康希诺生物股份公司
CanSino Biologics Inc.

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

STOCK CODE : 6185

2018

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

CONTENTS

Environmental, Social and Governance Report

I. ABOUT THE REPORT

(I) Basis of Preparation

The Environmental, Social and Governance Report 2018 of CanSino Biologics Inc. (hereinafter referred to as "the Report", "ESG Report") is the ESG Report that CanSino Biologics Inc. (hereinafter referred to as "CanSinoBIO", "the Company", "We") has disclosed to the public for the first time. The Report is prepared in compliance with the Environmental, Social and Governance Reporting Guide (the "ESG Reporting Guide") set out in Appendix 27 to the Rules of Governing the Listing of Securities of The Stock Exchange Limited ("Listing Rules") ("HKEX").

Additionally, the Report takes into full consideration the main areas of concern for stakeholders and the Company's business features. It aims to help stakeholders and other readers understand the Company's ESG policies, initiatives and performance, and to enhance communication and understanding between various stakeholders and the Company.

The Report abides by the "comply or explain" provisions set out in the ESG Reporting Guide.

Unless the context otherwise requires, definitions and acronyms of certain terms used in this Report in connection with our Company and our business shall have the same meanings as those defined in the prospectus dated March 18, 2019 issued by the Company.

(II) Scope of Report

Unless otherwise specified, the Report covers the period from 1 January 2018 to 31 December 2018 ("the reporting period"). The scope disclosed in the Report is the major production and operation location of the Company, namely the office building and manufacturing facility located in Tianjin, Mainland China.

(III) Source of Information

The information and cases in the Report was extracted mainly from the Company's statistical reports, relevant documents and internal communication documents. The Company undertakes that there is no false record or misleading statement in this report, and assumes liabilities for the authenticity, accuracy and completeness of its contents.

(IV) Access to the Report

The Report is in traditional Chinese and English versions for readers' reference, and its electronic version is available on the HKEX's website (www.hkexnews.hk) under the headline category of "Financial Statements/ ESG Information" of CanSinoBIO or the website of CanSino Biologics Inc (www.cansinotech.com).

II. ABOUT THE COMPANY

(I) Company Profile

We are a national high-tech enterprise founded in China. Our four founders once served as senior executives in multi-national pharmaceutical companies. Our mission is to develop, manufacture and commercialize high quality, innovative and affordable vaccines. The Company is committed to providing solutions for the prevention of communicable diseases and infectious diseases around the world, and is specialized in developing, manufacturing and commercializing high-quality vaccines for human use.

Our vaccine pipeline, which is strategically designed to meet China's vast and underserved market, can be summarized into three categories: (i) globally innovative vaccines (such as Ad5-EBOV, our TB Booster candidate and our PBPV candidate); (ii) potential first-in-class vaccines in China (such as our DTcP vaccine candidates and MCV4 candidate); and (iii) potential best-in-class vaccines in China developed to compete with the imported products in the PRC market (such as our PCV13*i* candidate).

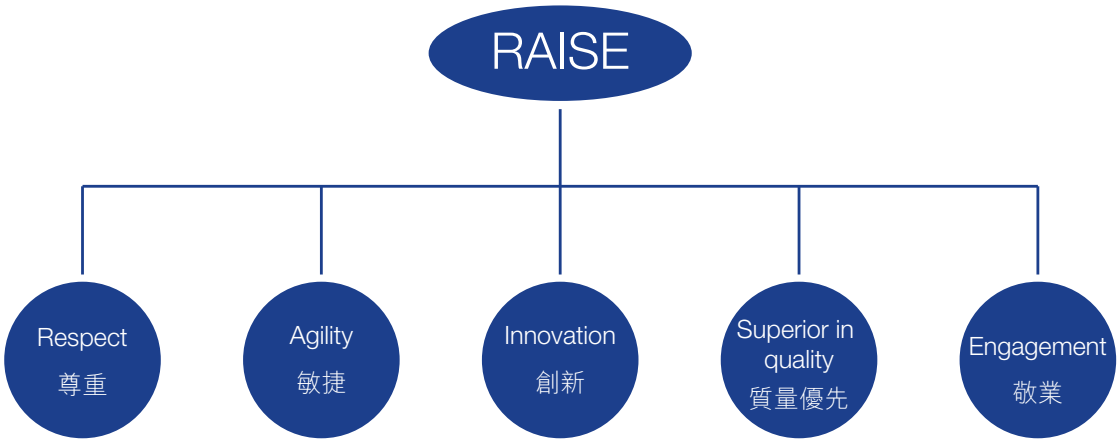
Our vaccine pipeline is developed through four key platform technologies: (i) adenovirus-based viral vector vaccine technology; (ii) conjugation technology; (iii) protein structure design and recombinant technology; and (iv) formulation technology. These platform technologies lay a good foundation for the research and development of vaccines. As at the end of the reporting period, we had been developing 15 vaccine candidates for 12 disease areas. In addition to our three near-commercial assets covering meningococcal diseases and Ebola virus disease, we have six vaccine candidates in clinical trial stage or CTA stage. We also have six pre-clinical vaccine candidates, including one combination vaccine candidate.

