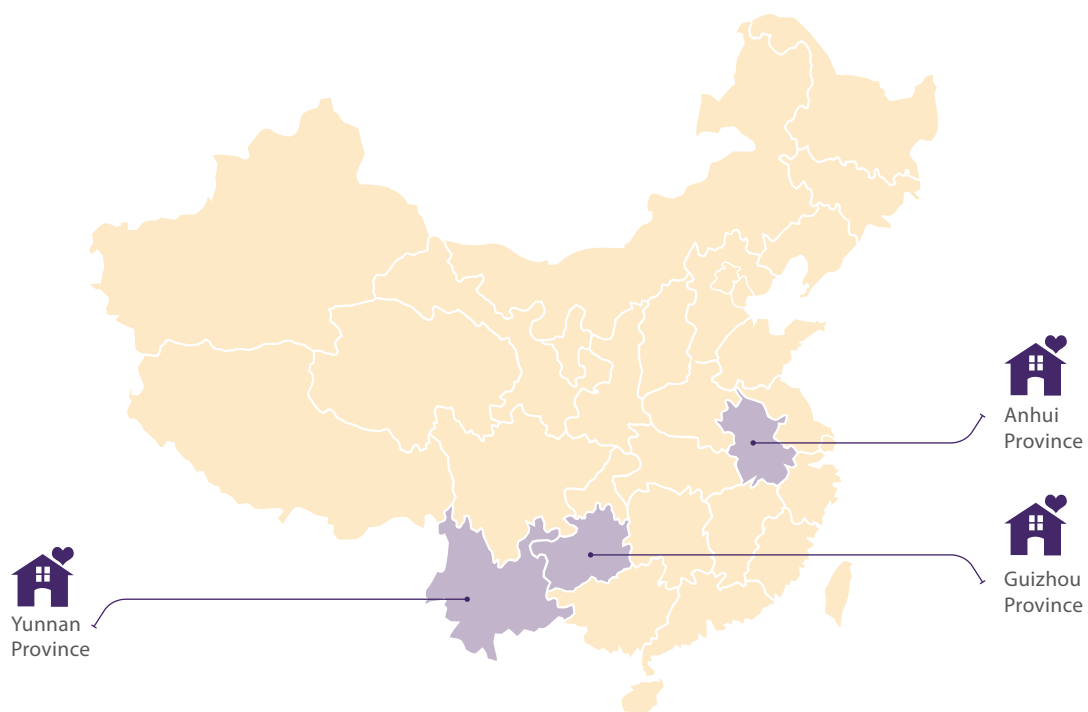
Trained **197** rural doctors



Free medical consultation
for **215** people



Shanghai Medical Care Guardian Plan



3 Effectiveness of targeted poverty alleviation

Unit: RMB0'000

Index	Quantity and development status
A. Overall situation	
In particular: funds	3341
B. Investment by category	
1. Poverty alleviation by industrial development	
In particular: 1.1 Types of industrial poverty alleviation projects	☒ Agriculture and forestry industry poverty alleviation ☐ Tourism poverty alleviation ☐ E-commerce poverty alleviation ☐ Asset income poverty alleviation ☒ Technology poverty alleviation ☐ Others
1.2 Number of industrial poverty alleviation project (no.)	5
1.3 Investment amount of industrial poverty alleviation project	3282
1.4 Number of people out of poverty for helping set up a case file (person)	554
2. Poverty alleviation by transfer of employment	More than 80 farmers employed
In particular: 2.1 Investment amount of vocational skills training	16
2.2 Number of people with vocational skills training (person/times)	900
3. Health poverty alleviation	
In particular: 3.1 Amount of money invested for medical and health resources in poverty areas	RMB1.66 million (mainly used for construction of hope clinics in poverty areas, training of rural doctors, funding for congenital heart diseases etc.)
3.2 Estimated coverage in poverty areas (person)	30,000
4. Social poverty alleviation	
4.1 Investment amount of targeted poverty alleviation	RMB150,000
4.2 Student-aid poverty alleviation	RMB300,000
C. Awards (content, level)	
Recommended cases for targeted poverty alleviation industry model for "2020 Victory" (SPH Shenxiang)	

4 Subsequent targeted poverty alleviation plans

According to the particular environment of each poverty area and the conditions of different poor people, implement accurate identification of poverty target, accurate assistance and accurate management through the application of scientific and effective procedures. Mainly focusing on the promotion plan relating to the "Shanghai Medical Care Guardian Plan" of the Company, followed by taking into consideration the advantages of the Company's resources, continue to vigorously promote health and industry poverty alleviation in remote and impoverished areas.

4.2 Forge ahead for love

Case 1

On May 5, 2018, nearly 300 staff of the Company, patients, doctors, non-profit organizations and social loving people gathered in Shanghai Haiwan National Forest Park to participate in the 130th anniversary of the birth of "Shanghai Zhongxi Sunve & Wei Ai You Li" (Chinese & Western brand) and the 60th anniversary of the establishment of Sunve Pharmaceutical - 2018 public welfare activities.

At the event, a donation ceremony was held for the patients with myasthenia gravis and the public service organization Beijing Aili Myasthenia Gravity Care Center. The dream plan for patients with myasthenia gravis of Shanghai Zhongxi Sunve and SPH Sales include continuously providing high-quality products and medical information services to patients; strengthening cooperation with public welfare organizations to assist patients in their studies and help the poor, etc.; providing a platform for further education for doctors in remote areas through cooperation with domestic benchmarking hospitals; increasing funding for clinical study on diagnosis & treatment of myasthenia gravis in China, and further improving the diagnosis & treatment of myasthenia gravis in China to benefit the patients with myasthenia gravis.

The employees donated money, in the hope that the patients could overcome the disease and get well as soon as possible.



Case 2

On July 23, 2018, Shanghai Federation of Trade Unions announced that the second batch of the municipal government's practical project - "Love Stations for Outdoor Workers" was officially put into use in 2018. Fahrenheit Pharmacy added 15 new "Love Stations for Outdoor Workers". Together with the 20 stations launched in February this year, Fahrenheit Pharmacy has a total of 35 "Love Stations for Outdoor Workers". Statistics show that each station has provided services for more than 8,100 outdoor workers so far.

Each "Love Station for Outdoor Workers" of Fahrenheit Pharmacy has a stationmaster who can provide convenient services for outdoor workers, e.g. drinking water, summer house, food heating, mobile phone charging, rest and toileting. In respect of hardware facilities, each station is equipped with 6 + X facilities. The 6 basic facilities are air conditioners, refrigerators, microwave ovens, water dispensers (or tea buckets), charging docks, tables and chairs. Moreover, blood pressure measurement, emergency medicines and other services are also available in the stations according to their actual conditions.



■ Case 3

The Shanghai City Amateur League and the 13th "Zhongzhi Cup" World Famous Chinese Enterprise Fitness Competition sponsored by SPH Zhonghua and others kicked off on the morning of June 2, 2018. The company organized 15 players to participate in the 10 km run and 13 families in the 3-km race to contribute for the charity work. During the event, everyone showed the vitality and passion of "100 Years of China" as well as a positive & healthy corporate culture of positive energy. Every finisher got a love coin at the end of the race and made donations on site to jointly feel the charm of "public spirit of everyone". During the event, SPH Zhonghua's ring toss, a game titled "a fight between a dragon and a tiger" with such prizes as cooling oil, essential balm and other prizes of brand Longhu, attracted a lot of people.



■ Case 4

On the afternoon of October 26, 2018 when the Cross-strait (Xiamen) Aging Industry Expo was opened, SPH Xiamen Traditional Chinese Medicine, in tandem with Xiamen Zhiyu Xiaolao Group, Health 100 and other cooperative enterprises, held the charity activity themed on "Party Warmth, Love and Care" for the elderly with basic living allowance. Through cooperation with the party organization of Xiamen Civic Pension Service Center for the Elderly, 63 party member vanguards of the Company helped 63 elderly people from the Center on a one-to-one basis, involving a total donation of RMB230,000. It is reported that every elderly person can receive a care package worth RMB3,600, including: daily care service package, health monitoring & management service package, medication reminder service package, housekeeping service package, security positioning service package, physical examination service package, valuable traditional Chinese medicine & health care service package, helicopter emergency service package.



■ Case 5

In June 2018, Sine General Factory and Sine Lianhe jointly organized the party building charity activity themed on "Party building to remain true to original aspiration, Sine's love for doctors and patients" in the affiliated hospital of the Institute of Neurology, Anhui University of Chinese Medicine. The industrial and commercial bureau, doctors and patients exchanged information on the production & supply of penicillamine products manufactured by Sine General Factory, visited the patients and their families in the ward, and donated compensation money.



Case 6



On the eve of Dragon Boat Festival of 2018, Hangzhou Huqingyutang Pharmaceutical Co., Ltd. sent a visiting team consisting of some representatives of its party committee, labor union and women's professional committee to visit the mentally handicapped teenagers in Wanwan Hosting Center in Jianggan District, Hangzhou City, with exquisite sachets and some daily necessities customized by the company.

Case 7

In active response to the Party Central Committee's call for overall poverty alleviation, SPH Keyuan participated in the targeted poverty alleviation campaign of "10,000 Enterprises Assisting 10,000 Villages" in Beijing in August 2018, during which it helped and docked with East Liujiashuang Village, Laiyuan County, Hebei Province. Focusing on the employment poverty alleviation, health poverty alleviation, education poverty alleviation and poverty alleviation through public welfare service, the company leveraged its advantages based on the actual conditions of East Liujiashuang Village to sign the Pairing Aid Agreement and establish "Beijing Keyuan - East Liujiashuang Village Edu-aid Fund" specifically providing "grants" mainly used to help primary and secondary school students receiving nine-year compulsory education complete their studies successfully and improve their quality and "scholarships" mainly used to reward senior high school students for their ranking first in their respective schools and being admitted to universities to encourage them to study hard for their ideal universities. It was reported that in 2018, the company had given "grants" of RMB30,000 in total to 100 students and "scholarships" of RMB12,000 in total to 2 students.



Case 8



On June 30, 2018, SPH Growful, with love and benevolence of its staff, organized the donation activity of "Caring for Song Village" in Song Village, Dianbu Town, Laixi City, to pay tribute to the 97th anniversary of the Party.

SPH Growful has kept a watchful eye on charity and made earnest efforts in promoting public welfare for many years. In 2016, SPH Growful signed an agreement on poverty alleviation with Laixi Charity Federation. At the event, SPH Growful donated drugs worth RMB200,000 and a subsidy for rural revitalization of RMB200,000 to Laixi Charity Federation and Song Village, Dianbu Town, respectively, for Song Village to harden its roads, improve the living environment for its villagers and build a "beautiful village", which contributed to its "five" constructions for improving the living environment.

Case 9

On July 9 - 11, 2018, SPH New Asiatic launched the second old clothes recycling-related public welfare activity of "Warm Youth, Warm Old Clothes", and collected and donated approximately 50 kg of old clothes in merely a few days. With all the old clothes donated to people in need in poverty-stricken mountainous areas after the activity, the company made a contribution to the cause of environmental protection.



Case 10



On April 22, 2018, Chiatai Qingchunbao Pharmaceutical organized an environmental protection public welfare activity before the World Environment Protection Day in line with the theme of "Beautiful China, I am an actor" of the state. In the activity, the company made elaborate publicity color pages, roll up banners and publicity pamphlets for garbage classification. Every participant wore a red waistcoat with words "serving the people", and its staff who are party members wore the Party emblems. The activity aimed at conveying the environmental protection concept of "garbage classification – co-building of a beautiful Hangzhou" to tourists coming and leaving Xixi Wetland through explaining the knowledge and significance of garbage classification to tourists along the road.



4.3 Co-establishment of communities

The Company attaches great importance to community relations. Affiliated enterprises actively participate in community affairs in various aspects, and constantly strengthen the positive interaction with the community. While contributing to the community, the Company creates conditions for its sustainable development.



1 Total title sponsor of the 9th Shanghai Music in the Summer Air to enhance the quality of music life of Shanghai citizens

After 8 years of accumulation, Shanghai Music in the Summer Air has gradually become one of the favorite cultural brands of Shanghai citizens. As an enterprise headquartered in Shanghai, Shanghai Pharmaceuticals fulfils its social responsibilities, keeps pursuing high quality and constantly provides services for uplifting people's healthy living quality. Through the total title sponsor of the 9th Shanghai Music in the Summer Air for 2018, from July 1 - 16, a total of 24 excellent performances of traditional symphonies and trendy crossover music were presented by Chinese and foreign famous groups and famous artists, creating a young, dynamic and positive health atmosphere for Shanghai.



2 Support for "rational use of drugs" in the community

Shanghai Pharmaceuticals has made active exploration and practice in the close integration of its corporate social responsibilities and corporate strategies and creation of overall value in recent years. Since the official launch of the series of publicity and educational activities themed on "strengthening pharmacy management and promoting rational use of drugs" in Shanghai in December 2015, Shanghai Pharmaceuticals has fully supported the activities consecutively for many years, with the aim of further improving the capabilities of medical institutions in pharmacy management and pharmaceutical service, continuously enhancing the public's scientific understanding of the drugs and the use of drugs and enabling the public to take medicine of high quality with peace of mind and without worries.

2018 Shanghai RUD Summit was held successfully on May 18. As a unit fully supporting the event, Shanghai Pharmaceuticals said, "It is the foremost social responsibility of pharmaceutical enterprises to improve people's satisfaction with drug safety and guarantee their medical needs to the utmost extent".



Case 1

On June 15, 2018, SPH Sales and Huashan Hospital jointly organized the activity of "615 Myasthenia Gravis Day". The company explained the incidents relating to short supply of Pyridostigmine Bromide in detail through the platform of patients association of Huashan Hospital, and popularized relevant medical knowledge, diagnostic pitfalls, progresses in therapies and experiences shared by other patients to solve puzzles for patients with myasthenia gravis.



Case 2

SPH No. 1 Biochemical and Pharmaceutical had provided pairing aid to the residents' committee of Hongqiqi Village on Jiangchuan Street for more than ten years by 2018, during which the company created a harmonious atmosphere through caring about and helping residents of the community. On the Learn From Lei Feng Day on March 5, the Learn From Lei Feng Squad of the company regathered in the Resident Activity Room of Hongqiqi Village to serve residents of the community together with other volunteers.

In the Learn From Lei Feng Squad, members with licensed pharmacist qualification from Shanghai Institute of Materia Medica provided residents with safe medication-related consultations and solved drug use-related puzzles in a professional manner for several residents, and members from device power division provided home appliance maintenance services. After efforts of all the morning, the dozens of home appliances brought by the residents were all examined and repaired.



Case 3

On the morning on October 25, 2018, the party committee of SPH Ningbo Pharmaceutical Co., Ltd. and party committee of Market Supervision Administration Bureau of Haishu District, Ningbo City jointly organized a volunteer event for party members themed on "Safe Medication to Countryside" in Chenhengjie Village, Gulin Town, Haishu District.

At the event, the company not only taught residents a lesson relating to food and drug safety, shared common knowledge about storage and use of drugs in daily life with them and popularized and explained the concept of safe medication and daily practical knowledge, but also passionately answered some drug-related questions proposed by residents at the event. Volunteers who are party members or league members also provided residents with such convenient and people-benefit services as blood pressure measurement, presentation of ginseng slices and health books, callback of expired drugs and safe medication-related consultations, which won high praise from residents.



Case 4

On April 19, 2018, Market Supervision Administration Bureau of Xuhui District and SPH Traditional Chinese Medicine jointly organized the second health lecture themed on "popularizing health regimen among neighbours and benefiting people with quality services" in Jiangnanyi Village, Xuhui District, on which traditional Chinese pharmacists and traditional Chinese medical specialists shared their experience in the identification, differentiation and classification of rare medicinal materials and decoction pieces with citizens and solve puzzles in health regimen for them.



Case 5

On October 20, 2018, the 20th Fahrenheit-Leiyunshang Paste Festival for 2018 with the theme of "Warming Families with Love" was held with the debut of "Ginseng Antler Steward" in Shanghai.

The Paste Festival was sponsored by Shanghai Pharmaceutical Trade Association, supported by Shanghai Traditional Chinese Medicine Trade Association and undertaken by Shanghai Fahrenheit Pharmacy Co., Ltd.. On the date of opening, well-known veteran traditional Chinese medicine practitioners in Shanghai provided citizens with volunteer medical consultation. Fahrenheit Pharmacy also provided medication consultation, blood pressure measurement, valet gel and other services.

With wild ginseng examined by over 10 licensed pharmacists led by Wei Jun, the officer in charge of the Labor Model Studio under Fahrenheit Pharmacy, "Ginseng Antler Steward" will provide lectures on wild ginseng and other services to help the public "choose right medicine, choose good medicine and take right medicine".



Case 6

On June 16, 2018, SPH Shenxiang, Shanghai Pharma and six medical institutions including Shuguang Hospital Affiliated to Shanghai University of Traditional Chinese Medicine, Shanghai Yangpu Hospital of Traditional Chinese Medicine sent experts and famous doctors to Longzang Village, Aba County, Sichuan to carry out the event of sending doctors to villages named "Pass on Love". They delivered medical health knowledge to local people and brought them standing drugs for summer, temporarily alleviating the urgent drug shortage. At the event, traditional Chinese medical specialists gave local people lectures on body care during the Dragon Boat Festival. While giving volunteer medical consultation, doctors found many people had endemic diseases such as Kashin-Beck disease, chloasma



Case 7

On July 29, 2018, volunteers from teams of Shihu Yeguang Pills, Shenxiang Suhe Pills, Wuji Baifeng Pills, Chenxiang Huaqi Capsules and Wubi Shanyao Pills of Huqingyutang Pharmaceutical came to Xianghu Retirement Center in Xiaoshan, Hangzhou, PLA Air Force Unit stationed in Hangzhou, and construction site and headquarters of Hangzhou Metro of Chinese Railway No. 4 Bureau together with provincial medical volunteer teams. They provided nutritional guidance, psychological counselling and health consultation for the elderly, air force officers and their family members, and migrant workers and their family members; besides, they also offered relevant drugs for the activity and participated in volunteer medical consultation and drug allocation.



Case 8

On June 16, 2018, SPH Shenxiang, Shanghai Pharma and six medical institutions including Shuguang Hospital Affiliated to Shanghai University of Traditional Chinese Medicine, Shanghai Yangpu Hospital of Traditional Chinese Medicine sent experts and famous doctors to Longzang Village, Aba County, Sichuan to carry out the event of sending doctors to villages named "Pass on Love". They delivered medical health knowledge to local people and brought them standing drugs for summer, temporarily alleviating the urgent drug shortage.

At the event, traditional Chinese medical specialists gave local people lectures on body care during the Dragon Boat Festival. While giving volunteer medical consultation, doctors found many people had endemic diseases such as Kashin-Beck disease, chloasma and neurodermatitis. Doctors patiently popularized knowledge related to disease prevention to patients during the inquiry. Local people presented doctors with silk banners for their benevolent mind and heart.



■ Case 9

On October 28, 2018, the annual "Shanghai Charity-oriented Volunteer Medical Consultation at Guoqing Temple" organized by the Pain Management Department of Huadong Hospital Affiliated to Fudan University met with citizens. The Lei-titled Service Team comprised of volunteers from Shanghai Leiyunshang Pharmaceutical, Leiyunshang Pharmaceutical and Lei's Clinics of Traditional Chinese Medicine provided residents in communities near the cultural and sports center in Tang Town, Pudong and worshippers from all over the country with volunteer medical consultation and health consultation relating to traditional Chinese medicine and popularized knowledge on disease prevention and control.

The Lei-titled Service Team not only patiently diagnosed and treated diseases and provided healthcare advice for people on site but also brought "Compound Zijing Xiaoshang Cataplasm", a classic Lei's product, to the scene for experience by patients.

