



SINO BIOPHARMACEUTICAL LIMITED

中國生物製藥有限公司

(Incorporated in the Cayman Islands with Limited Liability)

(Stock Code: 1177)



2016

**Environmental,
Social and
Governance Report**

2016 Environmental, Social and Governance Report

Content

I.	ABOUT THIS REPORT	2
II.	STRATEGY AND MANAGEMENT OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE MATTERS	3
	2.1. Participation of stakeholders	4
	2.2. Importance assessment	4
III.	ENVIRONMENTAL PROTECTION	5
	3.1. Construction of environment, health and safety (“EHS”) management system	5
	3.2. Use of resources	6
	3.3. Environmental impact	7
IV.	STAFF DEVELOPMENT AND PROTECTION OF THEIR RIGHTS AND INTERESTS	8
	4.1. Employment	9
	4.2. Development and training	9
	4.3. Health and Safety	11
	4.4. Democratic management and caring for employees	13
V.	OPERATION PRACTICES	13
	5.1. Supply chain management	13
	5.2. Product responsibility	14
	5.3. Anti-corruption	17
VI.	CONTRIBUTION TO THE SOCIETY	18

2016 Environmental, Social and Governance Report



I. ABOUT THIS REPORT

Sino Biopharmaceutical Limited (the “Company” or “Sino Biopharmaceutical”), together with its subsidiaries (collectively, the “Group”), is an integrated pharmaceutical enterprise. Applying advanced modernized Chinese and biomedical technology, the Group researches, develops, manufactures and markets a vast array of health enhancing modernized Chinese medicines and chemical medicines. The Group’s products can be grouped under the two major therapeutic categories of hepatitis and cardio-cerebral diseases. The Group also actively develops medicines for the treatment of tumors, analgesia, orthopedic diseases, anti-infection, parenteral nutrition, respiratory system diseases, anorectal diseases, diabetes and other diseases to meet the increasing demands of the market, medical practitioners and patients. In order to enhance our sustainable competitiveness, the Group also actively seeks for cooperation with international enterprises, promotes the enlarged healthcare industry strategy, nurtures the internet plus business and develops specialty hospitals.

Sino Biopharmaceutical is pleased to issue the first environmental, social and governance report, which covers the Company and its subsidiaries including Chia Tai – Tianqing Pharmaceutical Holdings Co. Ltd. (“CT Tianqing”), Lianyungang Runzhong Pharmaceutical Co., Ltd. (“LYG Runzhong”) and Lianyungang Chia Tai Tianqing Medicines Co., Ltd. for the year ended 31 December 2016, to report practices, performance and development of the Group in corporate social responsibility in 2016 to our shareholders, staff, clients, partners and other stakeholders.

This report is prepared in compliance with the requirements as set out in the Environmental, Social and Governance Reporting Guide under Appendix 27 to the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited.

2016 Environmental, Social and Governance Report



II. STRATEGY AND MANAGEMENT OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE MATTERS

With the continuous development and expansion of the scale of enterprise and the promotion of the internationalization process, the Group is gradually integrating the sustainable development strategy into its overall development strategy system.

Our mission: Based on continuous innovation in research and development (“R&D”) with improvement of quality, while providing customers with quality products and services to improve the quality of life, we will strive to maximise the investment return to shareholders and satisfy personal development needs of the staff, and take up more social responsibility to contribute our development results to the society.

Our objective: By working with industry elites, we will make efforts to promote the development of social responsibility in the healthcare industry and make the Group become a respected corporate citizen in the industry.

Our strategy: We will integrate the philosophy of sustainable development into our overall corporate development plan to fulfill social responsibility, explore a more clear path to make the Group become a leading enterprise with sense of social responsibility and philosophy of sustainable development in the healthcare industry, and at the same time integrate the sense of social responsibility and the philosophy of sustainable development into various business segments of the Group to make it the basic principle of behavior of our staff.

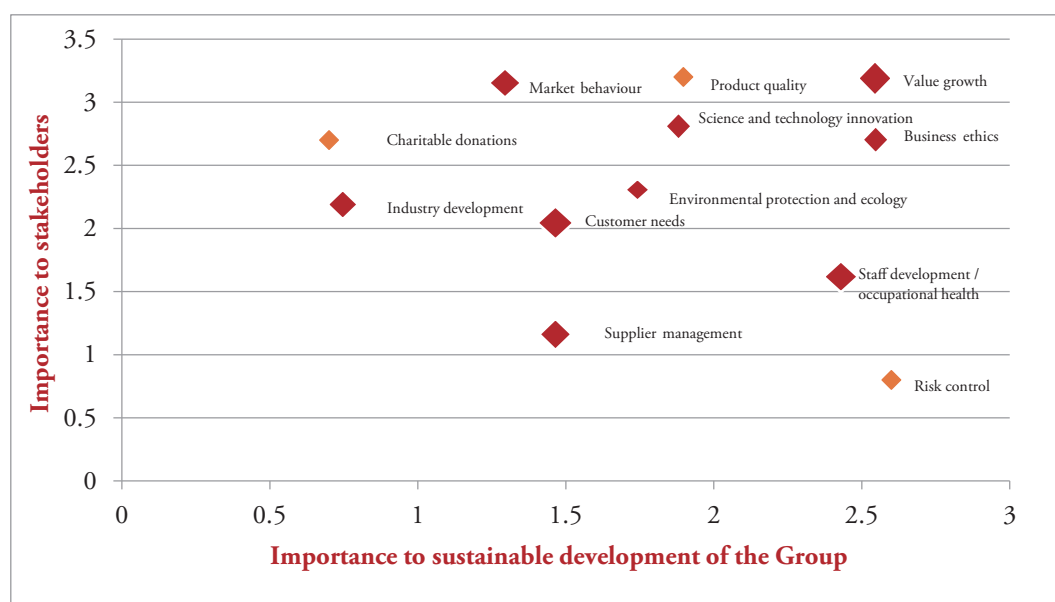
2016 Environmental, Social and Governance Report