At present, we own and operate a commercial-scale manufacturing facility in Tianjin with a gross floor area of approximately 37,000 m^2. Its design, construction and operation has successfully met international standards. The facility has an annual bulk production capacity of approximately 70 million to 80 million doses. Our GMP pilot plants in our R&D center have passed EMA's QP inspection.

A world with health, hope and promises are the pursuit of CanSinoBIO at its inception, and that is where the name of CanSinoBIO finds its origin. Infectious diseases have dashed the hope, visions and good lives of countless people, while vaccination is the most cost-effective way for disease control and prevention. For this reason, we will make unswerving efforts to develop and produce high-quality vaccine products to make due contributions to the cause of global public health.

(II) Corporate Culture

We adhere to the management concept of "people-orientation, openness and inclusion, responsibility first" and advocate the corporate culture of RAISE, namely "Respect", "Agility", "Innovation", "Superior in Quality" and "Engagement" where employees are required to have teamwork spirit and a strong sense of responsibility.



Respect

- Put yourself in other people's shoes to bring out the best in others
- Everyone is entitled to respect, and should not be judged on the difference of qualifications, work processes and opinions
- Treat others truthfully and honestly
- Listen and respond to concerns when they are raised
- Do not discriminate against others on the basis of incompatibility, learn to tolerate each other
- Everyone's time is entitled to be treated with courtesy and respect

Agility

- Fast and precise execution
- Sensitive to changes in both internal and external environment
- Strong subjective initiative
- Flat Management
- Through Communication and Authorization
- Fast decision making
- Accountability for results

Innovation

- Technology and Product Innovation
- Process and System Innovation
- Financial Management and Capital Operation Innovation
- Marketing and Business Promotion Innovation

Superior in Quality

- Science-based product and process quality
- Job quality
- Quality compliance, a particular focus of the pharmaceutical industry
- Quality of management practice and system
- Quality of employees

Engagement

- Sense of ownership
- Devotion and accountability

III SUMMARY OF ANNUAL ESG PERFORMANCE

In 2018, we focused on environmental management by establishing a sound system that promotes energy conservation, emission reduction and advocates green office; we safeguarded employees' rights by providing them with diverse development channels, adequate training and safe and comfortable working conditions; we were committed to building R&D capabilities through increasing R&D investment and have built a comprehensive portfolio of vaccine products; we strengthened risk management with the aim to create a clean and honest working environment within the Company and throughout the supply chain; we fulfilled corporate civic duty by actively launching and supporting various public welfare activities.

At present, China is accelerating the implementation of the "Healthy China Strategy" to promote high-quality development of the healthcare sector. It is time to set sail when the wind is coming. CanSinoBIO will continue to strengthen ESG management. Bearing our original aspiration in mind, we will work together with all stakeholders to create a world with health, hope and promises, thus becoming a contributor to global sustainable development.