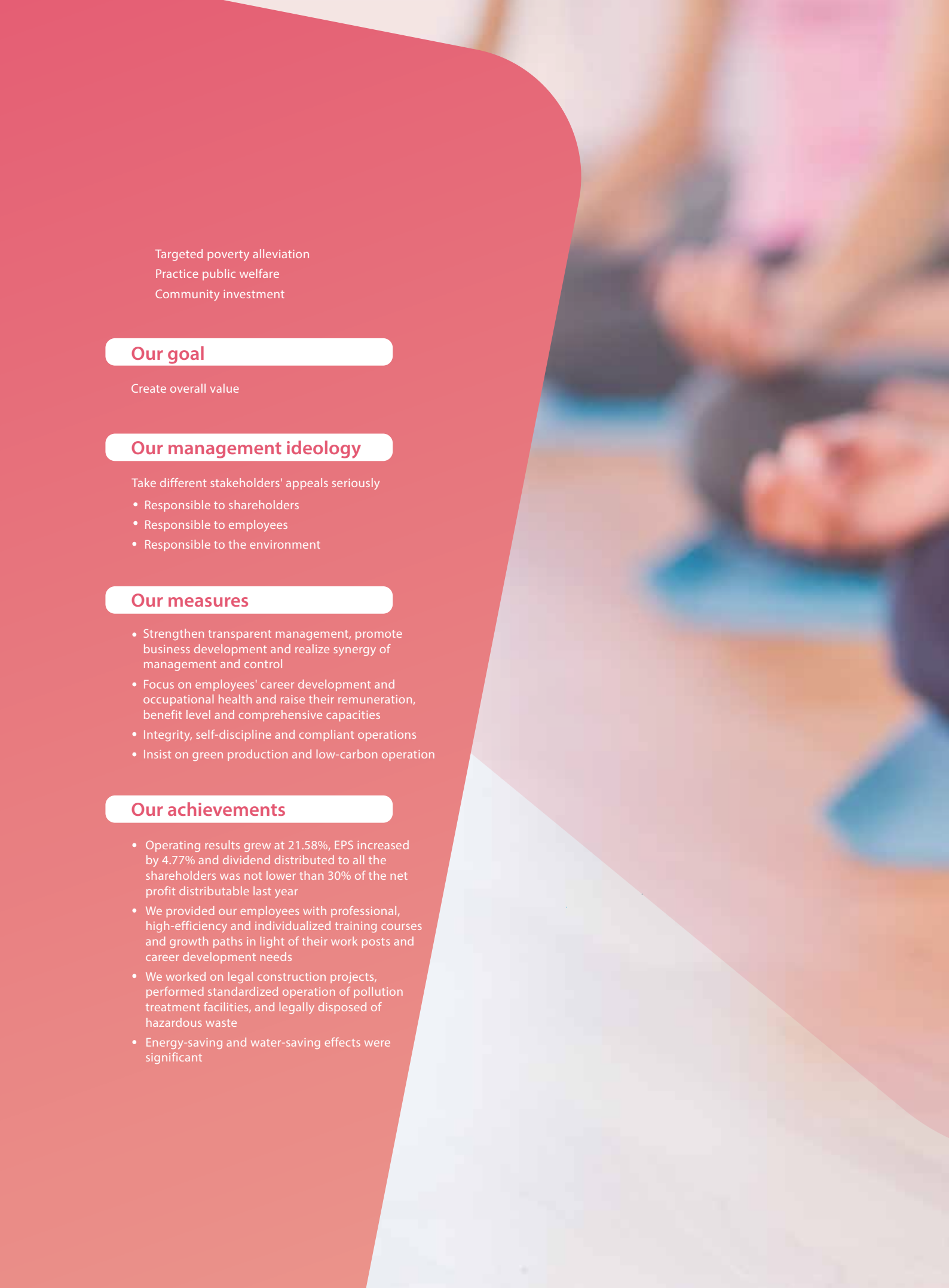


Case 10

In 2018, SPH Techpool carried on "Kaiqi Plan", successor of "Kaiqi Plan" for 2017, a public welfare program on caring for patients with acute thrombotic cerebral infarction conducted by Techpool together with Chinese Red Cross Foundation. The program aimed to donate Kailikang (Urinary Kallidinogenase for Injection), a therapeutic drug for acute stroke, through Chinese Red Cross Foundation to improve patients' access to treatment. Meanwhile, relevant training on diagnosis and treatment of ischemic stroke in the acute period was provided for frontline doctors, which would improve the diagnosis and treatment level and better benefit patients eventually.

On the 13th "World Stroke Day" on October 29, the volunteer medical consultation activity under the "Public Welfare Program on Caring for Patients with Acute Thrombotic Cerebral Infarction – Kaiqi Plan" was held in Shanghai Huashan Hospital. At 9:00 am, Techpool staff and medical personnel joined the red bracelet volunteers activity. During the volunteer medical consultation, more than 10 experts from neurology department and cerebral stroke-related departments provided volunteer medical consultation services for over 100 people, with more than 20 people receiving free carotid artery B-ultrasound examinations and nearly 90 people undergoing blood pressure and blood sugar examinations for free. Doctors Dong Yi, Ling Yifeng from the Neurology Department of Huashan Hospital gave a scientific lecture themed on "Getting to Know Transient Ischemic Attack".





Targeted poverty alleviation
Practice public welfare
Community investment

Our goal

Create overall value

Our management ideology

Take different stakeholders' appeals seriously

- Responsible to shareholders
- Responsible to employees
- Responsible to the environment

Our measures

- Strengthen transparent management, promote business development and realize synergy of management and control
- Focus on employees' career development and occupational health and raise their remuneration, benefit level and comprehensive capacities
- Integrity, self-discipline and compliant operations
- Insist on green production and low-carbon operation

Our achievements

- Operating results grew at 21.58%, EPS increased by 4.77% and dividend distributed to all the shareholders was not lower than 30% of the net profit distributable last year
- We provided our employees with professional, high-efficiency and individualized training courses and growth paths in light of their work posts and career development needs
- We worked on legal construction projects, performed standardized operation of pollution treatment facilities, and legally disposed of hazardous waste
- Energy-saving and water-saving effects were significant

5 CHAPTER



Create Overall Value based on Responsible Operation



5.1 Governance and management and control



In 2018, the Company successfully attained the business goals and completed various key tasks for 2018 and achieved annual budget goals in response to a sequence of significant policy and market changes including official implementation of plan of procurement of drugs with target quantity, implementation of efficacy consistency evaluation of generic drugs, and execution of new drug examination and approval policy, two-invoice system, etc.



1 Governance mechanism

The Company actively built a comparatively perfect modern governance system for listed companies and constantly improved corporate legal person governance structure in strict accordance with the Company Law, the Securities Law and other relevant laws, and relevant regulations formulated and issued by regulatory departments.

In 2018, to further improve the governance mechanism, the Company, on the basis of improving the profit distribution policy for the previous year, updated basic corporate information and included construction and management functions of party organizations in the Articles of Association according to the Company Law of the People's Republic of China, the Company's completion of allotment and private placement of new H shares as well as the Notice on Relevant Matters in relation to Accelerating Central Enterprises to Include the Overall Requirements on Party Construction Works in Their Articles of Association (Guo Zi Dang Wei Dang Jian [2017] No. 1) and other relevant provisions and requirements, further improving the Company's internal management structure. Currently, the aforesaid amendments have been approved by the shareholders' general meeting and become effective.

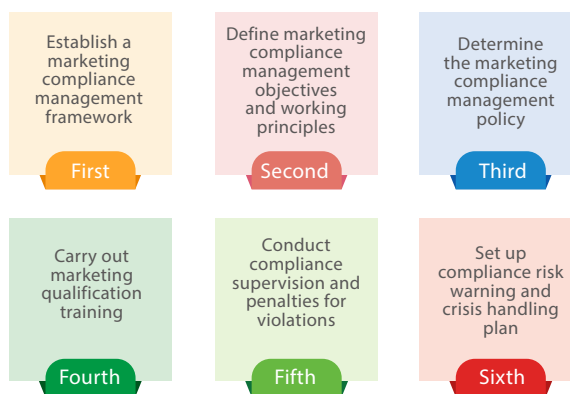
2 Risk and internal control management

In order to respond to the ever-changing risks and comply with the compliance requirements in terms of the listed company governance, the Company has set up working procedures for risk identification, risk assessment, risk response and risk reporting, which are used to identify internal and external risks and assess the probability and impact of risk occurrence, identify risk response strategies and implement response plans, and regularly and systematically report risk and risk management information to the Board of Directors, Audit Committee and management.

In respect of corporate internal control, the Company has established a corporate legal person governance structure, and set up an organizational structure that meets the Company's business scale and business management needs from the perspective of corporate risks based on the requirements for setting up a modern corporate system, taking into account its own development status, and has continuously improved and optimized the Company's internal control management system in relation to five aspects, namely control environment, risk assessment, control activities, information and communication, and supervision mechanism.

3 Compliant operation

Shanghai Pharmaceuticals has always been attaching importance to marketing compliance management, because compliant operations are not only the minimum management requirement for companies, but also an important guarantee for participating in international competition and practicing social responsibilities. In 2018, Shanghai Pharmaceuticals continuously and comprehensively promoted the construction of a compliance management system for marketing to ensure compliant operation.



4 Information disclosure

In respect of information disclosure, the Company, in line with investors' needs and compliance, took initiative to fulfil the obligation of information disclosure by innovative methods and enhanced time effectiveness and transparency of information disclosure in strict accordance with the Standards for the Contents and Formats of Information Disclosure by Companies Offering Securities to the Public No.2 - Contents and Formats of Annual Reports (2017 Revision) issued by CSRC, Guideline on Industry Information Disclosure No. 7 - Listed Companies Engaging in the Pharmaceutical Manufacturing and Notice on Further Improving Information Disclosure of Poverty Alleviation by Listed Companies issued by the Shanghai Stock Exchange, and Environmental, Social and Governance Reporting Guide issued by the Stock Exchange of Hong Kong Limited and other requirements.

From January 1, 2018 to December 31, 2018, the Company disclosed a total of four periodic reports (annual report 2017, first quarterly report 2018, interim report and third quarterly report 2018), 60 A-share temporary announcements and 87 H-share announcements and documents.

5 Communication with investors and safeguarding of their rights and interests

The Company regularly held conference calls involving global investors and conducted roadshows for global institutional investors. Meanwhile, the Company positively responded to and answered the investors' questions through the "E-interactive Platform" of the Shanghai Stock Exchange, investor hotline and e-mails. In 2018, the Company maintained good interaction with domestic and overseas investors, positively participated in and received investor survey, and held reverse roadshows in Hong Kong in November, ensuring investors could be promptly informed of the Company's operating results and strategy plans. In 2018, the Company has made invitations to its investors for more than 300 times in total.

As of December 31, 2018, the "E-interactive Platform" of the Shanghai Stock Exchange had received 82 questions from investors, and the Company paid great attention and responded to them all in a timely manner.

Case 1: Information disclosure

The Company attaches great importance to investors' right to know and discloses corporate information in a true, accurate, complete and timely manner. Since 2016, the Company has been given Grade A, the highest grade, in the annual information disclosure evaluation by the Shanghai Stock Exchange for two consecutive years, ensuring investors could be adequately and promptly informed of important corporate information and protecting investors' rights and interests.

Case 2: Crisis management

In 2018, frequent occurrence of "black swan" events in the pharmaceutical and biomedical industry, such as "faulty vaccine case" of Changsheng Biotechnology, reported goodwill problems of listed companies and implementation of policy of procurement with target quantity in "4+7" cities, added variables to the whole industry. In response to the aforesaid unexpected events, the Company immediately started crisis handling work by setting up a public relation team for crisis, formulating countermeasure plans and actively communicating with investors through press releases, announcements, Internet and offline receptions to maintain its corporate image so that investors could make an objective and rational judgment on the Company's valuation.

6 Anti-corruption

In respect of audit, the Company formulated the Procurement and Bidding Management Measures of Shanghai Pharmaceuticals as well as Management Measures of Supplier Integrity and Compliance of Shanghai Pharmaceuticals according to the Bidding Law of the People's Republic of China, the Regulation on the Implementation of the Bidding Law of the People's Republic of China and other relevant state laws and regulations. The two systems mainly specified the bidding and procurement requirements for engineering projects, equipment, facilities, office supplies, office equipment, IT software and hardware, professional maintenance, consulting services, etc., and honesty and compliance requirements that the Company's staff should observe during transactions with suppliers.

In respect of the discipline inspection commission, while complying with the Anti-Corruption and Bribery Law of the People's Republic of China and other laws and regulations related to [anti-corruption, anti-bribery, anti-extortion, anti-fraud, anti-money laundering] applicable to the Company, the Company continued to study, publicize and implement the Criteria of Honesty and Self-discipline for the Communist Party of China and Regulation of the Communist Party of China on Disciplinary Actions, and earnestly implemented Shanghai Pharmaceuticals' Measures for Implementation of Entity Responsibility of Party Committee and Supervision Responsibility of Discipline Inspection Commission in Building of A Clean and Honest Government. Key work was carried out in promoting building of risk prevention and control system for major fields:

01

Promote implementation of Guidance Opinions on Strengthening Management of Sensitive Posts. Enhance incorruption education for employees at sensitive posts, conduct examination on the implementation of management of sensitive posts, and prevent corruptions from the source.

02

Implement the Measures for Management of Honesty and Compliance of Suppliers, cooperate with relevant business departments in urging various units to regulate the management of suppliers so as to improve the enterprise's risk prevention ability.

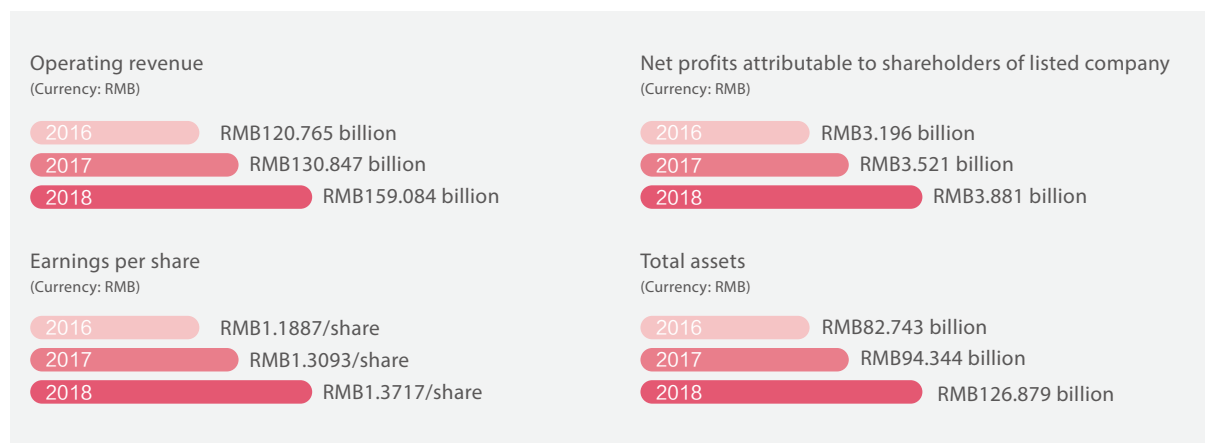
03

Formulate the Notice on Strengthening Management of Agency of Relevant Enterprise Products of the Group by Employees Who Have Left Shanghai Pharmaceutical Group, and further enhance the management of agency of relevant enterprise products of the Group by employees who have left the Group.

04

Formulate the Measures for Prevention of Conflicts of Interest of Leaders directly under the Group during Operational and Management Activities (Trial) to regulate leaders' conducts, prevent conflicts of interest during operational and management activities, promote leaders to perform their duties and powers correctly and safeguard enterprise's reform and development.

Key indicators



5.2 Employee development

1 Career development

The Company gradually established employee career development channels, including the position systems for managers, marketing personnel, R & D personnel, technical-quality personnel and skilled personnel, and kept improving the position standards.

The Company adhered to the market-based employment mechanism, organized talent review, and promoted the merit-based selection of talents on a competitive basis; strengthened the introduction of market-oriented talents, established a unified recruitment management platform, set up an internal employee recommendation system, integrated internal & external recruitment channels and resources, optimized recruitment process and established internal & external talent pools; attached great importance to the introduction and training of international talents, so as to promote the development of its international business; annually organized theme recruitment in the campus, established strategic alliances with relevant universities and jointly established national education practice bases and master graduate internship bases to improve students' practical ability through internships, graduation design, exchange of experts, directed and entrusted trainings, so as to shorten their run-in period after entering the company.

After systematic training and master instructing apprentice, a number of leading skilled personnel with exquisite craftsmanship and working in the frontline emerged in the Company. In particular, two persons were selected as "Shanghai Craftsmen", one person was honoured as outstanding technical expert in Shanghai, and two persons were honoured as technical experts in Shanghai.

2 Remuneration & benefit

The Company adhered to the remuneration payment concept centered on position, ability, performance and market and kept improving the normal growth mechanism and the underpinning mechanism for employee salaries, with reference to the Company's development, so as to improve the income level of employees of the enterprise. The Company developed differentiated remuneration systems for managers, marketing personnel, R & D personnel, technical-quality management personnel and production personnel based on the characteristics of their posts, and effectively mobilized the staff's initiatives and creativity to continuously improve its performance, contributing to the realization of its strategic objectives.

With reference to the enterprise's development, the Company actively improved the benefit system for employees, and some enterprises established the benefit items such as commercial medical insurance, supplementary provident fund and enterprise annuity.

3 Training and development

The Company paid high attention to employees' growth and development and provided employees with systematic learning and development paths and training courses. The Company established Shanghai Medical University, which served the "Five Platforms" functions, namely the talent training and management training platform, training platform for medical professional knowledge, platform for promoting strategic consensus and reform, platform for studying corporate policies and strategies, and platform for refining & innovation of management models,

as well as the talent "accelerator" of the Company to fuel its development through effective integration of resources.

The Company continuously improved the middle and senior managers' management level and leadership through expert forums, special lectures, external visits, internal sharing, etc.; launched the "Hongyan Plan" learning program for the reserve young management talents; for the new managers, the Company continued to optimize the iterations and continued to carry out the "Jing Yan" study program; the Company held the "Young Geese Flying High - Induction Training for New Graduates" to enhance the new employees' sense of identity for corporate culture and improve their sense of belonging and sense of pride.

The Company solidly promoted the "young geese growth partnership program" and provided each new graduate with a guide acted by excellent league cadre, so as to accompany the "young employee" in growth during the one-year growth partnership period and help them change from a good student to a good employee.

The Company provided ongoing trainings for employees, e.g. Lean Six Sigma management training, R&D project manager training, risk control training, quality management training,

and English and skills training, with the aim of enhancing their professional competence.

Upon approval of Shanghai Municipal Human Resources and Social Security Bureau, the Company set up "Continuing Education Base of Medical Professional and Technical Personnel in Shanghai", for knowledge updating and continuing education of medical professional and technical personnel.



■ Case: Shanghai Pharmaceuticals and East China University of Science and Technology launched the "Education Poverty Alleviation, Motivation & Morality" program.

To respond to the spirit of General Secretary Xi Jinping's speeches - "it is better to teach one the skill of fishing than to offer him fish. As poverty alleviation requires the support of education, it is necessary to help the children in poverty areas receive good education", and to further implement the special plan of the State Council on expanding the implementation of targeted enrollment in rural poverty areas, Shanghai Pharmaceuticals has actively participated in the "Education Poverty Alleviation, Motivation & Morality" program of East China University of Science and Technology since October 2015. The two parties signed the agreement concerning "Shanghai Pharmaceuticals Motivation & Morality Class", and set up the plan for "Scholarships of Shanghai Pharmaceuticals Young Geese Motivation & Morality Class": annual reward for 10 students excelling both in morals and studies and 20 extraordinarily poor students with special difficulties to help them build confidence and constantly strive to become stronger.

In the past three years, under the care of Shanghai Pharmaceuticals and school leaders, the number of special students has grown from 42 in 2014 to 147 in 18, and the total number of students of four grades has reached 360, covering all majors in the university. Through their own efforts, 95.32% of the students in 2014 completed their undergraduate studies and obtained bachelor's degree certificates. Among them, 12 students were recommended for admission to master's degree, and 35% of them intended to continue their studies. Over the past three years, 30 students obtained the "Scholarships of Shanghai Pharmaceuticals Young Geese Motivation & Morality Class", accounting for 25% of the total number of students in "Motivation & Morality Class"; 60 extraordinarily poor students got subsidized.

In the past three years, Shanghai Pharmaceuticals has established the "Shanghai Pharmaceutical Motivation & Morality Club" to carry out various sports activities which are beneficial to both physical and mental health and career consulting activities. In 2017, Shanghai Pharmaceuticals invited students from Motivation & Morality Class to participate in the "Shanghai Pharmaceuticals Health China Four Seasons Running" activity, creating a Guinness World record for 100 meters barefoot running by involving more than 1,000 people; Shanghai Pharmaceuticals organized some alumni of East China University of Science and Technology to participate in the "Dragon Boat Invitational Tournament of Shanghai Pharmaceuticals Motivation & Morality Class" for two consecutive years, to play against the students of Motivation & Morality Class.

To help these students fit into enterprises as soon as possible and learn more about the society, Shanghai Pharmaceuticals has organized nearly 100 students of Motivation & Morality Class to participate in its summer social practice activities for three consecutive years, and invited some teachers and students to visit its base of *Taxus yunnanensis*.