2.1. Participation of stakeholders

According to the actual situation of operation of the Company, our stakeholders are mainly governmental and industrial regulators, investors, customers and consumers, suppliers, employees, community, industry peers, media and general public. In 2016, we communicated with stakeholders mainly by the following methods to better perform our social responsibilities:

Stakeholders	Methods of communication
Governmental and industrial regulators	Government visits, supporting government projects, participation in policy development, industry collaboration
Investors	Board of directors, information disclosure, conference exchange, ordinary visits, website, mail, telephone
Customers and consumers	Academic seminars, new product launching conference, customer service, telephone consultation, complaint handling
Suppliers	Standardized supplier management system, improved procurement tender mechanism, annual evaluation
Employees	Trade union, employee congress, multi-type training, safety management, cultural and sports activities, health examination, paid annual leave
Community	Community activities, charitable organizations, volunteer work
Industry peers	Trade organizations, forums, conferences
Media and general public	Information disclosure, public opinion monitoring, media communication mechanism, website

2.2. Importance assessment



III. ENVIRONMENTAL PROTECTION

In pursuing economic development, to maintain sustainable development of the country and the enterprise as well as to fulfill a healthy and better life of our countrymen by protecting the environment and searching for ecological civilization are also our concerns. The Group attaches great importance to energy conservation, emissions reduction and environmental protection, and will continue to put more efforts to protect the environment.

3.1. Construction of environment, health and safety (“EHS”) management system

■ EHS Management System

Taking CT Tianqing, a major subsidiary of the Group, as an example, the company has established a relatively comprehensive EHS management organization. The environment management affairs are taken charge by the safety production division which is equipped with special environmental protection personnel responsible for the environment impact assessment on construction projects and “Three Simultaneous”^(note) completion acceptance, environmental protection facility operation, environment monitoring, handling of environmental pollution incidents and other daily environmental protection related matters.

(Note: Article 41 of the Environmental Protection Law of the People’s Republic of China requires the simultaneous design, simultaneous construction and simultaneous production of the anti-pollution equipment with the main body of any construction project)

In addition, CT Tianqing has formulated relevant environmental management system to have effective control and management on the company’s environmental factors, so as to ensure the effective operation of environmental protection work. The company has long set great store by the sustainable development strategy of establishing itself as an “environmental-friendly enterprise”, and has strictly controlled the emission of waste from production through the combined effect of enhanced production process, technology advancement and adoption of environmental protection facilities, so as to eradicate the adverse impact on staff and the environment.



2016 Environmental, Social and Governance Report

According to internal assessment, CT Tianqing achieved the followings in 2016:

1. The implementation rate of the company's "environmental impact assessment" and "Three Simultaneous" system was 100%;
2. Received the pollutant discharge permit according to the laws, met the requirements of the pollutant discharge permit and paid the pollutant discharge fees in full as required;
3. The total emission of the key pollutant COD (namely, chemical oxygen demand) met the aggregate emissions stipulated by the environmental protection department in the place where its businesses operate;
4. The emission of the company's major pollutants was stable and up to standard, with standardized setup at sewage outlets;
5. Non-hazardous disposal rate for industrial solid waste was 100%;
6. No use of prohibited substance, which is in line with the relevant policies in national pharmaceutical industry;
7. Complied with laws and regulations related to environmental protection; and
8. The production process of the company did not involve heavy metals and there was no discharge of pollutants containing heavy metals.

■ Environmental impact assessment on new investment projects

For new construction projects or reconstructing projects, the Group conducts environmental impact assessment in a timely manner, and makes design, construction, pilot production and acceptance inspection in accordance with the "Three Simultaneous" requirements for environmental protection.

For example, CT Tianqing has attached great importance to environmental protection since its establishment. All phases of projects in the factory have strictly complied with environmental protection approval and acceptance procedures.

Case study:

In August 2016, the Environmental Protection Bureau of Haizhou District, Lianyungang approved the environmental impact statement of the storage center projects in the new production plant of CT Tianqing in Haizhou. The project is currently under construction.

3.2. Use of resources

As a pharmaceutical enterprise, the resource consumption of the Group mainly comes from water resources, electricity and steam. The Group strives to reduce resource consumption by adopting energy-saving equipment, technological innovation, reasonable planning and design and other measures.

■ Energy consumption

The Company requires that its subsidiaries shall establish an energy-consumption equipment account and energy consumption account for each department by enhancing energy measurement, detailing tertiary measurement and comprehensively collecting and sorting out energy utilization.