Shanghai Pharmaceuticals participated in the poverty alleviation programme of East China University of Science and Technology three years ago. Over the past three years, the two parties organized various student-aid and social practice activities, which ignited the students' dreams of "Unwilling to Mediocrity" in their studies and helped them build self-confidence in study and ceaseless self-improvement, opening up a new chapter in the cooperation between schools and enterprises in promoting "education poverty alleviation, cooperation in education".

4 Health and safety

Occupational health

The Company always insisted on the work objective of 5 100% in occupational health management (100% report rate and detection rate of occupational hazardous factor, 100% notification rate of post occupational hazard, 100% physical examination rate and 100% training rate), and realized full coverage of occupational hazard management and the work objective of no occurrence of severe occupational hazard accidents.

The Company further promoted the occupational health infrastructure construction, inspected and urged the production enterprises involving occupational disease hazard factors to control and eliminate the hazard factors at the source, and improve and replace obsolete production equipment.

To improve the safety of production facilities, the Company controlled and eliminated the hazard factors at the source, and all enterprises increased their safety input, and improved and replaced obsolete production equipment. The investment holding company continued to promote the elimination of obsolete equipment that was expressly stipulated by the state and worked out rectification and transformation plan in advance, so as to make timely preparations and track the progress.

Case 1

Tianjin Jinjin Pharmaceutical Co., Ltd., a subsidiary of SPH Sine, added organic solvent absorption devices in multiple workshops where organic solvents were used. The organic solvent vapour was collectively absorbed through such devices, gathered through pipes, and processed through spraying, photocatalytic absorption, and other treatment process of VOCs, to ensure it was finally up to standard and discharged at high altitude. This was a retrofit project that integrated occupational health and environmental protection, with a total retrofit cost of RMB3.2 million.

Case 2

According to the 2018 annual maintenance plan of the Company, SPH Zhongxi Sunve performed the upgrading reformation of 5 centrifuges in Workshop 1 and Workshop 2, and selected and used the centrifuge (model PSB1000NF) of Jiangsu Huada Centrifuge Manufacturing Co., Ltd. Compared to before, this centrifuge is equipped with a frequency converter, which makes it start steadily, as well as a fluid damping shock absorber, which is fine in damping effect and can effectively reduce noise at the work site; meanwhile, thanks to an enclosed design (fluorine rubber used for sealing) and the nitrogen protection system, this centrifuge can also effectively control the evaporation & diffusion of organic solvents during centrifugation. In addition, SPH Zhongxi Sunve retrofitted the centrifuges in Workshop 2, specifically, it separately set up the centrifuge and the mother liquid cylinder, and connected them with a completely closed pipe to achieve fully enclosed process.

Production safety

In accordance with Production Safety Law and relevant laws and regulations, the Group continued to enhance the work safety responsibility system to control the risk of work safety accidents. The Group insisted that "work safety is the responsibility of both the Communist Party and the government and relevant cadres should be responsible for not only their own jobs but also related work safety" and applied supervision on work safety to every process.

The Company has established a set of Work Safety Management Norms and Systems, continued to develop a safety production management system to improve the level of safety standardization. To achieve the work objective of "no serious production safety accidents, no significant fire and explosion accidents, no largely responsible major traffic accidents, no major occupational hazard accidents and less serious injury accident and general accidents", the Company organized education programs regarding production safety to increase employees' safety knowledge and conducted safety risk evaluation and inspection to responsively spot and eliminate safety risks.

On January 2, 2018, the President of Shanghai Pharmaceuticals signed a Letter of Responsibilities for Work Safety in 2018 with the general managers of 26 subordinate enterprises, specifying the work safety work objective for each year.

The Company organized seven special projects including special rectification of "double prevention mechanisms", "non-flame-retardant colour steel plate", "laboratory hazardous chemicals", "anti-customary unlawful behavior", "China International Import Expo", "limited space" and "exhausted plant rental space". The Company focused on key special projects throughout the year, and has achieved certain improvements in all aspects of work safety.

The Company continued to push forward the review of work safety standardization. The production companies subordinate to Shanghai Pharmaceuticals completed the review of 19 second-tier companies and maintained full-scale work safety management.

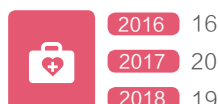
The Company encouraged enterprises to participate in the contests for demonstration enterprises of safety culture construction in Shanghai, and two enterprises (SPH Sine and SPH No. 1 Biochemical) in Shanghai were awarded "Demonstration Enterprise of Safety Culture Construction in Shanghai".

In 2018, a total of 73 enterprises organized various exercises (25 complex exercises and 48 special exercises), involving about 9,800 people. Such exercises improved employees' emergency response capability and safety awareness.

5 Employment and labour practices

Key indicators

1. Work safety accidents or work-related accidents in the year (number of accidents)

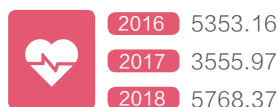


Note: A serious accident, the rest were minor and slight injury accidents.

2. Safety education and training (times/headcount)



3. Occupational health-related investment (RMB0'000)



This indicator mainly refers to investment in improving and optimizing the working environment and increasing personal protective equipment and emergent protective measures.

4. Incidence rate of occupational diseases



According to the requirements of the Labor Contract Law of the People's Republic of China and local labor laws, regulations and policies, Shanghai Pharmaceuticals recruited employees according to job requirements on the basis of impartiality and fairness and did not discriminate employees because of their gender, age, disease and race; the Company paid social insurance and other statutory benefits for all regular employees in a timely and fixed manner; the Company granted statutory holidays and paid leave to employees according to regulations to protect their leave entitlements; Shanghai Pharmaceuticals had always insisted on legitimate employment and was not involved in use of child labor or forced labor.

In protecting the legitimate rights and interests of employees, the labor union of the Company made it available for staff members to express their demands and tried to maintain harmonious labor relations by holding different activities. In 2018, labor unions at all levels listened to and collected the views and suggestions of staff members through the workers' congress (employee representative inspection, employee representative proposal), collective negotiation, labor emulation, continuous improvement proposals, cultural and sports activities and seminars, after which they responsively performed their duties and reported these views and suggestions to the Party and government leaders of enterprises and urged enterprises to make improvements.

In addition, the Company continued to urge labor unions at all levels to complete information collection and entry of membership cards. In 2018, the Company recorded a total of 11,257 registered members, including 2,353 new members, accounting for 68.6% of the total members and all of whom were insured under the special insurance plan (over RMB500,000 of premium was paid). Claims of 40 gravely ill members under the plan were settled; as at the end of the year, claims of 18 gravely ill members were satisfied with a compensation of RMB20,000 and consolation money of RMB1,000. And a total of RMB390,000 as compensation and RMB18,000 as consolation money were issued to three members suffering accidental or disease death. (The compensation to other members were under review.)

For enriching employees' cultural life, the Company consciously incorporated its core values of "innovation, integrity, cooperation, tolerance and responsibility" throughout the employees' cultural and sports activities, and continued to improve the spiritual and cultural pursuit and quality of employees by carrying out various types of healthy and diverse employees' cultural and sports activities. The Company held the "Pay Tribute to 40 Years" Shanghai Pharmaceutical Group's Employee Talent Show Competition, which attracted nearly 260 employees from 19 representative teams of 21 enterprises and public institutions in and outside Shanghai, more than 1,100 on-site audience and approximately 1,800,000 audience following the competition via live video and photo streaming. In the competition, on-site professional judges, employee judges and on-site and off-site audience selected by ballot one special distinction award winner, two first prize winners, four second prize winners, six third prize winners, three internet popularity award winners and six recognition award winners. The Company organized 342 teams totalling nearly 1,800 employees to participate in the Shanghai Team Culture Network Competition.

In addition, the Company also organized 360 employees from five enterprises including Shanghai Pharma to participate in the "Welcome National Day" Employee Singing Competition of Shanghai Industrial Investment (Holdings). In the Competition, Shanghai Pharma won the gold award, SPH Traditional Chinese Medicine won the silver award, and three enterprises including SPH Sine won the bronze award, presenting the employees of Shanghai Pharmaceutical Group.

■ Case 1: Another two employees of Shanghai Pharmaceuticals were selected into the third batch of "Shanghai Craftsmen"

At the "Named as Shanghai Craftsmen" cum Craftsmanship Spirit-themed Forum for 2018 held by Shanghai Federation of Trade Unions, Li Yuexiong from SPH Shenxiang and Shao Qi from SPH Sine subordinate to Shanghai Pharmaceuticals were selected into the third batch of "Shanghai Craftsmen". So far, four employees of Shanghai Pharmaceuticals have been elected as "Shanghai Craftsmen".

Li Yuexiong is a pacemaker in the traditional Chinese medicine industry. He spent more than 300 days per year shuttling to and from 15 wild ginseng production bases and 19 wild ginseng sample plots in northeast and northwest China. He fulfilled the responsibility of successor of traditional Chinese medicine with sincerity and faith, and enriched the treasure house of traditional Chinese medicine culture with hard-working and enquiring mind, making him one of the first successors of academic experience of national famous TCM experts. He won the Shanghai May 1st Labor Medal in 2017.

Shao Qi is mainly responsible for the R&D of inhalation preparation projects. He has successively undertaken seven inhalation preparation R&D projects and two liquid preparation R&D projects, and participated in one major special project during the national 12th Five-Year Plan and 13th Five-Year Plan respectively, three municipal special projects, and two solid preparation R&D projects. In the past 10 years, he helped his company establish the inhalation preparation R&D platform, making it the first company in the country to find a replacement for freon propellants of inhalation products, reducing the use of hundreds of tonnes of freon every year. He successively won the 3rd Shanghai Employee Science and Technology Innovation Newcomer Award, Key Quality Revitalization Project Award jointly issued by Shanghai Quality and Technical Supervision Bureau and Shanghai Municipal Commission of Economy and Informatization, and other honors.



■ Case 2: Shanghai Pharmaceuticals had another new Shanghai Labor Model Innovation Studio

At the Shanghai Employee Innovation Conference cum Opening Ceremony of the 8th Shanghai Employee Science and Technology Festival on the afternoon of May 29, 2018, SPH Sine Tianping Wang Yongzhen Technology Innovation Studio was named "Shanghai Labor Model Innovation Studio" in the seventh batch.

As the sponsor of the Employee Science and Technology Festival, Medicine Parallel Session, the pharmaceutical trade union further promoted the continuous improvement and innovation of employee posts by making full use of such activities as all-preparation same line labor competition and "I am responsible for making innovation in my own post" continuous proposal improvement, resulting in a number of excellent innovation achievements. In recent three years, the Company won a total of 27 municipal awards including Shanghai Excellent Invention Tryout, Employees' Rationalization Proposal Achievement Award, and Employees' Advanced Operation Achievement Award. Moreover, its six studios were named "Shanghai Technician Innovation Studio" and "Shanghai Labor Model Innovation Studio", respectively.

Wang Yongzhen Technology Innovation Studio is a trans-department and cross-group featured innovation team integrating formal workers and contract workers. Adhering to the team culture and original spirit of "Every little makes a mickle based on lean and all-round management, stable quality and improved efficiency" and the "Ten Ones" working mechanism, they acquired new projects, new management, new teaching, new skills and new achievements every year.

They were prepared to make innovation and solve problems. Specific to difficulties in production, they continued to conduct technical innovation, which successfully solved technical difficulties of several key products, achieved automatic packaging of many products, stabilized product quality and solved production bottleneck, thereby accumulatively saving more than RMB8 million of costs.

They improved their way of passing down skills, and each strove to seek better performance in their work. At present, the team has four technicians, three lean black (green) belt talents, three Sine craftsmen, one group-based woman master-hand, one Shanghai May 1st Labor Medal winner, and one National May 1st Labor Medal winner. As the original team of SPH Sine, they trained 19 employees to be technical backbones for the Company based on the master-prentice model. As a team with originality and innovative spirit, they were also striving to promote intelligence-oriented innovation to make new contribution to the development of the Company.

Key Indicators:

Employee indicator

1.Total number of employees (person)

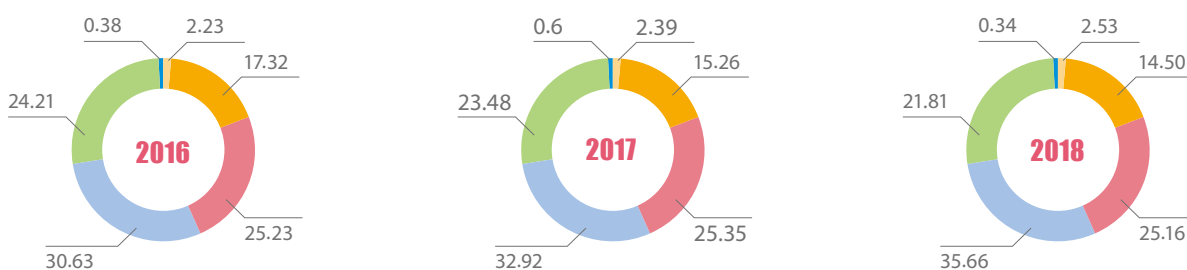


2. Sex composition (person)

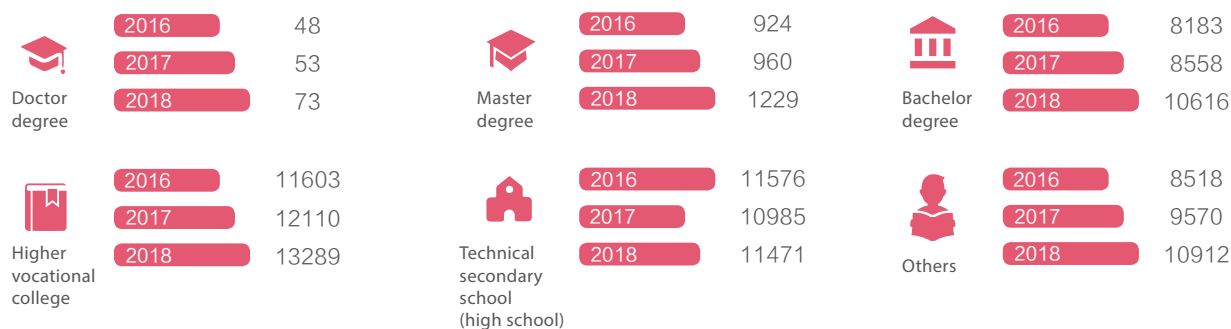


3. Age composition (%)

■ Aged 60 and above
 ■ Aged 50-59
 ■ Aged 40-49
 ■ Aged 30-39
 ■ Aged 20-29
 ■ Aged 19 and under

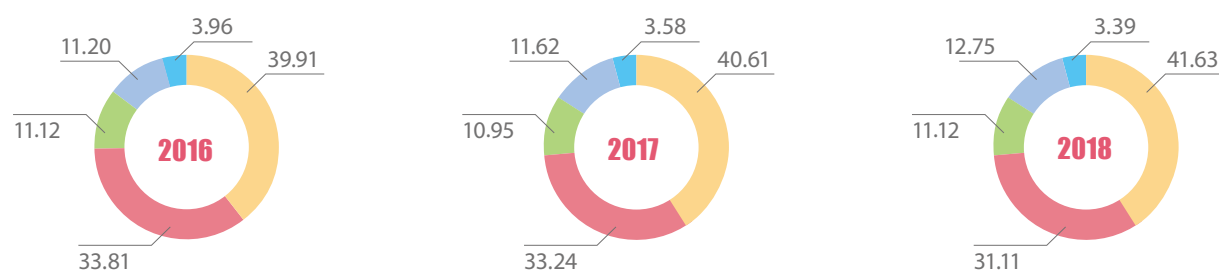


4. Education composition (person)

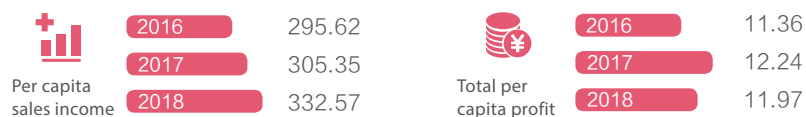


5. Employee structure (%)

Marketing Production Technology Management Others



6. Efficiency indicator (RMB0'000)



5.3 Environmental management

1 Environmental protection

Shanghai Pharmaceuticals has always performed its main corporate responsibilities for environmental protection in a comprehensive and strict manner. In January 2018, the leaders of the Group and 18 directly-affiliated enterprise operators signed the Responsibility Statement for the Environmental Protection Work Objectives for 2018, specifying the annual work objectives and tasks. The Group's security department regularly held video conferences on national environmental management, summarized and assigned work, and provided training on regulations to keep subordinate enterprises abreast of the latest management requirements; prepared and issued the working documents of the Group, required relevant enterprises to do a good job in the collection of basic information of annual reports and social responsibility reports and preparation for the first collection of environmental protection tax, carried out publicity activities on Environment Day (June 5), worked out "one policy for one factory" for heavy air pollution weather, etc.; formulated the annual work plan, conducted on-site environmental protection inspections and annual work assessment, pointed out problems found on the spot and put forward rectification suggestions to help enterprises improve their on-site environmental management level. The Company talked with persons in charge of relevant responsible enterprises to put in place their annual KPI environmental assessment and set strict rules on "dereliction of duty and accountability" in accordance with the Group's Accountability System for the Safety Production and Environmental Protection Accidents.



In 2018, Shanghai Pharmaceuticals confirmed the annual key environmental protection work, including the signing of environmental responsibility by directly-affiliated enterprises, application for national pollutant discharge permits, independent environment-related acceptance of construction projects, self-monitoring of pollutant discharge, standardized management of hazardous wastes in laboratories, preparation and filing of the Contingency Plan for Emergent Environmental Incidents, continued clean production audits, etc. All enterprises implemented various key tasks in a positive and comprehensive manner.

In 2018, among enterprises under Shanghai Pharmaceuticals, 13 API manufacturers obtained national pollutant discharge permits as scheduled; four enterprises completed independent environment-related acceptance of construction projects; 46 manufacturers basically completed their annual monitoring work by formulating self-monitoring schemes or plans; 46 manufacturers carried out special inspections on standardized management of hazardous wastes in laboratories to eliminate non-standard management of hazardous wastes; 28 drug manufacturers completed the preparation and filing of the Contingency Plan for Emergent Environmental Incidents in accordance with environmental protection requirements; and 12 drug manufacturers conducted continued clean production audits as required.

In 2018, 14 drug manufacturers under Shanghai Pharmaceuticals passed ISO14001 Environmental Management System certification, laying a solid foundation for standardizing production and operations and achieving sustainable development.

No.	Name of company
1.	Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd.
2.	Shanghai Harvest Pharmaceutical Co., Ltd.
3.	Shanghai Sine Jinzhu Pharmaceutical Co., Ltd.
4.	Shanghai Sine Tianping Pharmaceutical Co., Ltd.
5.	Shanghai SPH New Asiatic Pharmaceutical Co., Ltd., New Asiatic Pharmaceutical Factory
6.	Shanghai New Asiatic Pharmaceutical Minhang Co., Ltd.
7.	Shanghai SPH No.1 Biochemical and Pharmaceutical Co., Ltd.
8.	Shanghai Zhongxi Sunve Pharmaceutical Co., Ltd.
9.	Changzhou Pharmaceutical Factory Co., Ltd.
10.	Changzhou Wuxin Pharmaceutical Co., Ltd.
11.	Nantong Changyou Pharmaceutical Technology Co., Ltd.
12.	Chiatai Qingchunbao Pharmaceutical Co., Ltd.
13.	Hangzhou Huqingyutang Pharmaceutical Co., Ltd.
14.	SPH Changzhou Kony Pharmaceutical Co., Ltd.



In 2018, manufacturers subordinate to Shanghai Pharmaceuticals increased investment in energy saving and environmental protection. They reduced energy consumption to save energy; and strengthened governance to reduce pollution.

Shanghai SPH New Asiatic Pharmaceutical Co., Ltd., Asia Pioneer Pharmaceutical Factory invested RMB420,000 to install a VOC exhaust gas treatment facility in the gel workshop to reduce the impact of VOC on the environment; invested RMB700,000 to build a residual heat and water recycling system, which can recycle 20 tonnes of hot water per day, and save 5 tonnes of steam per day and 138 tonnes of standard coal per year.



Nantong Changyou Pharmaceutical Technology Co., Ltd. invested RMB6.5 million to build a new RTO treatment equipment with a capacity of 40,000 m³/h, in a bid to effectively collect and treat VOC exhaust gas. The current online testing data showed stable and up-to-standard exhaust gas discharge.



Shanghai Jinhe Biotechnology Co., Ltd. invested RMB3.7 million to rebuild the sewage treatment station so as to improve sewage treatment capacity.



Nantong Changyou Pharmaceutical Technology Co., Ltd. invested RMB220,000 to add eight circulating water pump frequency controllers and auxiliary electric cabinets, saving about 200,000 kWh of electricity per year.



Chiatai Qingchunbao Pharmaceutical Co., Ltd. invested RMB219,000 to install an additional odor treatment facility at the sewage treatment station, contributing to improving the air quality around there.



SPH Qingdao Growful Pharmaceutical Co., Ltd. invested RMB5.9 million to carry out the second phase construction of its sewage station. After completion, its designed treatment capacity increased from 750m³/d to 1,500m³/d, with the effluent COD_{Cr} dropping to 200mg/L and below, which can reduce COD emission by 12.48 tonnes per year.



2 Energy management

Shanghai Pharmaceuticals worked out the Management Measures for Assessing Energy Management by Energy-consuming Enterprises, Energy Information Management and Reporting Procedures for Energy-consuming Enterprises and other systems in strict accordance with relevant provisions of the Energy Conservation Law of the People's Republic of China and the Administrative Measures for Energy Conservation in Key Energy Consumers.

Shanghai Pharmaceuticals completed annual energy saving goals and tasks, monthly energy statistics and planned water use in accordance with the requirements of Shanghai Municipal Commission of Economy and Informatization, Shanghai Municipal Statistics Bureau and Shanghai Water Authority, passing their annual assessment on its energy saving, statistics, planned water use and so on.

The energy saving index set by the Shanghai Municipal Commission of Economy and Informatization to Shanghai Pharmaceuticals was the comprehensive energy consumption of not more than 125,000 tonnes of standard coal in 2018, representing a year-on-year decrease of 2% in energy consumption per RMB10,000 in production. In 2018, Shanghai Pharmaceutical Group recorded an annual comprehensive energy consumption of 117,900 tonnes of standard coal, representing a year-on-year decrease of 11.82% in energy consumption per RMB10,000 in industrial production, achieving a result beyond the annual energy saving goal set by the Shanghai Municipal Commission of Economy and Informatization.

3 Information of key pollutant-discharging units in 2018

Disclosed this time were 2018 key pollutant-discharging units affiliated to Shanghai Pharmaceuticals announced by the Ministry of Ecology and Environment. Upon analysis, Shanghai Environmental Protection Bureau and Changzhou Environmental Protection Bureau confirmed by issuing documents the following enterprises of Shanghai Pharmaceuticals as key pollutant-discharging units in 2018:

Type of key pollutant-discharging units	Name of key pollutant-discharging units
Key water environment pollutant-discharging units	Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd.
	Shanghai SPH No.1 Biochemical and Pharmaceutical Co., Ltd.
	Shanghai Ziyuan Pharmaceutical Co., Ltd.
	Shanghai SPH New Asiatic Pharmaceutical Co., Ltd. (Asia Pioneer Pharmaceutical Factory)
	Changzhou Pharmaceutical Factory Co., Ltd.
Key atmospheric environment pollutant-discharging units	Shanghai SPH No.1 Biochemical and Pharmaceutical Co., Ltd. - Jianchuan Road
	Shanghai SPH No.1 Biochemical and Pharmaceutical Co., Ltd. - Bijiang Road
	Shanghai Ziyuan Pharmaceutical Co., Ltd.
	Shanghai SPH Zhongxi Pharmaceutical Co., Ltd.
	Changzhou Pharmaceutical Factory Co., Ltd.
Key soil monitoring units	Shanghai SPH No.1 Biochemical and Pharmaceutical Co., Ltd. - Jianchuan Road
	Shanghai SPH No.1 Biochemical and Pharmaceutical Co., Ltd. - Bijiang Road
	Shanghai Ziyuan Pharmaceutical Co., Ltd.
	Shanghai Zhongxi Sunve Pharmaceutical Co., Ltd.
Other key pollutant-discharging units	Shanghai SPH No.1 Biochemical and Pharmaceutical Co., Ltd.
	Shanghai New Asiatic Pharmaceutical Minhang Co., Ltd.

Shanghai Pharmaceuticals required all key pollutant-discharging units to do a good job in information disclosure, environmental monitoring, ledger management, etc., in accordance with environmental regulations so as to ensure normal operation of pollution control facilities and stable and up-to-standard pollutant discharge, and complete in time various tasks assigned by the Ministry of Ecology and Environment.

Specifically, according to the Classification Management List for Pollutant Discharge Permits from Fixed Pollution Sources issued by the former Ministry of Environmental Protection, preparation manufacturers shall apply for pollutant discharge permits by 2020. Therefore, the total amount of permitted pollutant discharge for preparation manufacturers mainly depends on the environmental impact assessment documents of their construction projects. Due to different methods taken to calculate the amount, individual preparation manufacturers discharged more pollutants than the total amount permitted, but they did not violate any regulation. The renewed pollutant discharge permit issued in the future will reasonably specify the total amount of permitted pollutant discharge for enterprises, which will strictly implement relevant requirements. Enterprises shall disclose the emissions of PM, SO₂ and NO_x arising from use of automobiles as required by the SEHK. Therefore, the relevant data disclosed by enterprises include the emissions generated during the use of automobiles. The standards for pollutant discharge shall be subject to the environmental impact assessment on enterprise construction projects or description of pollutant discharge permit. According to the general statistical principles, the data were rounded to the second digit after the decimal point.

1. Pollutant discharge information

SN	Name of key pollutant-discharging units	Name of key pollutants	Discharge mode	Discharge condition	Discharge concentration/ wastewater (mg/L) or exhaust gas (mg/m ³)	Total discharge amount (tonne)	Excessive discharge	Implemented standards for discharge of pollutants	Approved total amount of discharge (tonne)
1	Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd.	COD	Continuous	Main wastewater outlet	76	14.04	No	Indirect Discharge Standard under the Pollutant Discharge Standard of Bio-pharmacy Industry (DB31/373-2010); Level 3 Standard under the Integrated Wastewater Discharge Standard (GB8978-1996).	6.18
		Ammonia nitrogen				0.32	No		1.38
2	Shanghai SPH No.1 Biochemical and Pharmaceutical Co., Ltd. (Jianchuan Road)	COD	Indirect	Main wastewater outlet	44.18	4.07 (including discharge of raw materials and preparations)	No	Indirect Discharge Standard under the Pollutant Discharge Standard of Bio-pharmacy Industry (DB31/373-2010). Level 3 Standard under the Integrated Wastewater Discharge Standard (GB8978-1996).	0.75 (including total discharge of raw materials only, and no pollutant discharge permit is issued for preparations)
		Total nitrogen			7.28	0.61 (including discharge of raw materials and preparations)	No		0.09 (including total discharge of raw materials only, and no pollutant discharge permit is issued for preparations)
		Ammonia nitrogen				0.28 (including discharge of raw materials and preparations)	No		0.06 (including total discharge of raw materials only, and no pollutant discharge permit is issued for preparations)
		SO ₂	Continuous	Exhaust gas outlet	1.23	0.35	No	Emission Standard of Air Pollutants for Boilers (DB31/387-2014).	0.6
		PM			1.6	0.11	No		0.57
		NO _x			59.28	8.91	No		11.48
		Non-methane hydrocarbon	Continuous	Exhaust gas outlet	5.91	0.81	No	Pollutant Discharge Standard of Bio-pharmacy Industry (DB31/373-2010).	1.25

SN	Name of key pollutant-discharging units	Name of key pollutants	Discharge mode	Discharge condition	Discharge concentration/ wastewater (mg/L) or exhaust gas (mg/m ³)	Total discharge amount (tonne)	Excessive discharge	Implemented standards for discharge of pollutants	Approved total amount of discharge (tonne)
3	Shanghai SPH No.1 Biochemical and Pharmaceutical Co., Ltd. (Bijiang Road)	COD	Indirect	Main wastewater outlet	83.37	0.99	No	Level 3 Standard under the Integrated Wastewater Discharge Standard (DB31/199-2018).	20.26
		Total nitrogen			2.96	0.04	No		2.84
		Ammonia nitrogen			1.01	0.10	No		1.82
		SO ₂	Continuous	Exhaust gas outlet	1.22	0.02	No	Emission Standard of Air Pollutants for Boilers (DB31/387-2014).	0.05
		PM			1.4	0.01	No		0.09
		NO _x			73.11	0.73	No		1.59
		Non-methane hydrocarbon	Continuous	Exhaust gas outlet	22.66	6.03	No	Integrated Emission Standard of Air Pollutants (DB31/933-2015).	10.3
4	Shanghai Ziyuan Pharmaceutical Co., Ltd.	Ammonia nitrogen	Interval	Main domestic sewage outlet	18.3	0.2	No	Wastewater Quality Standards for Discharge to Municipal Sewers (GB/T31962-2015)	The Company discharges domestic sewage only rather than production wastewater
		Suspended solid			56	0.62			
		COD			120	1.32			
		BOD ₅			33.6	0.37			
		SO ₂	Continuous	Boiler exhaust gas outlet	1.1	0.01	No	DB31/387-2014 Emission Standard of Air Pollutants for Boilers;	0.15
		NO _x			69	0.11			0.1
		Smoke			4.47	0.015			0.01
		Non-methane hydrocarbon		Exhaust gas outlet	5.44	0.12			0.24
		Toluene		Exhaust gas outlet	0.7	0.18			
5	Shanghai SPH New Asiatic Pharmaceutical Co., Ltd. (Asia Pioneer Pharmaceutical Factory)	COD	Continuous	Main wastewater outlet	17	10.3	No	Indirect Discharge Standard under the Pollutant Discharge Standard of Bio-pharmacy Industry DB31/373-2010; Level 3 Standard under the Integrated Wastewater Discharge Standard (GB8978-1996).	18.94 (Environmental impact assessment on Technological Transformation of Production Line of Gel Products)
		Ammonia nitrogen				0.26	No		7.43 (Environmental impact assessment on Technological Transformation of Production Line of Gel Products)

SN	Name of key pollutant-discharging units	Name of key pollutants	Discharge mode	Discharge condition	Discharge concentration/ wastewater (mg/L) or exhaust gas (mg/m ³)	Total discharge amount (tonne)	Excessive discharge	Implemented standards for discharge of pollutants	Approved total amount of discharge (tonne)
6	Shanghai SPH Zhongxi Pharmaceutical Co., Ltd.	COD	Continuous	Main wastewater outlet	44.88	3.84	No	Wastewater Quality Standards for Discharge to Municipal Sewers (GB/T31962-2015).	8.04
		Ammonia nitrogen			1.77	0.15	No		0.41
		SO ₂		Exhaust gas outlet	1.99	0.19	No	Emission Standard of Air Pollutants for Boilers (DB31/387-2018).	0.63
		NOx			32.59	50.89	No		2.96
		PM			4.48	7.05	No	Emission Standard of Air Pollutants for Boilers (DB31/387-2018); Integrated Emission Standard of Air Pollutants (DB31/933-2015).	0.88
		Non-methane hydrocarbon			8.19	0.82	No	Integrated Emission Standard of Air Pollutants (DB31/933-2015).	1.23
7	Shanghai Zhongxi Sunve Pharmaceutical Co., Ltd.	COD	Continuous	Main wastewater outlet	25.6	1.56	No	Discharge Standards of Water Pollutants for Pharmaceutical Industry under Chemical Synthesis Products Category (DB21904-2008); Wastewater Quality Standards for Discharge to Municipal Sewers GB/T31962-2015.	9.44
		Ammonia nitrogen			7.97	0.49	No		0.97
8	Shanghai New Asiatic Pharmaceutical Minhong Co., Ltd.	COD	Continuous	Main wastewater outlet	170.38	7.11	No	Level 3 Standard under the Integrated Wastewater Discharge Standard (GB8978-1996).	1.26
		Ammonia nitrogen			10.07	0.42	No		0.16
9	Changzhou Pharmaceutical Factory Co., Ltd.	COD	Interval	Main wastewater outlet	113.5	26.03	No	As per the Contract signed between the Company and Changzhou Southeast Industrial Wastewater Treatment Plant Co., Ltd.	97.61
		Ammonia nitrogen			15.13	2.95	No		5.87
		Non-methane hydrocarbon	Interval	Exhaust gas outlet	2.89	0.34	No	Emission Standard of Air Pollutants (GB16297-1996).	18.88
		PM			27.52	1.30	No		4.9
		HCl				0.52	No		

2. Construction and operation of pollution prevention & treatment facilities and administrative permission

SN	Name of key pollutant-discharging units	Construction and operation of pollution prevention & treatment facilities	Administrative permission for environmental protection	Environmental self-detection solution
1	Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd.	Established a sewage treatment station with a daily capacity of 1,000 tonnes of sewage and several sets of dust treatment equipment. After treatment by the biochemical sewage treatment station, the treated sewage was discharged into Bailonggang Sewage Treatment Plant in Shanghai for further treatment. In 2018, the sewage treatment station and dust treatment equipment were running normally and the sewage and exhaust gas were discharged under certain standards after treatment. An RTO incineration treatment device was installed in 2018.	The company obtained the Approval Opinions on Environmental Impact Assessment Concerning the Internationalization of Metformin Hydrochloride of Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd. in July 2018; and the Drainage Permit from Shanghai Pudong Water Supplies Bureau on June 6, 2014.	A set of automatic monitoring equipment was installed at the main sewage outlet to detect such data as COD, PH value and quantity of flow every hour. The online monitoring equipment was networked to the local environmental protection bureau. A third-party environmental detection company was authorized as planned to monitor the pollutant discharge indicators such as PH value, COD, ammonia nitrogen, animal and vegetable oil and suspended solids every quarter, and monitor exhaust gas emission every year. In 2018, the monitoring data were all up to standards.
2	Shanghai SPH No. 1 Biochemical and Pharmaceutical Co., Ltd. (Jianchuan Road)	Established a sewage treatment station with a daily capacity of 300 tonnes of sewage and several sets of exhaust gas treatment equipment, which were all running normally. The waste water and exhaust gas were discharged under certain standards after treatment. In 2018, the company completed transformation of a 10 tonnes/hour gas-fired boiler by installing a low-nitrogen combustor.	The company obtained the approval opinions on environmental protection for the Technological Transformation of Raw Materials Workshop at Jianchuan Road in January 2018, completed completion acceptance for environmental impact assessment concerning the Extension of High Rack Warehouse of Shanghai SPH No. 1 Biochemical and Pharmaceutical in December 2018, completed renewal and obtained approval for the Pollutant Discharge Permit on December 4, 2018, and obtained the Drainage Permit from Shanghai Water Authority on September 14, 2016.	A set of automatic monitoring equipment was installed at the main sewage outlet to detect such data as COD, PH value and quantity of flow every hour. The online monitoring equipment was networked to the local environmental protection bureau. A third-party environmental detection company was authorized as planned every quarter to monitor the pollutant discharge indicators such as waste water, exhaust gas and underground water. In 2018, the monitoring data were all up to standards.
3	Shanghai SPH No. 1 Biochemical and Pharmaceutical Co., Ltd. (Bijiang Road)	Established a sewage treatment station with a daily capacity of 210 tonnes of sewage and several sets of exhaust gas treatment equipment, which were all running normally. The waste water and exhaust gas were discharged under certain standards after treatment. In 2018, the company built two sets of new exhaust gas treatment facilities in the boiling workshop and soil column workshop, and completed transformation of the gas-fired boiler by installing a low-nitrogen combustor.	The company completed renewal and obtained approval for the Pollutant Discharge Permit on December 4, 2018, and obtained the Drainage Permit from Shanghai Water Authority on August 27, 2014.	A third-party environmental detection company was authorized to monitor the PH value, COD, ammonia nitrogen and total nitrogen every day, monitor the pollutant discharge indicators such as PH value, COD, ammonia nitrogen, total nitrogen, total phosphorus, animal and vegetable oil and suspended solids every month, and monitor exhaust gas emission every quarter. In 2018, the monitoring data were all up to standards.
4	Shanghai Ziyuan Pharmaceutical Co., Ltd.	Established two sets of VOCs treatment equipment, which were running normally in 2018. Industrial waste water was treated as hazardous waste by the entrusted qualified unit.	The company obtained a national-level Pollutant Discharge Permit on January 1, 2018, and the Drainage Permit from Shanghai Water Authority on August 10, 2015.	The company prepared a corporate environmental self-detection solution according to standards and authorized a qualified third party to detect various pollution factors according to the requirements and frequency specified in the solution. In 2018, the monitoring data were all up to standards.

SN	Name of key pollutant-discharging units	Construction and operation of pollution prevention & treatment facilities	Administrative permission for environmental protection	Environmental self-detection solution
5	Shanghai SPH New Asiatic Pharmaceutical Co., Ltd. (Asia Pioneer Pharmaceutical Factory)	Established an integrated sewage treatment station with a daily capacity of 4,000 tonnes of sewage and eight sets of exhaust gas treatment facilities. After up-to-standard treatment by the integrated sewage treatment station, the sewage of the whole factory was discharged into Bailonggang Sewage Treatment Plant in Shanghai for further treatment. In 2018, the sewage treatment station and the exhaust gas treatment facilities were running normally.	The company completed independent completion acceptance for environmental protection concerning the "Technological Transformation of Production Line of Gel Products" according to regulatory requirements in December 2018 and completed filing on the website of the Ministry of Environmental Protection on December 29. The company obtained the Drainage Permit from Shanghai Pudong New Area Water Bureau in April 2016.	The company prepared a corporate environmental self-detection solution and conducted regular monitoring on pollutant discharge. A third-party environmental detection company monitored the pollutant discharge indicators such as PH value, COD, ammonia nitrogen, animal and vegetable oil and suspended solids, as well as the exhaust gas and noise emissions every quarter. In 2018, the monitoring data were all up to standards.
6	Shanghai SPH Zhongxi Pharmaceutical Co., Ltd.	Established a sewage treatment station with a daily capacity of 600 tonnes of sewage and several sets of exhaust gas treatment equipment. After treatment by the biochemical sewage treatment station, the sewage of the whole factory was discharged into Shanghai Jiading Xincheng Sewage Treatment Company Limited for further treatment. In 2018, the sewage treatment station and exhaust gas treatment equipment were running normally. The company installed two sets of online VOCs monitoring equipment and installed a low-nitrogen combustor for the gas-fired boiler according to environmental protection requirements.	The company completed renewal of the Drainage Permit according to the requirements of Shanghai Water Authority in May 2018.	The company prepared a corporate environmental self-detection solution and the third-party environmental detection company monitored the pollutant discharge indicators such as exhaust gas, waste water and noise every quarter. In 2018, the monitoring data were all up to standards.
7	Shanghai Zhongxi Sunve Pharmaceutical Co., Ltd.	Established two sewage treatment stations with a daily capacity of 150 tonnes of sewage and 300 tonnes of sewage, respectively. After treatment by the biochemical sewage treatment station, the sewage of the whole factory was discharged into Shanghai Fengjin Environmental Construction Management Co., Ltd. for further treatment. In 2018, the sewage treatment station was running normally. Besides, a number of exhaust gas treatment facilities were established and were running normally in 2018.	The company obtained a national-level Pollutant Discharge Permit on January 1, 2018, and completed renewal of the Drainage Permit according to the requirements of Shanghai Water Authority in January 2018.	The company prepared an annual environmental detection solution and the third-party environmental detection company monitored the pollutant discharge indicators such as exhaust gas, waste water and noise every month. In 2018, the monitoring data were all up to standards.

SN	Name of key pollutant-discharging units	Construction and operation of pollution prevention & treatment facilities	Administrative permission for environmental protection	Environmental self-detection solution
8	Shanghai New Asiatic Pharmaceutical Minhang Co., Ltd.	Established a sewage treatment station with a daily capacity of 200 tonnes of sewage and several sets of exhaust gas treatment equipment. After treatment by the sewage treatment station, the sewage of the whole factory was discharged into Bailonggang Sewage Treatment Plant in Shanghai for further treatment. In 2018, the sewage treatment station and the exhaust gas treatment equipment were running normally.	The company obtained the Drainage Permit from Shanghai Water Authority on October 31, 2016.	In 2018, the company completed installation of the online waste water monitoring facilities, which was networked to the local environmental protection bureau. The online monitoring system detected the pollutant discharge indicators such as COD, PH value and quantity of flow every hour. A third-party environmental detection company was authorized to monitor the pollutant discharge indicators such as PH value, COD, ammonia nitrogen, BOD5 and suspended solids every quarter, and monitor the exhaust gas emission every year. In 2018, the monitoring data were all up to standards.
9	Changzhou Pharmaceutical Factory Co., Ltd.	Established a sewage treatment station with a daily capacity of 1,500 tonnes of sewage and several sets of exhaust gas treatment equipment. After treatment, the sewage was discharged into Changzhou Southeast Industrial Wastewater Treatment Plant Co., Ltd. for further treatment. In 2018, the sewage treatment station and the exhaust gas treatment equipment were running normally.	The company obtained a national-level Pollutant Discharge Permit in December 2017.	A set of automatic monitoring equipment installed at the main sewage outlet was networked to the local environmental protection bureau, and detected the pollutant discharge indicators such as COD, PH value, ammonia nitrogen and total phosphorus four times every day. The company authorized a qualified third party to detect such pollutant discharge indicators as total salt content, total zinc and suspended solids according to requirements, and detect various exhaust gas outlets according to the requirements of the Pollutant Discharge Permit. In 2018, the monitoring data were all up to standards.