Resource consumption data of CT Tianqing during the reporting period

Total water consumption (cubic meters/year)	Total power consumption (KWHs/year)	Steam (tons)
890,128	28,030,000	52,138

■ Energy conservation

The energy consumption of the Group's subsidiaries in the process of production and operation is reduced through measures like adjusting product mix, eliminating backward energy-intensive products, phasing out high energy-intensive outdated equipment and adopting rational energy-saving technology.

2016 Environmental, Social and Governance Report

Case study 1: Energy-saving measures in the new production plant of CT Tianqing in Haizhou

1. Frequency conversion control is adopted for new equipment to save energy.
2. Purified water preparation equipment in No. 3 workshop and No. 8 workshop adopted reverse osmosis (“RO”) concentrated water recovery measures. The recovered RO concentrated water can be used for the water supply of cooling tower and vacuum system. While saving water, it can reduce the occurrence of scaling resulted from the high hardness of water. In 2016, on the daily basis of 25 tons of recycled amount, this measure could save as much as 9,125 tons of water.

Case study 2: Energy-saving measures adopted by LYG Runzhong

1. RO concentrated water recovery is adopted in the phase I purified water equipment to collect the RO concentrated water to the gathering tank and pump to the vacuum pump for use. In 2016, on the daily basis of 40 tons of recycled amount, this measure could save as much as 14,600 tons of water.
2. Some equipment which used to directly use drinking water for cooling has changed to use cooling water, and management is strengthened to reasonably reduce the amount of water input in the water ring vacuum pump system. Consequently, the amount of drinking water consumption is relatively decreased when the production increases.
3. Frequency conversion control is generally used by high-power equipment and energy-saving products are adopted by newly purchased equipment as much as possible to save electricity.

The cooling tower system, water ring vacuum pump system, chilled water system, hot water system of CT Tianqing all adopt circulating water equipment to save water resources in a more effective way. Measures like detailed management and strengthened daily patrol are also taken to eradicate energy waste. As a result, while the production value of the company increased substantially in 2016, its energy consumption per ten-thousand-Yuan output value and water consumption per ten-thousand-Yuan output value declined significantly.

3.3. Environmental impact

The impact of the Group’s operation on the environment is mainly concentrated on the consumption of energy and raw materials as well as the production of waste water, exhaust gas and solid waste (“Three Wastes”) in the process of production and operation. While taking a series of energy-saving measures, the Group also keeps lowering the impact on environment by strengthening the construction of environment management system, improving production technology, adopting advanced equipment, using clean energy and raw materials, implementing green office, etc.

■ Emissions of Three Wastes

The pollutant data of CT Tianqing during the reporting period was as follows:

Water discharge	COD emissions	Solid waste disposed
327,709 tons	23.58 tons	210.39 tons

■ Emissions reduction measures

In respect of waste water discharge, the existing waste water of CT Tianqing is mainly generated from water processing, cleaning, testing, air conditioners and domestic sewage. The composite waste water produced in the factory is disposed by the sewage treatment station of the company to reach standard and discharged into the municipal sewage pipe network, and finally discharged outside after centralized processing in the sewage disposal plant.

With regard to solid waste, the types of the solid waste in the new production plant of CT Tianqing in Haizhou include sludge, waste activated carbon, waste drugs, abandoned bottles, waste packaging materials, cartons and household garbage, which are all collected by category, and entrusted to relevant party for treatment. Of these wastes, hazardous solid waste are all entrusted to local units with business license qualified for the collection and treatment of hazardous waste to eliminate the adverse impact on the environment and protect environmental safety in the locality.

2016 Environmental, Social and Governance Report

For exhaust gas emission, the exhaust gas in the new production plant of CT Tianqing in Haizhou is produced from the smashing process in some workshops, with a small amount of dust from the packing section and water vapor from the drying section, which are all collected by the workshop pipeline for high-altitude emission via exhaust funnels. Of the exhaust gases, dust-laden exhaust gas will undergo high-altitude emission after being processed through cloth bag dusting system.

In 2016, CT Tianqing achieved the followings:

1. Adopted the technique of membrane bioreactors for sewage treatment to improve the stability of effluent from sewage treatment;
2. Changed the sewage pipes of the company into open pipes and open channels to reduce the risks of waste water leakage;
3. Upgraded vacuum pumps to reduce the production of waste water, and expanded the sewage treatment station in a timely manner to make sure that its sewage treatment capability could meet the needs of production;
4. Collected and disposed of fugitive exhaust gas of the company and upgraded old equipment to improve handling efficiency and enhance the air quality in the plant sites; and
5. Household garbage was handled by the municipal government; the recycling utilization of waste organic solvent was intensified to reduce the production of waste; dangerous waste repository was upgraded to Class-A warehouse to elevate the storage capacity of hazardous wastes.

■ Green office and travel

The Group integrates the concept of green development into every link of corporate operation. The Group actively promulgates relevant systems to advocate ways of office work and travel that have minimal impact on the environment and reduce carbon footprint starting from saving water, electricity, office supplies and printing materials, and reducing oil consumption, which not only can save energy, improve energy efficiency and reduce pollution, but is also conducive to health while maintaining efficiency.