3. Environmental impact assessment on construction project

1. Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd.

In July 2018, the enterprise obtained the EIA approval for its Technological Upgrading Project for the International Line of Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd.

2. Shanghai SPH No. 1 Biochemical and Pharmaceutical Co., Ltd.

In 2018, the enterprise obtained the EIA approval for its Technological Transformation of Raw Materials Workshop at Jianchuan Road. In 2018, it completed independent completion acceptance for environmental protection concerning the Extension of High Rack Warehouse of Shanghai SPH No. 1 Biochemical and Pharmaceutical and filing on the website of the Ministry of Environmental Protection.

3. Shanghai Ziyuan Pharmaceutical Co., Ltd.

In 2018, the enterprise had no construction project or project under construction.

4. Shanghai SPH New Asiatic Pharmaceutical Co., Ltd. (Asia Pioneer Pharmaceutical Factory)

In 2018, the company completed independent completion acceptance for environmental protection concerning the "Technological Transformation of Production Line of Gel Products" and filing on the website of the Ministry of Environmental Protection.

5. Shanghai SPH Zhongxi Pharmaceutical Co., Ltd.

In 2018, the enterprise had no construction project or project under construction.

6. Shanghai Zhongxi Sunve Pharmaceutical Co., Ltd.

In 2018, the enterprise had no construction project or project under construction.

7. Shanghai New Asiatic Pharmaceutical Minhang Co., Ltd.

In 2018, the enterprise had no construction project or project under construction.

8. Changzhou Pharmaceutical Factory Co., Ltd.

In 2018, the enterprise had no construction project or project under construction.

4. Contingency plan for emergent environmental incidents

1. Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd.

In 2017, the enterprise completed the preparation of the Contingency Plan for Emergent Environmental Incidents and filing with the environmental protection agency. In 2018, the enterprise conducted exercises according to the plan, constantly summarized and improved the contingency plan via exercises to enhance the employees' ability to cope with the emergent environmental incidents.

2. Shanghai SPH No. 1 Biochemical and Pharmaceutical Co., Ltd.

In 2018, the enterprise completed the preparation of the Contingency Plan for Emergent Environmental Incidents, which passed expert review on October 31, 2018. After revising the plan, the enterprise submitted filing materials to the environmental protection bureau on January 25, 2019.

3. Shanghai Ziyuan Pharmaceutical Co., Ltd.

In 2018, the enterprise completed the preparation of the Contingency Plan for Emergent Environmental Incidents and filing with the environmental protection agency. In 2018, the enterprise conducted exercises according to the plan, constantly summarized and improved the contingency plan via exercises to enhance the employees' ability to cope with the emergent environmental incidents.

4. Shanghai SPH New Asiatic Pharmaceutical Co., Ltd., Asia Pioneer Pharmaceutical Factory

In 2017, the enterprise completed the preparation of the Contingency Plan for Emergent Environmental Incidents and filing with the environmental protection agency. In November 2018, the enterprise conducted the "comprehensive emergency exercises themed on safety, environmental protection and fire control", constantly summarized and improved the contingency plan via exercises.

5. Shanghai SPH Zhongxi Pharmaceutical Co., Ltd.

In 2016, the enterprise completed the preparation of the Contingency Plan for Emergent Environmental Incidents and filing with the environmental protection agency. In 2018, the enterprise conducted exercises according to the plan, constantly summarized and improved the contingency plan via exercises to enhance the employees' ability to cope with the emergent environmental incidents.

6. Shanghai Zhongxi Sunve Pharmaceutical Co., Ltd.

In 2018, the enterprise completed the preparation of the Contingency Plan for Emergent Environmental Incidents and filing with the environmental protection agency. In 2018, the enterprise conducted exercises according to the plan, constantly summarized and improved the contingency plan via exercises to enhance the employees' ability to cope with the emergent environmental incidents.

7. Shanghai New Asiatic Pharmaceutical Minhang Co., Ltd.

In 2017, the enterprise completed the preparation of the Contingency Plan for Emergent Environmental Incidents and filing with the environmental protection agency. In 2018, the enterprise conducted exercises according to the plan, constantly summarized and improved the contingency plan via exercises to enhance the employees' ability to cope with the emergent environmental incidents.

8. Changzhou Pharmaceutical Factory Co., Ltd.

In 2018, the enterprise completed the preparation of the Contingency Plan for Emergent Environmental Incidents and filing with the environmental protection agency. In 2018, the enterprise conducted exercises according to the plan, constantly summarized and improved the contingency plan via exercises to enhance the employees' ability to cope with the emergent environmental incidents.

5. Other environmental information that should be disclosed

1. Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd.

The data about total amount of discharge disclosed by the enterprise was from the description in the Environmental Impact Statement on Jinqiao Base Renovation and Expansion Projects of Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd. The values were apparently smaller as they were calculated according to the discharge concentration at the main outlet of Bailonggang Sewage Treatment Plant in Shanghai during the "12th Five-Year" Plan period. The total amount of discharge disclosed by the enterprise was calculated based on the discharge concentration at the main outlet of the enterprise. So, there are differences. According to the environmental protection requirements, the enterprise will complete the application for the Pollutant Discharge Permit before the end of 2020 and should verify the total amount of its pollutant discharge according to the technical specification requirements then.

The enterprise completed version upgrade of ISO 14001:2015 in June 2018; obtained the ISO5001 Energy Management System Certificate in September 2017; won the title of "Five-Star Environmental Protection Enterprise" in Jinqiao District of Shanghai in June 2018.

2. Shanghai SPH No. 1 Biochemical and Pharmaceutical Co., Ltd.

The enterprise obtained a national-level Pollutant Discharge Permit in January 2018. In 2018, it passed the version upgrading certification of the ISO14001 environment management system and clean production audit. It has completed the screening of hidden soil pollution risk as per requirements of the environmental protection department.

3. Shanghai Ziyuan Pharmaceutical Co., Ltd.

The enterprise obtained a national-level Pollutant Discharge Permit in January 2018. It carried out the screening of hidden soil pollution risk under the guidance of the environmental protection department.

4. Shanghai SPH New Asiatic Pharmaceutical Co., Ltd., Asia Pioneer Pharmaceutical Factory

In July 2018, the enterprise injected RMB420,000 in building a new VOC discharge treatment facility for the gel workshop to ensure up-to-standard VOC discharge and reduce the effect on atmospheric environment.

According to the environmental protection requirements, the enterprise will complete the application for the Pollutant Discharge Permit before the end of 2020 and should verify the total amount of its pollutant discharge according to the technical specification requirements then.

5. Shanghai SPH Zhongxi Pharmaceutical Co., Ltd.

The data about total amount of discharge disclosed by the enterprise was from the description in the Approval Opinions on the Environmental Impact Statement Concerning the Relocation and Extension (Technological Transformation) Project for Solid Preparations of Shanghai SPH Zhongxi Pharmaceutical Co., Ltd. and Plan for VOCs Emission Reduction of Shanghai SPH Zhongxi Pharmaceutical Co., Ltd. (One Factory One Plan). The total amount of discharge disclosed by the enterprise was calculated based on the discharge concentration at the discharge outlet of the enterprise. So, there are differences. According to the environmental protection requirements, the enterprise will complete the application for the Pollutant Discharge Permit before the end of 2020 and should verify the total amount of its pollutant discharge according to the technical specification requirements then.

6. Shanghai Zhongxi Sunve Pharmaceutical Co., Ltd.

The enterprise obtained a national-level Pollutant Discharge Permit in January 2018. In 2018, it completed such pollution prevention projects as change of the cover plate of the biochemical pool in the sewage treatment station and enclosure of area of sludge plate-

and-frame filter press. It carried out the screening of hidden soil pollution risk under the guidance of the environmental protection department.

7. Shanghai New Asiatic Pharmaceutical Minhang Co., Ltd.

The data about total amount of discharge disclosed by the enterprise was from the description relating to environmental impact assessment in the 2013 GMP Technological Transformation Project of Solid Antibiotic Preparation Workshop (Other than Penicillins and Cephalosporins). The values were calculated according to the discharge concentration at the outlet of Bailonggang Sewage Treatment Plant in Shanghai during the "12th Five-Year" Plan period. The total amount of discharge disclosed by the enterprise was calculated based on the discharge concentration at the main outlet of the enterprise. So, there are differences. According to the environmental protection requirements, the enterprise will complete the application for the Pollutant Discharge Permit before the end of 2020 and should verify the total amount of its pollutant discharge according to the technical specification requirements then.

8. Changzhou Pharmaceutical Factory Co., Ltd.

The enterprise obtained a national-level Pollutant Discharge Permit in December 2017. In 2018, it was granted the title of "Water-Saving Carrier of Jiangsu Province" by the Water Resources Department of Jiangsu Province. It transformed the aeration equipment of the sewage treatment station, reducing the noise in the area from 100 decibels to 75 decibels.

4 Data information of pollutant discharging units in 2018

According to the Guidelines for Reporting of Performance Indicators of Environmental Key Data proposed by the Stock Exchange of Hong Kong and requirements of relevant documents, the environment and energy data disclosed this time include the amount of greenhouse gas generated from annual paper use and sewage treatment, amount of greenhouse gas reduced due to tree planting, and quantity of particulate matters, sulfur dioxide and nitrogen oxide generated by vehicles. Greenhouse gas emissions were calculated with reference to the Guidelines for Reporting of Performance Indicators of Environmental Key Data and Guidelines for Calculation Methods and Reporting of Greenhouse Gas Emissions from Industrial and Other Industrial Enterprises. According to the general statistical principles, the data were rounded to the second digit after the decimal point.

The enterprises under Shanghai Pharmaceuticals Holding disclosed here are as follows:

SN	Name of enterprises directly under the Group	Name of subsidiaries of drug manufacturers directly under the Group
1.	Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd.	1-1 Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd., General Factory 1-2 Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd., No. 2 Subsidiary 1-3 Shanghai Harvest Pharmaceutical Co., Ltd. 1-4 Shanghai Fuda Pharmaceutical Co., Ltd. 1-5 Shanghai Sine Tianping Pharmaceutical Co., Ltd. 1-6 Shanghai Sine Jiufu Pharmaceutical Co., Ltd. 1-7 Shanghai Sine Yanan Pharmaceutical Co., Ltd. 1-8 Shanghai Sine Wanxiang Pharmaceutical Co., Ltd. 1-9 Shanghai Sine Jinzhu Pharmaceutical Co., Ltd. 1-10 Shandong Sine Pharmaceutical Co., Ltd. 1-11 Tianjin Jinjin Pharmaceutical Co., Ltd. 1-12 Gansu Sine Tiansen Pharmaceutical Co., Ltd.
2.	Shanghai SPH No. 1 Biochemical and Pharmaceutical Co., Ltd.	2-1 Shanghai SPH No. 1 Biochemical and Pharmaceutical Co., Ltd. 2-2 Shanghai Ziyuan Pharmaceutical Co., Ltd.
3.	Shanghai SPH New Asiatic Pharmaceutical Co., Ltd.	3-1 Shanghai SPH New Asiatic Pharmaceutical Co., Ltd., Asia Pioneer Pharmaceutical Factory 3-2 Shanghai SPH New Asiatic Pharmaceutical Co., Ltd., New Asiatic Pharmaceutical Factory 3-3 Shanghai New Asiatic Pharmaceutical Minhang Co., Ltd. 3-4 Liaoning Medya Pharmaceutical Co., Ltd.

SN	Name of enterprises directly under the Group	Name of subsidiaries of drug manufacturers directly under the Group
4.	Shanghai Traditional Chinese Medicine Co., Ltd.	4-1 Shanghai Leiyunshang Pharmaceutical Co., Ltd. 4-2 Shanghai Leiyunshang Fengbang Pharmaceutical Co., Ltd. 4-3 Shanghai SPH Xingling Sci. & Tech. Pharmaceutical Co., Ltd. 4-4 Shanghai Dehua Traditional Chinese Medicines Co., Ltd. 4-5 Shanghai Yutiancheng Chinese Herbal Medicine Company Limited 4-6 Shanghai Huapu Chinese Herbal Medicine Company Limited 4-7 Shanghai Xinde Chinese Herbal Medicine Company 4-8 Shanghai Huaying Pharmaceutical Co., Ltd. 4-9 Shanghai SPH Shenxiang Health Pharmaceutical Co., Ltd.
5.	Shanghai Zhongxi Sunve Pharmaceutical Co., Ltd.	5-1 Shanghai Zhongxi Sunve Pharmaceutical Co., Ltd. 5-2 Shanghai SPH Zhongxi Pharmaceutical Co., Ltd. 5-3 Shanghai Jinhe Bio-Pharmaceutical Co., Ltd.
6.	Shanghai Zhonghua Pharmaceutical Co., Ltd.	6-1 Shanghai Zhonghua Pharmaceutical Co., Ltd. 6-2 Shanghai Great Wall Pharmaceutical Co., Ltd. 6-3 Shanghai Zhonghua Nantong Pharmaceutical Co., Ltd.
7.	Shanghai Sunway Biotech Co., LTD.	7-1 Shanghai Sunway Biotech Co., LTD.
8.	SPH Changzhou Pharmaceutical Co., Ltd.	8-1 Changzhou Pharmaceutical Factory Co., Ltd. 8-2 Changzhou Wuxin Pharmaceutical Co., Ltd. 8-3 Nantong Changyou Pharmaceutical Technology Co., Ltd. 8-4 Chifeng Arker Pharmaceutical Technology Co., Ltd. 8-5 Chifeng Mysun Pharmaceutical Co., Ltd.
9.	SPH Qingdao Growful Pharmaceutical Co., Ltd.	9-1 SPH Qingdao Growful Pharmaceutical Co., Ltd.
10.	Xiamen Traditional Chinese Medicine Co., Ltd.	10-1 Xiamen Traditional Chinese Medicine Co., Ltd.
11.	Chiatai Qingchunbao Pharmaceutical Co., Ltd.	11-1 Chiatai Qingchunbao Pharmaceutical Co., Ltd.
12.	Hangzhou Huqingyutang Pharmaceutical Co., Ltd.	12-1 Hangzhou Huqingyutang Pharmaceutical Co., Ltd.
13.	Liaoning SPH Herbapex Pharmaceutical (Group) Co., Ltd.	13-1 Liaoning SPH Herbapex Pharmaceutical (Group) Co., Ltd.
14.	SPH Dong Ying (Jiangsu) Pharmaceutical Co., Ltd.	14-1 SPH Dong Ying (Jiangsu) Pharmaceutical Co., Ltd. 14-2 SPH Changzhou Kony Pharmaceutical Co., Ltd

Energy Saving and Environmental Protection Data Disclosure from 2018 Social Responsibility Report

1 Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd.

1-1 Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd., General Factory

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
19.50	14.04	0.32	163	0.77	724.08	2220.85	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
28322.47	457.68	27864.79	398.69	344.08	54.61	89.06	89.06	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
21.67	4023.49	2077.06	1.62	109559.10	0	0	12.84	46.8
Overall description: In 2018, the Company invested about RMB4.6 million in environmental protection, installed an RTO incineration treatment device to ensure up-to-standard VOC discharge, and completed version upgrade of ISO 14001:2015 environmental management system. It won the title of "Five-Star Environmental Protection Enterprise" in Jinjiao District, Shanghai in June 2018. By implementing the HVAC duty mode, the Company saved night electricity consumption of 1.1 million kWh, that is, RMB340,000 of electricity fee in 2018.								

1-2 Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd., No. 2 Subsidiary

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
4.8	4.77	0.92	0	42.6	325.4	42.77	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
2751.59	701.24	2050.35	51	0	24	5.57	4.57	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
5.3	1023	202.75	30.77	0	0	5	1.2	3.6
Overall description: In 2018, the Company invested RMB233,000 in environmental protection, including RMB20,000 for operation and maintenance of pollution facilities, RMB58,000 for solid waste disposal, RMB150,000 for establishment of new pollution facilities and RMB5,000 for other publicity. In 2018, the Company practised green lighting and used LED energy saving lamps, which could save electricity of 16,000 kWh per year. In 2018, the water consumption decreased by 4,996 tonnes as compared with the previous year.								

1-3 Shanghai Harvest Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
7.17	2.15	0.03	0	79.07	122.12	0	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
98010.15	79945.96	18064.19	670.21	652	18.21	1.08	1.08	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
7.97	1655.01	452.25	0.59	31543.35	0	0	7.89	2.92
Overall description: In 2018, the Company invested about RMB90,000 in environmental protection, including investment for replacement of sewage pumps and increase of hazardous waste warehouses and exhaust gas facilities. Due to reasonable discharge and production scheduling and intensified management, the amount of steam used decreased by 5.03% as compared with the previous year.								

1-4 Shanghai Fuda Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
2.25	3.93	0.088	28.2872	7.1424	7.2029	169.2657	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
5762.42	803.18	4959.24	48.6	48.6	7.5	15	12.7	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
2.49	969.87	169.33	36.54	0	0	3.95	0	0.35
Overall description: In 2018, the Company invested about RMB2.5 million in environmental protection. After the frequency converters for the air-conditioning ventilation system in the cephalosporin workshop and general solid preparation workshop were put into use in August-December 2018, a cumulative amount of electricity of about 66,600 kWh was saved, that is, RMB53,300 of electricity fee.								

1-5 Shanghai Sine Tianping Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
5.61	16.99	0.29	0	0.16	65.46	112.84	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
6969.57	348.43	6621.14	54.69	52.19	30.98	83.04	53.04	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
6.23	2502.58	638.1	0.98	19219.25	0	0	0	6.5
In 2018, the Company invested about RMB1.17 million in environmental protection. In 2018, the Company replaced all the fluorescent lamps in the office building with LED energy saving lamps, which could save electricity consumption of about 20,000 kWh per year.								

1-6 Shanghai Sine Jiufu Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
2.18	0.09	0	0	0	0	2.72	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
642.68	72.02	610.15	13.38	13.38	0	20.38	20.38	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
2.42	886.76	86	48	0	0	0	2.62	7.8
Overall description: In 2018, the Company invested RMB797,400 in environmental protection, including RMB497,000 for transformation of dust treatment equipment, RMB200,400 for hazardous waste disposal and RMB100,000 for environmental protection.								

1-7 Shanghai Sine Yanan Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
2.64	7.07	0.5	817.2	48.08	1021.9	10.43	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
1858.56	530.53	1328.03	60.9	48.83	12.07	11.7	5.7	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
2.93	814.31	182.47	22.22	0	0	0	0	0

Overall description:

In 2018, the Company invested RMB558,000 in environmental protection, including RMB38,000 for transformation of ventilation system in the new hazardous waste warehouse and RMB520,000 for transformation of rain sewage pipes. In 2018, the amount of natural gas used decreased by 0.047% as compared with the previous year.

1-8 Shanghai Sine Wanxiang Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of dichloroethane in exhaust gas emitted (kg)	
5.48	8.22	0.02	31.86	0.13	2235.75	378.48	1.49	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
2094.53	650.33	1444.20	44.64	8	36.64	10.56	10.56	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
6.09	922.69	204	22.84	0	0	0	9.5	16.7

Overall description:

In 2018, the Company invested about RMB700,000 in environmental protection, including investment in low-VOC transformation project. By using peak-valley power instead of steam to heat the bath water, the Company saved an electricity fee of RMB21,984.89 in 2018.

1-9 Shanghai Sine Jinzhu Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
20.25	24.3	4.92	26.73	0.18	241.44	23.75	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
8561.11	55.19	8505.92	119.47	56.7	62.77	73.62	67.12	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
22.5	3164.63	604	0	38640	0	8.6	2.427	9.01

Overall description:

In 2018, the Company invested about RMB921,300 in environmental protection, including expenses for rectification of fugitive emission of exhaust gas in laboratories, rectification of hazardous waste warehouses, maintenance of hazardous waste disposal equipment and washing of rain sewage pipes. It completed clean production audit and obtained a special government subsidy of RMB266,800. Besides, it replaced the steam trap and increased steam water coupler to constantly reduce the steam consumption. In 2018, the consumption of water of 10,000 tonnes decreased by 14.38% year-on-year, the consumption of steam of 10,000 tonnes decreased by 12.05% year-on-year, and the total energy consumption of 10,000 units decreased by 2.06% year-on-year.