Measures for green office and travel adopted:

1. E-mails are used instead of printing and photocopy. Meeting agenda will be emailed to participants of the meeting in advance to reduce the use of paper;
2. Advocate the use of recycled paper, double-sided printing and reuse of single-sided paper as much as possible when using printers or photocopiers;
3. Scale down font size and reduce paper margins to make the format of text more fitted with the paper;
4. Stop using thermal paper in operating fax machines to reduce waste;
5. Six bicycle parking sheds are set in three plant sites by subsidiaries in Lianyungang to encourage employees to commute by bike; and
6. Build a green office and achieve energy efficiency in construction and ecological environmental protection from building materials, design of the office and office purchase.

During the reporting period, there were no incidents of non-compliance with the relevant environmental regulatory requirements that had a material impact on the businesses of the Group.

IV. STAFF DEVELOPMENT AND PROTECTION OF THEIR RIGHTS AND INTERESTS

Adhering to the principle of people first, the Group gradually optimizes its talent management system, respects and recognizes the personal value of its staff at all times, and provides a platform for self-development and self-enhancement of staff. We value the sustainable development of talents and provide our employees with equal opportunities for growth by actively exploring and innovating training mechanism and career development channels. We have strengthened the construction of an echelon of talents to reserve outstanding personnel. We will persevere to do a good job in staff caring and democratic management, protect the health and safety of staff and foster harmonious labour relation as well as positive corporate culture.

2016 Environmental, Social and Governance Report

4.1. Employment

■ High-caliber, dynamic and talented team

As at 31 December 2016, we had a total of 18,163 employees, of which, 10,535 were male and 7,628 were female. The composition of our staff is characterized by younger in age, high level of education and balance in gender.

■ Protection of the rights and interests of staff

During the reporting period, the Group strictly complied with the Labour Law, the Labour Contract Law and other relevant laws and regulations of the country. The social insurance coverage rate and the rate of signed labour contracts are both 100%.

Both the Company and its subsidiaries have signed with all of their staff labour contracts, which have stipulations on prior notice period regarding consultation and negotiation and other relevant clauses. Prior notice will be given to staff when material operational changes that may have a severe impact on staff are to be implemented.

The Group has always laid emphasis on protecting the legitimate rights and interests of its staff with assured labour rights and interests from remuneration package, recruitment and promotion, development and training, health and safety, working environment and corporate culture as well as anti-discrimination, with an aim to fostering harmonious labour relation.

It has been a consistent policy of the Group to fight against discrimination and advocate fair competition. Men and female employees enjoy equal pay for the same work. Female employees will have their jobs retained when they are in their pregnancy and lactation period. According to the law of the country, maternity leave is provided to female employees as well as male employees whose spouse has given birth.

The remuneration systems are established through a scientific and reasonable design, by taking reference to the local market and industry standard of the subsidiaries, the value of the post in concern and the performance of the staff. The remuneration level of staff has an obvious competitive edge in the industry and the places where the enterprises are located.

■ Absorption of talents

The Group regards the continued development of talents as an important guarantee to achieve the strategic objective of the Company. The Group offers ample room for career development of its staff through human resource management measures such as improving the talents absorption mechanism, establishing platform for career development, and regulating incentive and promotion mechanism.

In respect of optimizing external recruitment channels, our enterprises continue to bring in talents through channels such as large recruiting websites, job fairs, campus job fairs and head-hunting agencies. However, CT Tianqing even went a step further in 2016 to hold company promotion conference and high-end job fairs abroad and succeeded in attracting advanced researchers.

With regard to getting through the mechanism of internal flow of talents, the Group encourages its staff to achieve mobility within the enterprises through internal competitive employment. This move can not only select suitable candidates to serve the enterprises, but also expand the channel for the career development of staff, thus enhancing talent effectiveness and tapping their potential.

4.2. Development and training

The Group sets great store by the cultivation of talents. By continuously exploring to improve and optimize its training system and gradually enriching training programs and content, the Group tends to make training play an increasingly important role in the process of talents cultivation and become a platform for employees to enhance their professional skills and comprehensive quality.

■ Comprehensive training system

Our training courses can be classified into three sections, namely, new staff training, skill training for current employees and external training to meet the training requirements of different staff.

2016 Environmental, Social and Governance Report

Case study 1: Training system of CT Tianqing

Training of new employees	On-the-job training	External training
<ul style="list-style-type: none"> Corporate culture Corporate awareness Professional concepts and working methods Professional knowledge and skills Teamwork and collaboration etc. 	<ul style="list-style-type: none"> Management capacity enhancement for management personnel Enhancement of management capacity for frontline supervisors Enhancement of general skills Other business training 	<ul style="list-style-type: none"> Professional competence training Academic education training Vocational qualification examination

Case study 2: Induction training for new employees of LYG Runzhong

In the process of induction training for its new employees, LYG Runzhong has incorporated the “workplace sailing accelerator”, “the seven good habits of the pharmaceutical personnel”, “shaping the sunny career mentality”, “work experience sharing” and other courses into the program; provided guidance and training for new employees in career concept and working methods; enhanced the professional knowledge and skills training for new recruits through the “safety management knowledge”, “production management knowledge”, “quality and regulations”, “personnel health and microbiology” and other courses; and enhanced teamwork and helped new employees to integrate into our team through outdoor outward activities.



Outward training for new employees of LYG Runzhong

■ Extensive training courses

On the basis of the above, in 2016, CT Tianqing made the program design in three aspects, including enhancement of leadership and management capabilities of research and development management personnel, management capacity of frontline supervisors and improvement of occupational skills of staff; and in order to enhance professional capacity of the marketing team, it vigorously carried out various academic activities for more intensified training for marketing staff.