1-10 Shandong Sine Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of dichloroethane in exhaust gas emitted (kg)	
1.2	1.48	0.17	86.65	0.237	119	11.4	42.65	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
9786.47	8136.19	1650.28	0.8	0.8	0	36.4	34.7	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
1.5	446.99	118	0	8343	0	0	8.69	3.23

Overall description:

In 2018, the Company invested about RMB700,000 in environmental protection, including investment in low-VOC transformation project. By using peak-valley power instead of steam to heat the bath water, the Company saved an electricity fee of RMB21,984.89 in 2018.

1-11 Tianjin Jinjin Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of acetone in exhaust gas emitted (kg)	
3.15	8.59	0.046	0	9.71	280.73	18.66	88.2	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
26912.03	5813.54	21098.49	1.8	1.8	0	18.93	18.63	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
3.71	4815.88	1614	171.24	0	0	0	8.4	5.66
Overall description: In 2018, the Company invested about RMB7.1 million in environmental protection, including RMB1.5 million for operation and maintenance of environmental protection and pollution facilities, RMB100,000 for solid waste disposal and RMB5.5 million for building new pollution facilities. It implemented energy saving technological transformation projects, such as replacement of ammonia refrigeration with screw refrigeration and change of fixed-frequency equipment with variable-frequency equipment. About 2 kWh per hour could be saved after variable-frequency equipment was installed for the six centrifuges, and about 5 kWh per hour could be saved after variable-frequency equipment was installed for the five environmental protection fan motors.								

1-12 Gansu Sine Tiansen Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of dichloroethane in exhaust gas emitted (kg)	
0.57	0.000057	0.000014	0	0	0	0	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
811	282.66	529.34	40	40	0	0	0	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
1.55	213.26	75.24	8	0	0	0	5.84	5.64
Overall description: In 2018, the Company invested about RMB300,000 in environmental protection, including expenses for installation of online sewage monitoring equipment, preparation of environmental contingency plans and maintenance and operation of pollution control facilities. The Company began to suspend production in July 2018.								

2 Shanghai SPH No. 1 Biochemical and Pharmaceutical Co., Ltd.

2-1 Shanghai SPH No. 1 Biochemical and Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of dichloroethane in exhaust gas emitted (kg)	
16.98	31.67	0.21	6886.87	285.69	11778.37	222.17	107.05	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
29184.86	11431.55	17753.31	830	830	0	555.74	555.74	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
57.87	12552.6	2520.64	406.43	0	0	0	7.22	0.89

Overall description:

In 2018, the Company invested about RMB6.4916 million in environmental protection, including RMB480,000 for investment in exhaust gas treatment equipment in the pericarpium trichosanthis boiling workshop and soil column workshop, RMB980,000 for low-nitrogen combustion transformation of boilers, RMB598,700 for operation and maintenance of pollution facilities and RMB4.3423 million for solid waste disposal. In 2018, the Company invested RMB50,000 in recycling of air conditioning condensate water. After such an action was taken in July 2018, 15 tonnes of water were saved per day in summer and 2 tonnes of water was saved per day in winter. As the Company produced injections, some water was used for production of such injections. The Company began to recycle the treated wastewater several years ago. So, the amount of wastewater discharged was obviously lower than the amount of water used.

2-2 Shanghai Ziyuan Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of methylbenzene in exhaust gas emitted (kg)	
1.1	1.32	0.2	1539.3	4.97	107.6	15.39	4.9	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
963.16	226.58	736.6	0.25	0.25	0.25	378.69	378.69	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
1.38	233.52	104.5	0	0	0	0	8.12	64

Overall description:

In 2018, the Company invested about RMB4.355 million in environmental protection, including RMB700,000 for operation and maintenance of pollution facilities and RMB3.075 million for hazardous waste disposal.

3 Shanghai SPH New Asiatic Pharmaceutical Co., Ltd.

3-1 Shanghai SPH New Asiatic Pharmaceutical Co., Ltd., Asia Pioneer Pharmaceutical Factory

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
60.61	10.3	0.26	382.74	0.36	181.18	17.36	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
18624.78	185.62	18439.16	782.77	534.18	248.59	42.33	42.33	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
67.35	6778.54	1494.81	0	71982	0	1.8	12.8	5

Overall description:

In 2018, the Company invested RMB3.38 million in environmental protection, including RMB420,000 for VOCs discharge treatment facility in the "gel workshop". In 2018, the Company saved water of 18,215 tonnes by reusing reclaimed water and about 6,000 tonnes by using the river water in the factory for virescence irrigation. After recycling residual heat and water in the water-making room, 5 tonnes of steam were saved every day and 10-20 tonnes of hot water was recycled. As compared with 2017, in 2018, the amount of COD in wastewater discharged decreased by 5.6%, the amount of N-NH3 in wastewater discharged decreased by 92.2%, the amount of general solid waste disposed of decreased by 6%, the tonne of standard coal decreased by 1.1%, the liquefied petroleum gas consumption decreased by 47.8% and the gasoline consumption decreased by 22%.

3-2 Shanghai SPH New Asiatic Pharmaceutical Co., Ltd., New Asiatic Pharmaceutical Factory

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
21.31	0.85	0.01	6.01	113.7	3880.01	88.53	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
12134.41	3499.92	8634.49	108	78	30	97.16	97.16	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
23.68	0	1227	160.22	0	0	4.8	2.48	6.55

Overall description:

In 2018, the Company invested RMB500,000 in environmental protection, mainly for transformation and operation of environmental protection facilities. It carried out water freezing energy-saving transformation project of raw materials workshop, saving 19,200 kWh of energy in the month after completion; effectively recycled waste heat from boiler flue gas to heat boiler soft water, saving 300 kWh of electricity per day after use; and carried out the tunnel drying oven cooling water recycling project of preparation workshop, recycling 800 tonnes of cooling water every month after operation.

3-3 Shanghai New Asiatic Pharmaceutical Minhang Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
4.18	7.12	0.42	206.56	37.21	576.74	360.74	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
4620	1161.81	3458.2	124	6	118	44.37	31.63	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
4.64	1911.88	490.62	37.1	0	0	0	11.35	0
In 2018, the Company invested RMB1,495,000 in environmental protection, including expenses for maintenance of various environmental protection facilities, new online monitoring fees, annual water and gas sound testing costs, hazardous waste disposal fees, etc. The Company effectively controlled energy consumption by exercising strict energy management. In 2018, its natural gas consumption decreased by 79,600 m3 or 18% as compared with 2017. The Company exercised strict water management to eliminate evaporating, emitting, dripping and leaking. In 2018, its tap water consumption decreased by 4,956 tonnes or 9.6% as compared with 2017.								

3-4 Liaoning Medya Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
17.78	4	0.12	307	316.31	1707.28	154.45	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
13253.58	1153.58	12100	500	500	0	33.72	30	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
20	2960.25	523	50.18	46018	0	5.6	15.7	4.94
Overall description: In 2018, the Company invested RMB2.22 million in environmental protection, including RMB1 million for transformation of coal-fired boilers, RMB240,000 for operation and maintenance of online equipment, RMB240,000 for transformation and operation of sewage equipment, RMB145,000 for pollution monitoring, etc. The Company strengthened steam management and used steam traps to reduce steam waste.								

4. Shanghai Traditional Chinese Medicine Co., Ltd.
4-1 Shanghai Leiyunshang Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
14.27	11.4	0.15	32	74	2714	230	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
11092	3545	7547	1524	1524	0	30.4	30.4	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
20.63	5245	1072	155	0	0	0	24	34
Overall description: In 2018, the Company invested RMB2.4 million in environmental protection, mainly including operating costs of sewage stations, online monitoring and operating costs of wastewater and exhaust gas, general and hazardous waste disposal fees, pollutant discharge testing costs, expenses for transformation of environmental treatment facilities, etc. The Company actively carried out energy-saving technological transformation projects, including upgrading and transformation of air-conditioning chillers, clean air-conditioning automatic control system in the production workshop, inverter compressors, blowers, vacuum ovens and other energy saving projects, saving 112 tonnes of standard coal per year. In 2018, while the Company's production remained basically flat as compared with last year, its water consumption decreased by 10.5% year-on-year, electricity consumption decreased by 4.1% year-on-year, natural gas consumption decreased by 9.5% year-on-year, gasoline consumption decreased by 3.1% year-on-year, diesel fuel consumption decreased by 48.5% year-on-year, and annual comprehensive energy consumption decreased by 1.5% year-on-year.								

4-2 Shanghai Leiyunshang Fengbang Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
0.8	0.5	0.01	0	2.13	1544.2	161.39	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
1131.6	194.4	937.2	42.1	42.1	0	0.34	0.33	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
1.01	473.62	133.3	0	0	0	0	0.88	60.68
Overall description: In 2018, the Company invested RMB325,000 in environmental protection, mainly including operating costs of sewage stations, general and hazardous waste disposal fees, pollutant discharge testing costs, expenses for maintenance and transformation of environmental treatment facilities, etc. The Company carried out energy-saving technological transformation projects and installed 57 sets of LED energy saving lamps in the office area, saving 5,400 kWh of electricity per year.								

4-3 Shanghai SPH Xingling Sci. & Tech. Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
7.73	4.3	0.01	95.46	929.7	3017.8	2757	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
3309.93	3307.32	2.61	764	764	0	18	18	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
8.58	2728.88	282.76	141.9	0	0	2.55	33.36	14.52
Overall description: In 2018, the Company spent a total of about RMB2.6 million in environmental protection operation, maintenance and treatment of various pollutants. It exercised strict energy management, resulting in a year-on-year decrease of more than 5% in water, electricity and gas consumption, etc., on an annual basis.								

4-4 Shanghai Dehua Traditional Chinese Medicines Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
1.28	2.52	0.08	0	80.53	49.56	481.04	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
1086.34	123.84	962.5	52	52	0	2.36	2.36	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
1.83	672.31	54.66	0	5255.3	0	2.8	13.29	24.63
Overall description: In 2018, the Company invested RMB600,000 in environmental protection, including RMB200,000 for diversion of rainwater and sewage pipelines, and replacement and transformation of old pipelines, RMB200,000 for purification of flue gas and odor exhaust gas in the processing workshop; and RMB100,000 for hazardous waste disposal.								

4-5 Shanghai Yutiancheng Chinese Herbal Medicine Company Limited

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
0.43	1.16	0.009	0	19.8	124.2	51.35	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
662.74	207.69	455.16	20	20	0	0.5	0	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
0.48	194.63	64.7	0	0	0	0	0	79
Overall description: In 2018, the Company invested RMB310,000 in environmental protection, including RMB280,000 for reconstruction of rainwater and sewage pipelines and relevant maintenance, RMB10,000 for equipment maintenance and repair, and RMB20,000 for third-party testing.								

4-6 Shanghai Huapu Chinese Herbal Medicine Company Limited

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
1.08	1.11	0.03	0	45.91	151.64	43.99	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
628.32	261.18	367.14	50	50	0	1	1	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
1.2	266.47	49.8	0	0	0	0.25	34.09	50
Overall description: In 2018, the Company invested RMB1.7 million in environmental protection, including expenses for separation of rainwater and sewage pipeline networks, expenses for installation of exhaust funnels, expenses for adding dust centralized processors of small packers, operating costs of sewage stations, general and hazardous waste disposal fees, pollution testing costs, etc. In 2018, while the Company's production remained basically flat as compared with last year, its water consumption decreased by 1.9% year-on-year, electricity consumption decreased by 2.1% year-on-year, diesel fuel consumption decreased by 10.5% year-on-year, and comprehensive energy consumption decreased by 5.3% year-on-year.								

4-7 Shanghai Xinde Chinese Herbal Medicine Company

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
0.86	0.22	0.002	0	2.42	17.1	2.26	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
631.33	181.78	450.51	87	87	0	0.66	0.66	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
1.22	163.56	63.9	0	0	0	0	13.23	45
Overall description: In 2018, the Company invested RMB149,000 in environmental protection, mainly including operating costs of sewage stations, general and hazardous waste disposal fees, pollutant discharge testing costs, operating costs of environmental treatment facilities, etc. In 2018, while the Company's production remained basically flat as compared with last year, its water consumption decreased by 2.6% year-on-year, electricity consumption decreased by 4.5% year-on-year, diesel fuel consumption decreased by 10.9% year-on-year, and comprehensive energy consumption decreased by 4.1% year-on-year.								

4-8 Shanghai Huaying Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
0.4	0.15	0.03	0	3.6	22.6	8.1	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
195.2	45.6	149.6	20	20	0	0.1	0	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
0.46	70.06	17.77	0	0	0	0	0	12.96
Overall description: In 2018, the Company invested RMB100,000 in environmental protection, mainly including operating costs of sewage stations, general and hazardous waste disposal fees, pollutant discharge testing costs, etc. In 2018, while the Company's production remained basically flat as compared with last year, its water consumption decreased by 4.5% year-on-year, electricity consumption decreased by 3.6% year-on-year, diesel fuel consumption decreased by 20.6% year-on-year, and comprehensive energy consumption decreased by 3% year-on-year.								

4-9 Shanghai SPH Shenxiang Health Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
0.32	0.002	0.0002	0	0	0	0	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
520.09	0.18	519.91	12	12	0	0.1	0	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
0.35	212.54	73.8	0	0	0	0	0	0.15

Overall description:

In 2018, the Company invested RMB300,000 in environmental protection and replaced traditional energy-saving lamps and incandescent lamps with high-efficiency energy-saving LED lamps. Anti-flooding valves were installed in rainwater wells to prevent rainwater flooding. Suspended hoods were installed in adjustable chalking machine to collect dust. Bag filters were equipped. Exhaust pipes were elevated to 15m above the ground, which was in line with environmental standards.

5 Shanghai Zhongxi Sunve Pharmaceutical Co., Ltd.

5-1 Shanghai Zhongxi Sunve Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of ethyl acetate in exhaust gas emitted (kg)	
6.10	1.56	0.49	8984.78	350.15	118850.1	11235.13	2980.8	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
9184.13	1721.62	7462.51	50.07	25.93	24.14	230.54	230.54	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
6.78	1579.81	714.77	0	22028.36	0	1.2	16.06	21.1

Overall description:

In 2018, the Company invested RMB12.61 million in environmental protection, including expenses for transformation of environmental protection facilities such as addition of VOC treatment facilities in the workshops, replacement of covers of biochemical pools of the sewage treatment station and enclosure of the area where the plate-frame filter press is, expenses for maintenance and operation of pollution prevention equipment and expenses for pollution monitoring, etc. In 2018, comprehensive energy consumption was reduced by 581.99 tonnes of standard coal as compared with 2017. While the output increased by 38.88% as compared with last year, comprehensive energy consumption per tonne of standard coal decreased by 26.92%.

5-2 Shanghai SPH Zhongxi Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
8.56	3.84	0.15	823.31	191.16	50888.9	7049.26	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
10328.89	3666.87	6662.02	783	768	15	11.96	4.7	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
12.23	3252.67	945.28	160.21	0	0	0	5.98	0
Overall description: In 2018, the Company invested RMB6.78 million in environmental protection, including RMB1.08 million for replacement of low-nitrogen burners for gas-fired boilers, RMB300,000 for noise control in freezing and compressed air station, RMB300,000 for comprehensive improvement of discharge outlets of solid preparation workshops, RMB2.4 million for upgrading and transformation of exhaust gas treatment, RMB950,000 for equipment of online monitoring of VOCs, RMB870,000 for entrusted operation of sewage and RMB880,000 for treatment of solid wastes, etc.. In May 2018, the Company transformed low-nitrogen burners of four gas-fired boilers in operation. After the transformation, the concentration of nitrogen oxides emitted was reduced to be below 50mg/m3, and the emission of nitrogen oxides decreased by about 1.2 tonnes throughout the year. In 2018, the Company implemented the renovation project of chillers in the power center and purchased a 100KW chiller to operate alternatively with the original 200KW water chiller in different seasons, which could save about 86,000 kWh of electricity per year.								

5-3 Shanghai Jinhe Bio-Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
1.44	0.39	0.43	4053.6	0.31	968.45	23.94	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
5665.32	1022.7	4642.62	27.2	22.5	4.7	102.83	66.93	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
1.6	2799.75	659.3	43.5	0	0	0	6.61	9.33
Overall description: In 2018, the Company invested RMB4.8 million in environmental protection and completed such projects as translocation of the old sewage station, modification of discharges of exposed sewage pipes, reconstruction of storm-water sewers, centralized treatment of exhaust gas of the sewage station, optimization of water circulation pipeline system and transformation of boilers toward low-carbon emission, etc. In 2018, while the annual output increased by 34% as compared with last year, electricity consumption decreased by 8.1%, gasoline consumption decreased by 3.5%, diesel fuel consumption decreased by 5.3% and comprehensive energy consumption decreased by 13.27% as compared with last year.								

6 Shanghai Zhonghua Pharmaceutical Co., Ltd.
6-1 Shanghai Zhonghua Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
5.63	1.1	0.5	344	0.09	54.95	95.27	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
6881.76	52.76	6828.9	32	22	10	16.94	15.12	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
6.26	1636.41	319.9	0.11	19803.66	0	2.54	3.03	1.65

Overall description:

In 2018, the Company invested RMB761,650 in environmental protection, including RMB50,000 for operation and maintenance of pollution prevention facilities, RMB660,000 for treatment of solid wastes, RMB50,000 for construction of new pollution prevention facilities and RMB1,650 for other publicity.

6-2 Shanghai Great Wall Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
2.52	0.68	0.008	65.47	0.193	112.57	187.31	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
3683.32	95.02	3588.3	3	3	2	65.75	55.75	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
2.8	641.56	145.9	0.52	1472.04	0	12.22	6.22	3.36

Overall description:

In 2018, the Company invested RMB600,000 in environmental protection. In 2018, the Company updated a set of chillers, with GDP jumping from original 3.094 to 6.2. In the same operation time, theoretically, electricity saved would amount to 1,400 million kWh per year.

6-3 Shanghai Zhonghua Pharmaceutical Nantong Co., Ltd.

				Emissions					
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)		
0.2	0.36	0.02	0	0.09	4.56	0.34	0		
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)		
1893.19	129.95	1763.24	63	5	58	0.4	0.4		
Energy used									
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)	
2.6	338.65	121	0	0	0	0.15	4.5	4.5	

Overall description:

In 2018, the Company invested RMB300,000 in transformation of nanotube collection network for domestic sewage and added water quality detection equipment. A bag-type dust collector was installed in the production equipment for prickly-heat powder products, and a deodorizing facility was installed in the production equipment for skin cream products. In 2018, the Company was rated as a green enterprise by the Rudong County Environmental Protection Bureau.

7 Shanghai Sunway Biotech Co., Ltd.

7-1 Shanghai Sunway Biotech Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
1.08	0.002	0.0001	0	0.11	280.5	27.8	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
2342.3	17.5	2324.78	3.4	3.4	0	0.18	0.18	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
1.2	1072.4	192.4	0	8655	0	0	1.15	4.54

Overall description:

In 2018, the Company invested RMB186,200 in environmental protection, including RMB110,400 of direct expenses and RMB75,800 of indirect expenses. The Company invested in transforming a piston compressor for the cold storage, reducing the consumption of F22 refrigerant by about 5kg per year. The Company adjusted the life span and efficiency of moist heat sterilizers, which reduced the consumption of purified water and pure steam, with the steam consumption decreasing by 192 tonnes per year. In 2018, electricity consumption per unit decreased by 2% year-on-year, and steam consumption per unit decreased by 12% year-on-year.

8 SPH Changzhou Pharmaceutical Co., Ltd.
8-1 Changzhou Pharmaceutical Factory Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of hydrogen chloride in exhaust gas emitted (kg)	
19.5	26.03	2.95	339.29	0.41	127.31	1300.66	520.48	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
11893	660.51	11232.49	272.39	224.84	25	256.61	219.01	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
23.06	2982.75	1030.29	0	36200	0	0.68	18.22	2.5

Overall description:

In 2018, the Company invested RMB6.14 million in environmental protection. In 2018, the Company was awarded the title of "Water-saving Supporter in Jiangsu" by the Water Resources Department of Jiangsu Province. The blower was replaced, and as a result, regional noise was reduced from original 100 decibels to 75 decibels. Treated water discharged from the sewage station was used to clean the filter belt of the belt-type sewage machine in place of deep well water, which could save deep well water of about 18,000 tonnes per year and reduce the amount of wastewater discharged. In 2018, the total amount of sewage discharged and the amount of N-NH3 in wastewater discharged decreased by 7.14% and 50%, respectively on a year-on-year basis.