2016 Environmental, Social and Governance Report

Case study: “Training Camp of Management Capacity of Frontline Supervisors” of CT Tianqing’s production system

In November 2016, the opening ceremony of “Training Camp of Management Capacity of Frontline Supervisors” with first session of training was held, in which about 30 persons, including officer of each workshop and frontline management personnel from production system, attended such training. The first training topic was “Responsibilities and Roles”. Through group competition, case analysis, on-site combat exercises and other training methods, the participants re-examined the responsibilities and roles of front-line supervisors to enhance their own quality and establish a positive mentality of work.



The training site of “Training Camp of Management Capacity of Frontline Supervisors”

In December the same year, the second session of training of “Training Camp of Management Capacity of Frontline Supervisors” was held, focusing on “trust-based communication”. The course was divided into three modules: communication and understanding, interpersonal communication skills and management communication.

4.3. Health and safety

The Group has always paid attention to the health and safety of employees, focusing on working protection and management of production safety. We have used leading production equipment in the industry to regulate strictly the operation process under the pharmaceutical production quality control standards, and strengthened the training of production operation, training of production safety and safety inspection to provide a safe operating environment for employees. At the same time, we are concerned about the occupational health of employees and have provided health checkup for all staff.

■ Showing concern for employees’ occupational health

The Company requires its subsidiaries to improve construction of the occupational health management system from assessment of dangerous and harmful factors, protection of occupational health, health checkup, file management and so on. In each year, local regular hospitals are selected to provide general health checkup for all employees and specific health checkup for female staff. In view of possibility of staff of the production department having exposure to occupational hazards in the course of working, the Company provided physical examination of occupational hazards for such employees.

2016 Environmental, Social and Governance Report

Case study:

CT Tianqing is equipped with standard working protection products for staff, and through the transformation of equipment and technical improvements, it reduced and controlled the dust, chemicals, noise and other occupational hazards, improved operating conditions for staff, and protected the health of employees. At the same time, it held regularly special occupational health education and training, made the occupational hazards on-site testing on employees' operating site, and posted safety charts at the operating site.



Left: On-site inspection at workshop of CT Tianqing



Right: Safety charts posted in the working place of CT Tianqing

■ Adhering to safe production

The Company's subsidiaries are required to formulate annual safe production training plan, and organize the frontline production staff to actively participate in the plan to improve the safe production awareness and related skills for all employees.

For example, in 2016, in addition to provision of safety knowledge training for new employees, occupational hazard training for frontline production staff, training of new national Safe Production Law, use of firefighting devices and equipment operation and other trainings, CT Tianqing also invited Lianyungang Municipal Security Fire Center to conduct the fire safety knowledge training. CT Tianqing has also carried out a series of safe production activities such as "Safe Production Hazard Inspection Month", "Safe Production Month", "Detailed Safe Production Inspection", and required to have the safe production responsibility letter signed at all levels, developed the safety management system, posted safety charts, held safety warning education film shows, and hanged safety propaganda banners. It also carried out different safety activities like escape drills and firefighting drills to remind all staff to always pay attention to safety through practical acts.



The "Safe Production Month" activities

2016 Environmental, Social and Governance Report

Case study:

In order to strengthen the occupational health management of employees, effectively control risk factors of workshop and reduce risks of staff's exposure to occupational hazards, in 2013, LYG Runzhong's Safety Production Management Office had carried out risk assessment of dangerous and harmful factors in workshop, and formulated preventive measures and emergency treatments. In 2016, LYG Runzhong revised the assessment report on the dangerous and harmful factors of each workshop.

4.4. Democratic management and caring for employees

Workers representatives congresses are set up in all major subsidiaries of the Company to provide protection of collective negotiation agreement for employees. The workers representatives congress is an important manifestation of enterprise democratic management, so that employees can participate in the management process, having the right to know, participate in, consult and decide upon the company's management affairs; this will not only strengthen the sense of ownership of our staff, and enhance their sense of responsibility and enterprising spirit, but also capture the wisdom of employees to promote healthy growth of the company.

In addition to providing employees with competitive salary, state-based paid leave and transportation subsidies, meal subsidies, special post allowance, high-temperature subsidies and festive gifts, the Group has also established a number of personalized benefit programs which can benefit the staff themselves or their families such as medical aid mechanism for serious illness.

During the reporting period, the Group did not have any incident of non-compliance with the requirements under relevant laws and regulations in relation to equal opportunities, discrimination, harassment, occupational health and safety, child labour and forced labour.

V. OPERATION PRACTICES

5.1. Supply chain management

■ Strengthen supply chain management

In order to guarantee the purchase and use of products and services with stable and reliable quality, all of the Group's principal subsidiaries have established strict management systems on suppliers to standardize the selection principles, audit and appraisal methods and approval procedures on suppliers (including suppliers of materials, distributors and providers of transportation services).

During the reporting period, the Group continued to strengthen the management on the purchase of materials. Based on the requirements of the new version of the Good Manufacturing Practice ("GMP") and the past performance of suppliers, it conducted classified and hierarchical management on suppliers. Major materials used for production were purchased from large and professional manufacturers. Our quality departments have led the establishment of a quality audit group to conduct audit and appraisal on new suppliers. They also conduct strict inspections and grading evaluations on the quality system and the production management system as well as the quality and timeliness of products delivery of existing suppliers on a yearly basis to determine whether such suppliers continue to be qualified.