8-2 Changzhou Wuxin Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of ethyl alcohol in exhaust gas emitted (kg)	
0.19	0.46	0.05	293.76	0.01	0	55.8	355.68	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
816.69	13.42	803.27	10	10	0	456.84	453.05	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
0.59	320.63	43.10	0	4534.02	0	1.84	0	0.34

Overall description:

In 2018, the Company invested over RMB3 million in environmental protection, including expenses for routine maintenance of the exhaust gas absorption tower in the workshop, replacing the packing and sprayer to ensure the strong absorption effect; expenses for capping some intermediate pools and discharge tanks of the sewage station to reduce the fugitive emission of exhaust gas.

8-3 Nantong Changyou Pharmaceutical Technology Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of ethyl acetate in exhaust gas emitted (kg)	
5.60	14.85	0.12	158.4	0.74	463.06	76.52	1360.8	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
7240.51	567.83	6672.68	25	25	0	331.91	305.84	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
7.64	1111.71	590.15	12.65	22802.26	0	3	16	21.82
Overall description: In 2018, the Company invested RMB9.876 million in environmental protection, including RMB6.708 million for operation of pollution prevention facilities; RMB840,000 for treatment of solid wastes, RMB1.352 million for construction of new pollution prevention facilities, RMB780,000 for energy conservation project, and RMB196,000 for other publicity. In 2018, its investments in key projects of energy conservation and environmental protection included RMB50,000 for transforming the water replenishing piping of water vacuum pumps in the workshop and using the initial rainwater collected as replenish water for the vacuum pumps; RMB480,000 for purchasing 4 screw-type vacuum pumps to replace 4 water vacuum pumps, saving about 400 tons of water every month; about RMB30,000 for replacing 34 energy-saving drain valves, saving about 12 tons of steam every year; RMB220,000 for increasing 8 frequency converters for circulating water pumps and supporting electric boxes, saving about 200,000 kWh of electricity every year; RMB400,000 for purchasing a sludge dryer to dry the sludge, resulting in an annual sludge reduction of about 120 tons.								

8-4 Chifeng Arker Pharmaceutical Technology Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
6.5	3.79	0.146	29823	0.125	3.81	0.28	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
8578.07	111.5	8466.57	76	76	0	0.404	0	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
7.8	7534.3	380.29	0	52629.48	0	0	5.58	0.76
Overall description: In 2018, the Company invested RMB930,000 in environmental protection, including RMB500,000 for operation & maintenance of pollution prevention facilities, RMB150,000 for treatment of solid wastes, RMB180,000 for construction of new pollution prevention facilities, and RMB100,000 for association, newspapers, books, publicity, etc. Recycled water is reused for cooling water of vacuum pumps, saving about 30,000 tons of water every year.								

8-5 Chifeng Mysun Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
5	1.25	0.04	0	2.63	1579.17	5074.34	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
3585.48	422.46	3163.02	1.8	1.8	0	0	0	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
6	2322.7	235.36	0	13689	0	0	32.79	102.6

Overall description:

In 2018, the Company invested RMB320,000 in environmental protection, including RMB250,000 for operation & maintenance of pollution prevention facilities, RMB0 for treatment of solid wastes, RMB50,000 for construction of new pollution prevention facilities, and RMB20,000 for association, newspapers, books, publicity, etc.

9 SPH Qingdao Growful Pharmaceutical Co., Ltd.

9-1 SPH Qingdao Growful Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
9.88	17.09	0.37	0	2.30	302.53	2410.17	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
21776.58	637.97	21138.61	845.24	78.00	767.24	6.37	0	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
13.52	4366.9	932	0.91	152431	0	0	66.3	50.6

Overall description:

In 2018, the Company invested RMB7 million in environmental protection, including RMB5.9 million for construction of the second phase of the sewage station, RMB800,000 for operation & maintenance of pollutant treatment facilities, and about RMB243,000 for treatment of solid wastes. In 2018, the Company carried out clean production audits, and completed clean production audit assessment and acceptance work at the end of December; in 2018, its water consumption and comprehensive energy consumption decreased by 2.87% and 23.1% (or 1,311.48 tons of standard coal) respectively year-on-year.

10 Xiamen Traditional Chinese Medicine Co., Ltd.

10-1 Xiamen Traditional Chinese Medicine Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
7	1.79	0.013	0	0.65	129.29	145.99	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
11635.03	313.55	11321.48	992.4	973	19.4	2.24	2.24	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
11.88	2358.27	677.59	0	44175.6	0	0	25.92	6.86

Overall description:

In 2018, the Company invested RMB740,200 in environmental protection. The consumption of water, electricity and steam decreased by 12%, 9.4% and 11.05% respectively as compared with 2017. After treatment, the wastewater can be used for green irrigation, saving 36,970 tons of fresh water every year.

11 Chiatai Qingchunbao Pharmaceutical Co., Ltd.

11-1 Chiatai Qingchunbao Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
29.32	34.24	2.82	0	195.43	9683.14	794.69	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
24142.36	11591.51	12550.85	5600	600	5000	85.36	85.36	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
43.34	8148.12	1680.00	483.12	0	0	0	79.76	59.23

Overall description:

In 2018, the Company invested RMB5.82 million in environmental protection, including investment costs of facilities for controlling odors in the newly built sewage treatment stations and the initial rainwater tanks. The Company passed the third round of clean production audit with excellent results and completed the certification renewal of the new version of Environmental Management Systems (GB/T24001-2016).

12 Hangzhou Huqingyutang Pharmaceutical Co., Ltd.
12-1 Hangzhou Huqingyutang Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
15.72	4.04	0.10	0	0.13	642.56	922.12	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
15555.34	37.61	15517.73	3766.8	86	3680.8	49.37	48.99	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
15.72	3879.45	983.95	0	78024.76	0	6.56	4.36	2.14

Overall description:

In 2018, the Company invested RMB625,200 in environmental protection. In spite of increased production capacity, tap water consumption and energy consumption per RMB10,000 turnover decreased by 11.13% and 0.55% respectively year-on-year.

13 Liaoning SPH Herbapex Pharmaceutical (Group) Co., Ltd.
13-1 Liaoning SPH Herbapex Pharmaceutical (Group) Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
8.1	20.09	0.06	0	125208.48	26328.49	11855.82	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
31831.39	26290.47	5540.92	4926	2426	2500	0.1635	0	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
14.85	9708.35	494.41	0	0	12690	3.78	18.5	5.7

Overall description:

In 2018, the Company invested RMB711,200 in environmental protection, including RMB511,200 for environmental protection equipment and RMB250,000 for disposal of the three wastes. More than 5,000 trees have been planted in its factories, of which about 4,860 trees are greater than 5 meters in height, which can reduce carbon dioxide emissions by 111.78 tons a year.

14 SPH Dong Ying (Jiangsu) Pharmaceutical Co., Ltd.

14-1 SPH Dong Ying (Jiangsu) Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of others in exhaust gas emitted (kg)	
0.41	0.1	0.002	0	0.6	393.23	29.83	0	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
2409	694.37	1714.64	10.7	7.2	3.5	1.73	0	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
2.62	354.86	160.45	0.46	5275.49	0	0	20.4	18.8

Overall description:

In 2018, the Company invested RMB297,300 in environmental protection, mainly for daily operation of pollution prevention facilities. In 2018, the amount of COD and N-NH3 in wastewater discharged decreased by 10% and 92%, respectively, as compared with last year. The amount of wastewater discharged has been greatly reduced thanks to the implementation of the water recycling project.

14-2 SPH Changzhou Kony Pharmaceutical Co., Ltd.

Emissions								
Amount of wastewater discharged (10,000 tonnes)	Amount of COD in wastewater discharged (tonne)	Amount of N-NH3 in wastewater discharged (tonne)	Total amount of non-methane hydrocarbon in exhaust gas emitted (kg)	Amount of sulfur dioxide in exhaust gas emitted (kg)	Amount of nitrogen oxide in exhaust gas emitted (kg)	Amount of particulate matter in exhaust gas emitted (kg)	Amount of methyl alcohol in exhaust gas emitted (kg)	
3.09	13.28	0.77	151.96	4.68	1651.58	115.57	409.2	
Greenhouse gas emissions (tonne)	Direct greenhouse gas emissions (tonne)	Indirect greenhouse gas emissions (tonne)	Amount of general solid waste produced (tonne)	Amount of general solid waste disposed of (tonne)	Amount of general solid waste utilized (tonne)	Amount of hazardous waste produced (tonne)	Amount of hazardous waste disposed of (tonne)	
4906.39	638.24	4268.15	108.4	107	1.4	400.96	391.17	
Energy used								
Water consumption (10,000 tonnes)	Comprehensive energy consumption (tonne of standard coal)	Electricity consumption (10,000 kWh)	Natural gas (gaseous) consumption (10,000 cubic meters)	Outsourcing thermal power consumption (million kJ)	Coal consumption (tonne)	Liquefied petroleum gas consumption (tonne)	Gasoline consumption (tonne)	Diesel fuel consumption (tonne)
5.71	1589.08	605	74.17	0	0	0	2.25	12.46

Overall description:

In 2018, the Company invested RMB6.32 million in environmental protection, including expenses for transformation of exhaust gas absorption equipment, rain foul water pipe and collection pool. The concentration of exhaust gas has been tested and found to be up to the standard after the upgrading of exhaust gas absorption equipment.

5 Packaging for finished products

SPH Dong Ying (Jiangsu) Pharmaceutical Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Cisatracurium Besilate	72.605	35.46686	/	/
Raw material	Perindopril tert-butylamine	9.852	30.32146	/	/
Auxiliary materials	Mannitol	800	526.2	/	/
Auxiliary materials	Medicinal charcoal	10	5.2777	/	/
Auxiliary materials	Lactose	325	150	/	/
Auxiliary materials	Magnesium stearate	15	10.5	/	/
Packaging materials	Freeze-dried sterile powder for injection with chlorinated butyl rubber plug	8,340,500 pieces	5,279,740 pieces	/	/
Packaging materials	Aluminium composite cover for antibiotic bottle	3,700,000 pieces	5,238,031 pieces	/	/
Packaging materials	Polyvinyl chloride solid medicinal PVC sheet	2620	2046.832	/	/
Packaging materials	Drug packaging aluminium foil for 2mg Perindopril tert-butylamine tablets	195.4	371.3424	/	/

SPH Changzhou Kony Pharmaceutical Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Acyclovir crude	36906	29800	/	/
Raw material	N-benzyloxycarbonyl-L-valine	49950	53640	/	/
Raw material	Dicyclohexylcarbodiimide	46000	44700	/	/
Raw material	N, N-dimethylformamide N	178380	532800	462200	86.7
Raw material	Methanol	1582780	757760	383540	50.6
Packaging materials	Medicinal low density polyethylene bags	15,000 pieces	8,095 pieces	/	/
Packaging materials	40*50 fiber can	5,800 pieces	1,944 pieces	/	/

Changzhou Pharmaceutical Factory

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Reserpine	50	52	/	/
Raw material	Dihydrazide sulphate	9225	10225	/	/
Auxiliary materials	Starch	129650	120000	/	/
Packaging materials	30ml medicinal high density polyethylene bottle	5,500,400 pieces	5,500,000 pieces	/	/
Packaging materials	15ml medicinal high density polyethylene bottle	28,650,200 pieces	28,000,000 pieces	/	/
Packaging materials	Small box	29,287,725 pieces	29,196,525 pieces	/	/

Nantong Changyou Pharmaceutical Technology Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	(3R)-3-tertbutyldimethylglyoxylglutarateR-mandelate	31425	29025	/	/
Auxiliary materials	Methanol	277080	265080	164349.6	62%
Auxiliary materials	Triethylamine	37800	35800	/	/
Auxiliary materials	Toluene	78220	71220	56976	80%
Packaging materials	Medicinal transparent polyethylene bags	39,000 pieces	34,200 pieces	/	/

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Common Bletilla Tuber	3056	8536.5	/	/	/
Cuttlebone Sepium	32110	22194.9	/	/	/
Yanhusuo Tuber	46306	10243.8	/	/	/
Pilose Asiabell Root	35465	30825	/	/	/
Chinese Goldthread Rhizome	20521	18495	/	/	/
Ginseng	15921	7706	/	/	/
Ferric chloride	233780	127725	/	/	/
Syrup	210000	134406	/	/	/
Sodium hydroxide	113875	77421	/	/	/
Coating agent	3220	3150	/	/	/
Starch	5000	4832	/	/	/
Opadry 80W	5000	4658	/	/	/
Magnesium stearate	990	1068	/	/	/
Talcum powder	2000	2603	/	/	/
Ethanol	448650	286890	1599510	84.80%	84.80%
Small box (90 pieces of Kuaiwei Tablets)	1770500	1911342	/	/	/
Medicinal high density polyethylene bottle	4340700	1911342	/	/	/
Small box (90 pieces of Yangxinshi Tablets)	5550000	5480940	/	/	/
Medicinal PVC (175 Transparent)	37799	32880	/	/	/
Medicinal composite ilm	11684.5	6850	/	/	/
Small box (Polyferose Capsules)	16848303	15752620	/	/	/
Medicinal PVC (180 Orange yellow)	33501.6	33405	/	/	/
Medicinal composite film	28653.8	27510	/	/	/

Shanghai Zhongxi Sunve Pharmaceutical Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Hydroxychloroquine sulphate	55102.893	49261.148	/	/
Raw material	Aripiprazole	202.908	693.158	/	/
Raw material	Diloxetine hydrochloride	3015.745	2280.967	/	/
Auxiliary materials	Corn starch	28071.509	27158.045	/	/
Auxiliary materials	Magnesium stearate	1292.225	1368.886	/	/
Auxiliary materials	Talcum powder	11289	6715.234	/	/
Auxiliary materials	Lactose	21460.58	18141.527	/	/
Packaging materials	Small box for hydroxychloroquine sulfate tablets	33,890,900 pieces	33,865,049 pieces	/	/
Packaging materials	Medicinal aluminium foil for hydroxychloroquine sulfate tablets (0.1g)	12915.9	15673.7	/	/
Packaging materials	Polyester / aluminium / polyethylene medicinal composite film and bag (Aripiprazole tablets)	11298	11770.32	/	/
Packaging materials	Small box for Aripiprazole tablets	6,113,670 pieces	6,173,204 pieces	/	/
Packaging materials	Medicinal aluminium foil for duloxetine hydrochloride enteric-coated tablets (20mg)	3484.1	3141.6	/	/
Packaging materials	Small box for duloxetine hydrochloride enteric-coated tablets	4,662,900 pieces	4,192,500 pieces	/	/

Xiamen Traditional Chinese Medicine Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Sanchi	47,896.40	47,978.60	/	/
Raw material	Artificial Bezoar	4,846.50	4,880.18	/	/
Raw material	Artificial Forest Musk Abelmosk	168.00	160.65	/	/
Auxiliary materials	Corn starch	9,975.00	11,471.17	/	/
Auxiliary materials	Magnesium stearate	5,010.00	4,258.64	/	/
Packaging materials	Medicinal aluminium foil for Xin Huang Tablet (234mm)	7,105.80	8,338.00	/	/
Packaging materials	Composite film for Xin Huang Tablet [145*150mm (36 pieces)]	10,677.00	10,425.15	/	/
Packaging materials	Medicinal aluminium foil for Pill of Eight Treasures capsules (170mm)	5,376.80	2,323.40	/	/

Shanghai Leiyunshang Fengbang Pharmaceutical Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Hypoglauous Collett Yam Rhizome	11760	10560	/	/
Raw material	Liquorice Root	5880	5280	/	/
Raw material	Combined Spicebush Root	2740	2640	/	/
Auxiliary materials	Talcum powder	8600	9852	/	/
Auxiliary materials	Sucrose	1900	2064	/	/
Packaging materials	Medicinal high density polyethylene bottle	5,535,000 pieces	4,941,200 pieces	/	/
Packaging materials	Color box	550,564 pieces	492,824 pieces	/	/

Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd., General Factory

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Metformin Hydrochloride	69000	50147.28	/	/
Raw material	Rabeprazole Sodium	510	345.538	/	/
Raw material	Methotrexate	353	295.28	/	/
Raw material	Digoxin	85	76.793	/	/
Raw material	Spironolactone	3263.36	889.42	/	/
Raw material	Salbutamol Sulfate	25	4.48104	/	/
Auxiliary materials	Corn starch	53000	50296.293	/	/
Auxiliary materials	White sugar	5000	2150	/	/
Auxiliary materials	Pregelatinized starch	45000	42455.021	/	/
Auxiliary materials	Magnesium stearate	3181.03	2259.68724	/	/
Auxiliary materials	White dextrin	2500	2272.378	/	/
Auxiliary materials	Talcum powder	4500	2484.026	/	/
Auxiliary materials	Magnesium oxide	5200	3091.24	/	/
Auxiliary materials	Mannitol (Imported)	4500	2658.276	/	/
Auxiliary materials	Polyvinylpyrrolidone k29/32	199.6	298.415	/	/
Auxiliary materials	Isopropanol	17418	16316.731	/	/
Auxiliary materials	Dichloromethane	21976	17912.3	/	/

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Auxiliary materials	Film coating premix HEY5403747	1225	952.74	/	/
Auxiliary materials	Titanium dioxide	101	91.648	/	/
Auxiliary materials	Carboxymethyl starch sodium / made in China	300	204.87	/	/
Auxiliary materials	Hypromellose / E5-LV	5200	4328.66	/	/
Auxiliary materials	Calcium carbonate	250	221.92	/	/
Auxiliary materials	Cross-linked PVPxl	2594.8	1912.431	/	/
Auxiliary materials	95% Ethanol	52200	43566	/	/
Auxiliary materials	Carmellose sodium (SH-SJJ-4000)	8000	4315.24	/	/
Auxiliary materials	Hypromellose K100M	33000	22250.41	/	/
Auxiliary materials	Microcrystalline cellulose PH302 Asahi Kasei	11850	10044.24	/	/
Auxiliary materials	99.5% Ethanol	4320	2185.319	/	/
Auxiliary materials	HFA-134a	23798	22163.78	/	/
Auxiliary materials	Maltodextrin	14250	9197.9	/	/
Auxiliary materials	Skim milk powder	61200	57060.94801	/	/
Auxiliary materials	Oligofructose P95	8000	6130.24	/	/
Auxiliary materials	Fresh milk essence (powder)	370	206.4	/	/
Auxiliary materials	Glucose (water free)	8975	5299.87822	/	/
Auxiliary materials	Yeast extract	10552	6851.05451	/	/
Auxiliary materials	Tryptone	8670	8356.028	/	/
Auxiliary materials	Peptone	4500	2095.0905	/	/
Auxiliary materials	Dipotassium phosphate	600	565.52901	/	/
Auxiliary materials	Ammonium sulphate	900	840.664	/	/
Auxiliary materials	Ammonium sulphate	15000	10086.96	/	/
Auxiliary materials	Vitamin C Sodium	500	252.08003	/	/
Packaging materials	Medicinal high density polyethylene bottle for oral solid dosage 60ml/01B	44,049,300 pieces	40,193,570 pieces	/	/
Packaging materials	Medicinal aluminium foil for rabeprazole (SPH)	2711.1	2066.9	/	/
Packaging materials	Rabeprazole 250 double aluminium	9303.5	8813.6	/	/
Packaging materials	Lei Bei composite film (155mm) 10mg*7 pieces	5973.3	5586.3	/	/
Packaging materials	Lei Bei composite film (155mm) 10mg*14 pieces	3342.5	2821.2	/	/
Packaging materials	Medicinal high density polyethylene bottle for oral solid dosage 25ml	11,094 pieces	11,272.8 pieces	/	/

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Packaging materials	Medicinal aluminum platinum for Digoxin 30 tablets	1975.9	1068.94	/	/
Packaging materials	Polyvinyl chloride solid medicinal hard patch (digoxin)	10049.8	6856.1	/	/
Packaging materials	Medicinal high density polyethylene bottle for oral solid dosage 70ml/01B	4,866,800 pieces	4,554,800 pieces	/	/
Packaging materials	Medicinal high density polyethylene bottle for oral solid dosage 50ml/01B	105,792,000 pieces	106,809,180 pieces	/	/
Packaging materials	Bidobacterium triple active bacteria powder composite film	27021.5	18195.5	/	/