Case study:

In 2016, CT Tianqing conducted an appraisal on suppliers of major materials which could affect the production and operating costs of products. While maintaining and assuring the production quality of products, it reasonably and in compliance with law introduced more competitive suppliers. The pricing management and control on suppliers were enhanced through bidding and tender negotiation to reasonably reduce the purchase cost and achieve dual controls on the quality and price of the materials to be purchased. It also coordinated the matching of materials purchase and production plans to ensure that materials can meet production demands in time with the required quality and quantity.

2016 Environmental, Social and Governance Report

5.2. Product responsibility

As a large pharmaceutical group integrating R&D, production and sale of pharmaceuticals, our business system covers the whole process from production of raw materials to sale of products. From the raw materials entering our plants to the processing of materials and the completion of product manufacturing, we conduct strict inspection on each segment and process with corresponding quality standards on internal control higher than national standards and all processes have to pass such inspection. In order to be responsible for our products and improve the availability of health products, we consistently improve the product workmanship and the management process to further reduce manufacturing cost and alleviate the burdens of patients.

■ Increase efforts on R&D and innovation of products

The Group has always been focusing on R&D and innovation and considered them as the lifeblood for the development of the enterprise. As a result, it has increased the investment in R&D and concentrated on the rapid industrialization of R&D results for new products.

➤Widen the R&D scope

The Group's several subsidiaries, namely: Nanjing Chia Tai Tianqing Pharmaceutical Co., Ltd., Jiangsu Chia Tai Qingjiang Pharmaceutical Co., Ltd. and Jiangsu Chia Tai Fenghai Pharmaceutical Co., Ltd., have been designated "Engineering Technological Research Centre for Treating Tumors and Cardio-Cerebral Phytochemistry Injections of Jiangsu Province", "Orthopedic Medicines Engineering Technological Research Centre" and "Engineering Technological Research Centre for Parenteral Nutritious Medicines" by The Science and Technology Committee of Jiangsu Province, respectively. The R&D Institute of CT Tianqing was recognized as the "National Postdoctoral Research and Development Institute", the "New Hepatitis Medicine Research Center of Jiangsu Province", "Engineering Technological Research Centre for Polymorphs of Drugs of Jiangsu Province", "Key Laboratory for the Study of Targeted Drugs for Treating Tumors" and can independently conduct the entire process of the study of new drugs.

Case study:

As at the end of 2016, CT Tianqing had over 180 items under R&D, including nearly 40 innovative Class I drugs and over 20 biological drugs covering tumors, hepatitis, respiratory system, anti-infection, endocrine, cardio-cerebral diseases, diabetes and other areas of treatment.

In 2016, CT Tianqing obtained 3 awards on science and technology at the provincial and ministerial level. "Entecavir" was awarded the first class prize of the Chinese Pharmaceutical Association. "Biapenem" received the first class prize for Scientific and Technological Progress of Shanghai City. "Tianqingganping" obtained the second class prize for Science and Technology of Jiangsu Province.

➤ Technological innovation recognized internationally

The R&D capability of the Group has been recognized internationally.

In 2016, CT Tianqing signed an exclusive licensing agreement with the US company Johnson & Johnson, granting Johnson & Johnson an international license to develop outside China an innovative medicine with immense potential for treating hepatitis. The cooperation marks that the innovation ability of the Group in treating hepatitis has been internationally recognized. It also sets a good beginning for multi-model international cooperation in the future.

In addition, Anlotinib Hydrochloride, a new drug, has obtained clinical approvals for treating lung cancer and ovarian cancer in the US and clinical trials are in smooth progress. It is also qualified as an Orphan Medicinal Product for ovarian cancer. Domestic clinical trials show that it has obvious curative effects on non-small cell lung cancer, metastatic colorectal cancer, soft tissue sarcoma and other cancers.

2016 Environmental, Social and Governance Report

➤ Value the protection of patents

To ensure that the innovation results can create maximum value to the enterprise, the Group actively conducts full protection of patents. During the reporting period, the Group was granted 198 clinical approvals, 5 production approvals, 17 new clinical applications and 8 production applications; and had also made 91 patent licensing notices (87 invention patents, 2 utility model patents and 2 apparel design patents) and received 249 new patent applications (240 invention patents, 8 utility model patents and 1 apparel design patent).

■ Improve intelligent production

The production plants of the Group's principal subsidiaries are designed and constructed based on the international standards of the US Food and Drug Administration ("FDA") and the EU Current Good Manufacturing Practices ("cGMP"). The Group adopts world-class equipment for drugs production which makes up an efficient and environment-friendly intelligent production line to provide essential hardware protection for stable product quality and safety.

➤ Adopt intelligent equipment

First-class equipment, leading technologies and strict internal control standards on quality all contribute to the stable, safe and reliable product quality of the Group.



Imported Production Lines of CT Tianqing

2016 Environmental, Social and Governance Report

➤ Promote lean production

The Group's principal subsidiaries have promoted lean production to reduce the resources in production and operating cost and make the production processes better align with the GMP requirements.

Case study:

In September 2016, CT Tianqing officially initiated the Total Productive Maintenance (TMP) program to achieve informationized and standardized management on the production equipment at its plants by front-line production staff.



Picture Initiation of the TMP program

➤ Newly-established projects

With more new products and new medicines coming onstream, some of the Group's subsidiaries are actively conducting expansion and constructing new projects to meet production needs. For example, Phase I of the R&D and Production Base for Innovative Drugs of CT Tianqing has commenced construction. The R&D and Production Base for Biological Drugs of LYG Runzhong was enlisted as one of the key investment projects of Jiangsu Province in 2016.



Layout plan of the R&D and Production Base for Biological Drugs of LYG Runzhong

■ Improve product quality management

The product quality management system of the Group covers all processes from products R&D to technological transformation and from materials supply to production, manufacturing and products circulation. With the implementation of internationalization strategies, the Group's principal subsidiaries have conducted international certification for various products. Continuous improvements are made on plant facilities, quality control and workmanship according to the international standards of cGMP of the European Union and FDA of the United States. In addition, we have actively conducted consistency appraisal and technological improvements to respond to the changes in the national medicine policies.

2016 Environmental, Social and Governance Report

Case study:

CT Tianqing has set up a working group on quality with over 200 staff which focuses on the formulation and improvement of product technologies, quality assurance during the production process, control of inspection and quality parameters as well as documents management and verification to ensure that its products meet the GMP requirements with quality assurance before, during and after the process.

In 2016, CT Tianqing passed over 20 inspections, including the GMP certification, special inspections and audits conducted by third parties, and 8 self-examinations on GMP. All defects spotted during inspections have been rectified.

■ Improve the availability of drugs

The Group strictly abides by relevant laws and regulations of the state and emphasizes customer services during the promotion of products. We have established an efficient business network and improved the efficiency of decision-making and professional promotion to improve the availability of drugs and services and help patients in more regions to have access to our products in more reasonable ways.

Case study:

CT Tianqing requires all sales staff to receive trainings on corporate culture, professional ethics and business ethics in the pharmaceutical industry before taking up their positions. Meanwhile, it also provides the marketing staff with trainings on relevant laws and regulations, rules and systems of the company and medical knowledge on products to standardize the activities of the marketing staff and ensure that patients can benefit from the promotion of medicines.

The Group did not commit any significant non-compliance on product safety during the reporting period.

5.3 Anti-corruption

The Group has been following the codes of ethics of a pharmaceutical enterprise of “Healthcare and Patients Orientation, Integrity, Independence, Legitimacy, Transparency and Responsibility” and attached great importance to integrity building. Based on the business nature and actual conditions of the enterprise, we have established an appropriate regulatory system and internal control measures to curb corruption and fraudulent behaviors in any forms. Meanwhile, we actively infuse the staff with the integrity and law-abiding concept and require our staff to keep high ethical standards and strictly abide by current laws, regulations and relevant practice requirements.

Integrity, law-abiding and anti-corruption clauses with binding effects have been set out in the employment contracts of our staff. The staff manual also sets out the Group’s aspiration and guidance on preventing corruption and fraudulent practices by the staff. We encourage the staff to directly report any behaviors breaching professional ethics to the senior management or the Department of Human Resources. We will keep the information of the informers strictly confidential and ensure that the informers will not be discriminated or revenged.

The Group’s principal subsidiaries have established scrupulous systems on the purchase of materials, which regulated the principles for selecting and evaluating suppliers and the approval procedures on purchasing. We make use of the bidding and tendering processes to ensure the fairness and openness of purchasing. For the sale of products, the enterprises have prepared detailed code of conduct on the promotion of drugs by the sales staff, which provided clear guidance on the communication and promotion activities of the staff with professionals on pharmaceuticals and health, academic specialists and other external parties to completely eradicate any inappropriate or illegal activities.

In addition, the Group has an internal audit department. While conducting regular and special audits, the internal audit department will supervise the implementation of anti-fraud measures and conduct in-depth investigations on any suspicious fraudulent cases.

2016 Environmental, Social and Governance Report

VI. CONTRIBUTION TO THE SOCIETY

As a responsible corporate citizen following the enterprise principle of “benefit the country, benefit the general public and benefit the enterprise”, the Group provides the society with quality products and services and actively seeks solutions to social problems on health. It also devotes itself to consistently improving platforms for community work and seeking more appropriate community service programs and activities to contribute to the society.

■ Establish community service platforms and perform responsibilities of a corporate citizen

The Group’s principal subsidiaries have made contributions to the community in recent years through donations to students, earthquake relief, local poverty relief and other charitable activities. Meanwhile, they have actively established and improved platforms for community work. For example, CT Tianqing and its senior management contributed to the establishment of the Lianyungang CTTQ Charity Foundation which concerns about the people’s livelihood and the vulnerable groups, and promotes love and care as its mission for charitable work, including poverty alleviation, medical assistance and education assistance.

Case study: Donations to students

In 2016, Lianyungang CTTQ Charity Foundation provided education subsidies of a total of RMB 500,000 to 177 students from Nanjing University, China Pharmaceutical University, Shenyang Pharmaceutical University and Nanjing Tech University.