Shanghai Sine Tianping Pharmaceutical Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Sulfasalazine	46400	46400	/	/
Auxiliary materials	Pregelatinized starch	10000	10000	/	/
Auxiliary materials	Starch	5000	5000	/	/
Auxiliary materials	Magnesium stearate	560	560	/	/
Auxiliary materials	Carboxymethyl starch sodium	1850	1850	/	/
Packaging materials	Aluminum foil for 60 tablets/box of salazide	2750	2750	/	/
Packaging materials	PVC for 60 tablets/box of salazide	15800	15800	/	/
Packaging materials	Single box for 60 tablets/box of salazide	1,662,000 pieces	1,662,000 pieces	/	/
Packaging materials	Medicinal high density polyethylene bottle for 60 tablets of salazide	850,000 pieces	850,000 pieces	/	/
Packaging materials	Single box for 60 tablets/bottle of salazide	850,000 pieces	850,000 pieces	/	/
Packaging materials	Medicinal high density polyethylene bottle for 100 tablets of salazide	400,000 pieces	400,000 pieces	/	/
Packaging materials	Single box for 100 tablets/bottle of salazide	400,000 pieces	400,000 pieces	/	/

Shanghai SPH Sine Pharmaceutical Laboratories Co., Ltd. No. 2 Subsidiary

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Warfarin sodium	763.06	720	/	/
Raw material	Amiodarone hydrochloride	10775	9920	/	/
Auxiliary materials	Dextrin	4320	4320	/	/
Auxiliary materials	Pregelatinized starch	4320	4320	/	/
Auxiliary materials	Microcrystalline cellulose	10080	10080	/	/
Auxiliary materials	Corn starch	7152	7152	/	/
Auxiliary materials	Magnesium stearate	350	350	/	/
Packaging materials	Medicinal high density polyethylene bottle	4,767,800 pieces	5,075,800 pieces	/	/
Packaging materials	Medicinal PVC	8,215.6	7919.8	/	/
Packaging materials	Medicinal aluminum foil	1,426.2	1268.1	/	/

Shanghai Sine Jinzhu Pharmaceutical Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Salbutamol sulfate	140	136.078	/	/
Auxiliary materials	Sodium chloride	2000	98.446	/	/
Packaging materials	Low borosilicate glass ampoule	44,503,164 pieces	44,503,164 pieces	/	/
Packaging materials	Single box	9,818,000 pieces	9,818,000 pieces	/	/

Shanghai Fuda Pharmaceutical Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Sulfasalazine	19200	19200	/	/
Raw material	Spironolactone	1400	1400	/	/
Auxiliary materials	Corn starch	6604.36	6604.36	/	/
Auxiliary materials	Dextrin	1000	768	/	/
Auxiliary materials	Low-substituted hydroxypropyl cellulose	1117.16	1117.16	/	/
Auxiliary materials	Magnesium stearate	500	300.12	/	/
Auxiliary materials	Carboxymethyl starch sodium	250	230.4	/	/
Auxiliary materials	Coated powder	3600	3200	/	/
Auxiliary materials	Calcium hydrogen phosphate	2000	2094.4	/	/
Packaging materials	Medicinal PVC	21820	21820	/	/
Packaging materials	Medicinal high density polyethylene bottle	700,000 pieces	700,000 pieces	/	/
Packaging materials	Medicinal aluminum foil	2048	2048	/	/

Shanghai Leiyunshang Pharmaceutical Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Salvia miltiorrhiza	800560.3	806379.45	/	/
Raw material	Patchouli oil	220	200	/	/
Auxiliary materials	Corn starch	49000.4	54144.42	/	/
Auxiliary materials	Salvia miltiorrhiza tablet coating premix	11000	12691.4	/	/
Auxiliary materials	Polyethylene glycol 6000	1680	1600	/	/
Packaging materials	1*1 color box for 100 salvia miltiorrhiza tablets	1,858,860 pieces	2,145,064 pieces	/	/
Packaging materials	60ml medicinal high density polyethylene bottle	3,500,505 pieces	3,594,510 pieces	/	/
Packaging materials	1*1 color box for 60 tablets of Huodan Diwan	657,380 pieces	672,152 pieces	/	/
Packaging materials	Bottle with cover for 60 tablets of Huodan Diwan	725,500 pieces	736,240 pieces	/	/
Packaging materials	Color box for 10 tablets*6 tubes/box of Liushenwan (artificial)	2,430,346 pieces	2,450,404 pieces	/	/
Packaging materials	Bottle with cover for 10 tablets/tube of Liushenwan	18,961,000 pieces	17,192,020 pieces	/	/

Shanghai SPH Xingling Sci. & Tech. Pharmaceutical Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Ginkgo leaf	720000	710400	/	/
Raw material	Ginkgo ketoester	645.12	645.12	/	/
Auxiliary materials	Ethanol	369890	374822	/	/
Auxiliary materials	Macroporous resin	9600	13200	/	/
Auxiliary materials	Polyamide resin	7200	6000	/	/
Auxiliary materials	Cyclohexane	21150	21600	/	/
Auxiliary materials	Corn starch	2400	1551.66	/	/
Auxiliary materials	Microcrystalline cellulose	475	329.34	/	/
Auxiliary materials	Carboxymethyl starch sodium	325	245.34	/	/
Auxiliary materials	Film coating premix	80	70.18	/	/
Packaging materials	Ginkgo ketoester paper bucket	1500	1819	/	/
Packaging materials	20ml medicinal high density polyethylene bottle	1,534,000 pieces	1,371,720 pieces	/	/
Packaging materials	Small box for ginkgo ketoester tablets (12 tablets)	1,250,100 pieces	1,164,031 pieces	/	/
Packaging materials	Medium box for ginkgo ketoester tablets (12 tablets)	129,700 pieces	116,409 pieces	/	/

Hangzhou Huqingyutang Pharmaceutical Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Red ginseng	79000	74093.6	/	/
Raw material	Isodon amethystoides	1700000	1498000	/	/
Raw material	Submature bitter orange	215212	149800	/	/
Raw material	Loquat leaf	100985	89424	/	/
Raw material	Stemona root	16697	19440	/	/
Raw material	Chinese goldthread rhizome	300	133	/	/
Raw material	Baikal skullcap root	/	133	/	/
Auxiliary materials	Starch	30000	22196	/	/
Auxiliary materials	Magnesium stearate	510	895.5	/	/
Auxiliary materials	Sucrose	791300	777600	/	/
Auxiliary materials	Citric acid	700	648	/	/
Auxiliary materials	Refined honey	2000	1371.48	/	/
Packaging materials	Small box (piece)	16584695	14897497	/	/
Packaging materials	Medicinal high density polyethylene bottle	842770	482260	/	/
Packaging materials	Medicinal polyester bottle (piece)	12521576	11049056	/	/

Shanghai SPH No. 1 Biochemical and Pharmaceutical Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Tanshinone IIA	1530	1186	/	/
Raw material	Pericarpium trichosanthis	108000	96350	/	/
Raw material	Chymotrypsinogen	1051	791.528	/	/
Raw material	Dibutyl cyclic phosphate adenosine calcium	733.917	618.574	/	/
Auxiliary materials	Glucose (for injection)	6825	7075	/	/
Auxiliary materials	Dichloromethane (industrial)	70000	65000	/	/
Auxiliary materials	Hydrochloric acid (CP)	23880	23880	/	/
Auxiliary materials	Ethanol (food grade)	658180	683400	/	/
Auxiliary materials	Mannitol injection (250ml:50g)	2000	2227	/	/
Auxiliary materials	Dextran 20	400	150	/	/
Packaging materials	Low borosilicate glass ampoule (2ml)	140,685,800 pieces	141,108,800 pieces	/	/
Packaging materials	Low borosilicate glass ampoule (5ml)	6,175,224 pieces	5,463,424 pieces	/	/
Packaging materials	Low borosilicate glass control injection bottle (2ml)	42,046,200 pieces	29,294,160 pieces	/	/
Packaging materials	Freeze-dried halogenated butyl rubber plug for injection (Φ13)	43,882,000 pieces	29,315,500 pieces	/	/
Packaging materials	Small box for tanshinone IIA sodium sulfonate injection (2ml:10mg)	18,358,600 pieces	18,332,200 pieces	/	/
Packaging materials	Small box for dibutyl cyclic phosphate adenosine calcium for injection (20mg)	11,620,400 pieces	12,302,900 pieces	/	/
Packaging materials	Small box for chymotrypsinogen for injection (4000u)	5,687,900 pieces	5,414,300 pieces	/	/
Packaging materials	Small box for pericarpium trichosanthis injection (4ml)	4,429,600 pieces	4,530,400 pieces	/	/

Shanghai New Asiatic Pharmaceutical (Minhang) Co., Ltd.

Category of materials	Name of materials	Amount of materials purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Benazepril hydrochloride	1371.46	1371.46	/	/
Raw material	Amoxicillin potassium clavulanate (7:1)	7450	7450	/	/
Auxiliary materials	Microcrystalline cellulose (import PH102)	2020	2020	/	/
Auxiliary materials	Lactose (import 200M)	1200	1200	/	/
Auxiliary materials	Low-substituted hydroxypropyl cellulose	700	325	/	/
Auxiliary materials	Hypromellose	15300	15300	/	/
Auxiliary materials	Ethanol (water free)	29000	29000	/	/
Auxiliary materials	Ethanol	2000	1700	/	/
Auxiliary materials	Coated powder (OY-22967)	1100	1044	/	/
Auxiliary materials	Carboxymethyl starch sodium	8100	8094.06	/	/
Auxiliary materials	Magnesium stearate	35108	34703.585	/	/
Auxiliary materials	Croscarmellose sodium	1100	1070.195	/	/
Auxiliary materials	Silicon dioxide (solid phase)	11000	10343	/	/
Packaging materials	Molding material 250	3580	3296.85	/	/
Packaging materials	Medicinal aluminum foil for benazepril hydrochloride tablets	1300	920.9	/	/
Packaging materials	Medicinal composite film for amoxicillin potassium clavulanate dispersible tablets (0.5g)	1400	1400	/	/
Packaging materials	Single box for amoxicillin potassium clavulanate dispersible tablets (0.5g)	34951.4	34408.2	/	/

Shanghai SPH New Asiatic Pharmaceutical Co., Ltd.

Category of materials	Name of materials	Amount of material purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Ceftriaxone	6076.4	6076.4	/	/
Raw material	Meropenem	9352.3	9085.5	/	/
Raw material	Cefotiam Hydrochloride	1386.1	1381.209	/	/
Raw material	Ceftazidime	36828.65	35659.95	/	/
Raw material	Praxilene Sodium Sulbactam	513.49	471.04	/	/
Raw material	Cefamandole Nafate	11254.91	23857.78	/	/
Raw material	Amphotericin B	6365	4714.67	/	/
Raw material	Cefixime	4218	8964.007	/	/
Auxiliary materials	Anhydrous sodium carbonate	2814.59	3826.46	/	/
Auxiliary materials	Sodium deoxycholate	6.4	7.631	/	/
Auxiliary materials	Lecithin	5020	5161.34	/	/
Auxiliary materials	Pregelatinized starch	50	19	/	/
Auxiliary materials	Talcum powder	140	148	/	/
Packaging materials	10ml molded bottles	67,161,055 pieces	64,756,840 pieces	/	/
Packaging materials	25ml molded bottles	4,523,781 pieces	4,112,630 pieces	/	/
Packaging materials	30ml molded bottles	10,129,476 pieces	9,596,796 pieces	/	/
Packaging materials	25ml glass vials	707,850 pieces	752,070 pieces	/	/
Packaging materials	Coated butyl rubber plug	64,260,000 pieces	62,940,000 pieces	/	/
Packaging materials	Butyl rubber plug	15,890,000 pieces	16,619,640 pieces	/	/
Packaging materials	Freeze-dried butyl rubber plug	720,000 pieces	766,000 pieces	/	/

Chiatai Qingchunbao Pharmaceutical Co., Ltd.

Category of materials	Name of materials	Amount of material purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Red ginseng	23000	22074	/	/
Raw material	Radix Ophiopogonis (from Zhejiang)	23000	22074	/	/
Raw material	Salvia miltiorrhiza	265000	262845	/	/
Auxiliary materials	Activated carbon	1800	1784	/	/
Auxiliary materials	Polysorbate 80	1200	1103	/	/
Auxiliary materials	Sodium chloride	1600	1545	/	/
Packaging materials	50ml Infusion bottle (Type B)	4968000	4414860	/	/
Packaging materials	10ml Ampoule bottle	18000000	17523000	/	/
Packaging materials	Small box for Shenmai injection (50)	4500000	4414860	/	/
Packaging materials	Small box for Salvia miltiorrhiza injection (10ml*6)	2922775	2920500	/	/

Liaoning SPH Herbapex Pharmaceutical (Group) Co., Ltd.

Category of materials	Name of materials	Amount of material purchased (kg)	Material usage (kg)	Recycling amount (kg)	Recycling rate (%)
Raw material	Figwort Root	71812	76170	/	/
Raw material	Sanchi	50900	68500	/	/
Raw material	Safflower	135741	130201	/	/
Raw material	Rehmannia root	137651	161206	/	/
Raw material	Asper-like Teasel Root	109395	120854	/	/
Raw material	Common Swisscentauray Root	40984	41611	/	/
Raw material	Chinese Angelica	31604	23922	/	/
Raw material	Milkvetch Root	6979	5944	/	/
Raw material	Malaytea Scurfpea Fruit	13336	11730	/	/
Raw material	Indian Buead Tuckahoe	20009	24527	/	/
Raw material	Common Yam Rhizome	20783	22610	/	/
Raw material	Prepared Milkvetch Root	25182	25890	/	/
Auxiliary materials	Sucrose	243000	214496.4	/	/
Auxiliary materials	Talcum powder	149000	150302.7	/	/
Auxiliary materials	Coated powder	7500	7371	/	/
Auxiliary materials	Dextrin	29000	31719.2	/	/
Auxiliary materials	Blood stasis capsule shells	8136	9007.45	/	/
Packaging materials	Medicinal PVC	165630	163164	/	/
Packaging materials	Medicinal aluminum foil	10495.1	13808.8	/	/
Packaging materials	Medicinal high density polyethylene bottle	8866200	8715000	/	/
Packaging materials	Composite film	7740.3	10952.2	/	/
Packaging materials	Small box for Rupixiao Tablet	11740670	10978006	/	/
Packaging materials	Small box for Qiangshen Tablet	7751930	6315777	/	/
Packaging materials	Small box for Tongru Granule	613340	679193	/	/
Packaging materials	Small box for Blood Stasis Capsule	17852200	1848490	/	/
Packaging materials	Small box for Wangbi Tablet	11344550	11444371	/	/

6 Environment and natural resources

In respect of environment and natural resources, Shanghai Pharmaceuticals complies with the Environmental Protection Law of the People's Republic of China and the provisions of laws and regulations related to the Company's [environment and natural resources] and actively takes the initiative to prevent and reduce environmental pollution and ecological damage. Vigorously advocating and actively taking water-saving measures, the Company has no problem with the acquisition and utilization of water resources, nor does it exert any significant impact on the environment and outside world.

7 Significant benefits brought by normalized green offices

Video conference

From January to December of 2018, the Company held 138 video conferences in total. The total duration of the video conferences was 430 hours and the average duration of the video conferences was 3.11 hours. Supposing that an average travelling expense of RMB3,000/time is provided for eight attendees outside Shanghai, the Company saved travel costs of more than RMB3.31 million in 2018.

Video conference

The Company installed over 90 virtual servers. The resource utilization rate was improved significantly after the application of virtualization technology.

CPU resource utilization rate	Increasing by 6 times
Memory utilization rate	Increasing by 3 times
Storage capacity utilization rate	Increasing by 3 times
Network bandwidth utilization rate	Increasing by 4 times
Power consumption	Decreasing by 9 times
UPS power	Decreasing by 5 times
CRAC power	Decreasing by 3 times
Utilization rate of machine room area	Increasing by 6 times

Collaborative office management OA

Up to now, the Company's OA has over 20,000 users, initiated over 2.64 million processes, and uploaded more than 2.25 million files. If each file has 10 pages on average and each electronic file is printed twice for distribution, it is equivalent to cumulative savings of more than 45 million pieces of paper.

Our Responsibility, Our Commitment (2018)

1. Let people take medicine of high quality and make the medicine affordable: Shanghai Pharmaceuticals is patient-oriented, adheres to innovation, efficacy, safety and compliance, closely integrates medical development and clinical needs, and is open to cooperation and works together with partners. We continue to seek new ways and methods for the diagnosis and treatment of major diseases and chronic diseases, provide safe and effective branded therapeutic drugs, continue to increase investment in R&D, pave the way for innovative development in the pharmaceutical industry, and accelerate the development of major innovative drugs, gene therapy and cell therapy products, and microecological products. We will continue to strive for excellence and continuously improve the energy level of production technology and equipment, production management and quality management with world-class standards to ensure the quality and safety of drugs.

2. Let people take medicine with ease: Shanghai Pharmaceuticals has basically established the nation's third drug and medical device distribution service platform and innovation platform, and has a modern drug distribution system that covers 31 provinces and cities in China and has a high level of intensification and informatization. In the future, through (1) the innovative drug distribution approach, we will continue to provide services for the reform of medical institutions, and simplify the process of drug purchase by patients and improve service experience by means of leading supply chain management, information technology, and logistics technology; (2) upgrading global resource allocation, we will build a new structure of integrated services with large channels, expand international perspectives, and enhance the overall capabilities of one-stop service, integrated cooperation, and seamless management through cooperation in technology and services, and continue to introduce the world's most valuable innovative therapeutic drugs with optimal efficiency through the establishment of an internationally competitive import variety operating platform; (3) accelerating the development of new online and offline retail models, and building a "backtracking cloud" service platform, focusing on the data of the whole process of production, distribution and use, we establish an electronic traceability and regulatory public platform covering drugs, equipment and other goods covering multiple regions to ensure the safe use of drugs of patients. Our ultimate goal is to transform Shanghai Pharmaceuticals' business platform into a service-driven and technology-driven modern health service provider.

3. Ensure that special needs of special groups are met: Shanghai Pharmaceuticals, as the group-based industrial company with the most abundant pharmaceutical approvals in China, will continue to ensure the normal supply of low-cost drugs in shortage, and continue to bring good news to special groups and patients with rare diseases.

4. Care for the community and help build a healthy China: Shanghai Pharmaceuticals pays close attention to the backward medical conditions in remote mountain areas of China and responds positively to the call from the government about healthy China and targeted poverty alleviation. We have invested RMB10 million to launch the establishment of a special fund for the "Shanghai Medical Care Guardian Plan" to build hope clinics in Yunnan, Guizhou and other mountain areas, train local village doctors, and help children with congenital heart diseases in Yunnan through free medical consultation and follow-up surgery. Shanghai Pharmaceuticals hopes to make full use of its expertise to improve local people's health.

5. Sound governance and operations ensure the interests of investors: Shanghai Pharmaceuticals is an A+H listed company. It also takes into account the requirements of laws and regulations in China and Hong Kong and maintains sound governance and operations. The management of the Company performs its duties diligently and takes the initiative to create more values for shareholders.

6. Respect the value of employees and create opportunities and platforms for employee development: Shanghai Pharmaceuticals constantly integrates internal and external recruitment channels and resources, enhances market allocation, and attracts various types of talents; pays high attention to the growth and development of employees, and provides employees with systematic learning development paths and training courses to achieve organizational empowerment; adheres to the concept of remuneration based on position, ability, performance and market, improves employee remuneration system, performance assessment system and benefit system, so that employees can share the development results.

A top-down view of several hands of different skin tones cupping a mound of dark brown soil. A small, vibrant green basil-like plant with four leaves is growing out of the center of the soil. The hands are positioned in a circle, with some wearing light-colored shirts and others darker. One hand at the bottom left wears a brown leather watch with a silver buckle. The background is a neutral, light grey.

6

CHAPTER



Our Responsibility, Our Commitment (2018)



Tel: +86-021-63730908 Address: No. 200 Taicang Road, Huangpu District, Shanghai
Website: www.sphchina.com



Official Weibo



Official WeChat



This report is printed on recycled paper

Copyright reserved by Shanghai Pharmaceuticals Holding Co., Ltd.
Reprinting or reproduction is not allowed without permission Your
comments and suggestions on this report will be appreciated



Century-Old Shanghai Pharma

Trustworthy Medicine We Provide

Shanghai Pharmaceuticals Holding Co.,Ltd.

Tel: +86-021-63730908

Address: No. 200 Taicang Road, Huangpu District, Shanghai

Website: www.sphchina.com