Left: Signing ceremony of “CTTQ Scholarship” at Nanjing University



Right: Award-giving ceremony of “CTTQ Education Subsidies” at China Pharmaceutical University

■ Initiate Chinese Pharmaceutical Enterprise Social Responsibility Alliance

In July 2016, 8 companies including CT Tianqing and PHIIC (China National Pharmaceutical Industry Information Center), Guangzhou Pharmaceutical Group, Alibaba Health, jointly launched the Chinese Pharmaceutical Enterprise Social Responsibility Alliance. The aims of the Alliance lie in “striving to enhance the social responsibilities of pharmaceutical enterprises, improve the social responsibility image of pharmaceutical enterprises and promote the integration of social responsibilities of enterprises with the competitiveness of Chinese enterprises”. It will unite various stakeholders to initiate and conduct a series of corporate social responsibility activities, and to promote the development of Chinese pharmaceutical industry.

2016 Environmental, Social and Governance Report

■ Support medical programs and promote standard diagnosis and treatment

The Group continues increasing R&D investment. While accumulating more diversified product reserve and technical resources, it has also expanded the service coverage. With the joint efforts of partners in the pharmaceutical industry, it conducted many programs to promote the development of the Chinese medical treatment and healthcare industry.

In 2016, CT Tianqing provided strong supports to the “National Administration on Rational Use of Drugs for Gastrointestinal Tumors at Grass-root Medical Institutions”, the “Surgery Skills Program” (美刀項目) and the “Tianqing Blood • Zijijn Forum” to promote standard diagnosis and treatment of tumors and hepatic and gall diseases by clinicians, the in-depth communication between authoritative experts and young physicians in the medical industry and share the results in the development of clinical medicine.

Case study:

I. National Administration on Rational Use of Drugs for Gastrointestinal Tumors at Grass-root Medical Institutions

In order to respond to the government call and promote rational use of drugs and standard diagnosis and treatment, CT Tianqing established a group with about 40 experts in gastrointestinal tumors to conduct a tour lecturing in 16 provinces and provide training on medical staff.

II. Surgery Skills Program

The program was hosted by the China Branch of the Chinese Chapter of the International Hepato-Pancreato-Biliary Association and co-organized by CT Tianqing. It is positioned to be a high-end, professional and authoritative multidisciplinary comprehensive communication and study platform for hepato-pancreato-biliary surgeries. Since the initiation of the program, it has received strong support from various experts and consultants in China. During the reporting period, a series of continuing education, academic conferences, physicians trainings and other academic activities were held.

III. Tianqing Blood • Zijijn Forum

The forum was hosted by the China Continuing Medical Education Magazine and co-organized by CT Tianqing. Its aim is to further promote the progress and development of hematology diagnosis and treatment in China. More than 700 authoritative experts in the domestic hematology industry participated in the forum. They shared the latest achievements in the international hematology industry with outlook for the development trend in future.

■ Focus on hepatitis and improve the prevention and treatment of hepatitis in China

CT Tianqing, a subsidiary of the Company, is a leader in drugs for hepatitis in China. Besides providing patients with safe and effective products, CT Tianqing also takes active steps for improving the prevention and treatment of hepatitis in China. It has launched the “CTTQ Liver Research Fund”, the “Hepatitis B follow-up and clinical research platform in China” and the “Youth College of the CTTQ Liver Research Fund” since 2011 to create more value in the diagnosis and treatment of hepatitis in the social context.

2016 Environmental, Social and Governance Report

Case study:

1. CTTQ Liver Research Fund

In 2011, CT Tianqing donated RMB 10 million to the Chinese Foundation for Hepatitis Prevention and Control in the establishment of the “CTTQ Liver Research Fund” with the aim of supporting middle-aged and young medical staff in the 2nd and 3rd tier cities to conduct study on hepatitis to improve the prevention and treatment of hepatitis in China.

It funded 126 projects and supported 84 projects spreading over 29 provinces and municipalities in the first five years of the Fund (from 2011 to 2015). It has become a scientific research fund program with the largest number of projects applied, biggest impact and largest coverage for hepatitis in China.

In 2016, CT Tianqing donated another RMB 12.50 million to the Chinese Foundation for Hepatitis Prevention and Control, which will fund more grass-root physicians to widen their perspectives on clinical diagnosis and treatment and improve the scientific research capability in the following five years to improve the overall prevention of hepatitis in China.



Left: President of CT Tianqing donated RMB12.50 million to the Chinese Foundation for Hepatitis Prevention and Control



Right: Ceremony on appointment of members to the Management Committee of the “CTTQ Liver Research Fund”

2. Hepatitis B follow-up and clinical research platform in China

The platform was initiated by the National Health and Family Planning Commission under the coordination of the Chinese Foundation for Hepatitis Prevention and Control. The Hepatology Branch of the Chinese Medical Association is responsible for its operation and CT Tianqing provides exclusive support to it. It strives to promote standardized diagnosis and treatment among Chinese Hepatitis B patients and the administration of follow-up processes and improve the diagnosis and treatment of Hepatitis B in China.

The platform can send regular follow-up reminders to Hepatitis B patients on record and remind them to make subsequent follow-up visits at hospitals. It can help patients obtain more standardized diagnosis and treatment and health education and prevent or slow down development of diseases. As at the end of 2016, 47 hospitals participated in the platform. Over 135,000 patients were recorded in the system and more than 506,000 follow-up visits were conducted. It is the first database for chronic Hepatitis B in China.