Environment

- The energy consumption per floor area was 6.29 MWh per square meter
- The GHG emission per floor area was 2.23 tCO_2e per square meter
- The annual oxynitride emissions amounted to 1.51 tonnes

Empolyment and Labour Practices

- There were 322 employees and 7 counsellors in service
- 51% were female employees and male employees accounted for 49%
- 94% of female employees and 96% of male employees participated in various training activities of the Company

R&D and Products

- There were 93 internal R&D personal, 95.7% of whom have a degree or above
- The annual R&D expenses were approximately RMB114 million
- We had been developing 15 vaccine candidates for 12 disease areas

Social Contribution

- We donated HKD1 million to the Community Chest
- We donated RMB54,754 million to support the "Sixth Life Science Basic Experimental Skill Competition for College Students"
- We donated RMB43,052 to support various poverty alleviation programs

IV ESG MANAGEMENT

(I) ESG Management Concept

Committing to our original aspiration of bringing "health, hope and promises" to the world, CanSinoBIO adheres to the mission of "develop, manufacture and commercialize high quality, innovative and affordable vaccines". We specialize in the development, manufacturing and commercialization of high-quality vaccines for human use. Taking providing solutions for the prevention of communicable diseases and infectious diseases around the world as our responsibility, we are committed to contributing to the cause of global public health.

We know that good ESG management is critical to meeting stakeholders' expectations and improving the performance of the Company. The Company's Board of Directors is responsible for reviewing its ESG strategies and reports, and overseeing ESG work and important ESG-related issues to ensure that the Company's core values are reflected in these strategies and the ESG-related risk management and internal control systems are operated appropriately and effectively.

During the reporting period, based on our own business features, we established an organizational system and management system for corporate social responsibility and environmental protection issues, and defined the responsibilities of each department, which enhanced the Company's overall ESG management. We actively improved our ESG performance through continuous inspection and system optimization. We vigorously promoted a culture of environmental protection and corporate social responsibility fulfillment among all employees and deepened the integration of ESG concepts into the Company's operations, thus facilitated the sustainable development of the Company.

(II) Communication with Stakeholders and Identification of Material Aspects

We believe that learning about the demands of stakeholders can help the Company determine its long-term development direction and move towards a more sustainable future. The Company has built various channels for proactive and honest communications with stakeholders.

The main stakeholders, their concerns and communication channels we have identified are listed in the table below:

Main stakeholders	Key ESG concerns	Major communication channels
Governments and regulators	Employment, supply chain management, product responsibility, anti-corruption and community investment	Policy consultations, incident reporting, information disclosure and participation in government agencies' meetings
Shareholders and investors	Employment, product responsibility and anti-corruption	Shareholders' meetings, regular announcements and official websites
Employees	Employment, health and safety, development and training and labor standards	Quarterly meetings, employee activities, one-to-one interviews, opinion collection boxes, and mid-year/year-end summary conference
Customers and patients	Product responsibility and anti-corruption	Information disclosure, official public accounts and service hotline
Suppliers	Supply chain management and anti-corruption	Supplier inspection and suppliers meetings
Media and NGOs	Emissions, use of resources, environmental and natural resources, employment, supply chain management and product responsibility	Social media, official websites, press conferences and exchanges
Community	Emissions, use of resources, environmental and natural resources, and community investment	Community interaction, public welfare programs, poverty alleviation activities and social media

During the reporting period, based on various communication channels and in conjunction with the Company's operations, we identified "product responsibility" and "employment" as the most important concerns, "environmental management", "training and development", "health and safety" and "supply chain management" as important concerns, and "labor practice", "anti-corruption" and "community investment" as relevant concerns.

(III) Social Recognition and Honors

The Company has obtained multiple honors and awards since its establishment. Some of the recognitions and awards won in the past three years are listed in the table below:

Year	Awards
2016	New High-tech Enterprise Certificate 2016
	International Science and Technology Cooperation Base of Innovative Vaccine Technology Development and Formulation Technology in Tianjin City
	Overseas Chinese Contribution Award
	Top 20 Scientific and Technological Innovation Enterprise in Tianjin Development Zone
	Director Unit of the Overseas Chinese Association for Innovation and Entrepreneurship
	Contribution Award of the 3rd TEDA Innovation and Entrepreneurship Competition
2017	Biosafety Level 2 Laboratory
	China's Top 100 Innovative Growth Companies
	Future Unicorn in China's Life and Health Industry
	Symbolic Leading Enterprise in Binhai New Area
2018	Leading Enterprise in Tianjin Economic and Technological Development Area
	GMP Certificate for Recombinant Vaccine for Ebola Virus Disease (Adenovirus-based Viral Vector)
	Advanced Organization of the All-China Federation of Returned Overseas Chinese
	The First Batch of Leading Enterprises in the Strategic Emerging Industry in Tianjin City

In addition to corporate honors, the Company's founders, board members and management team also won a number of individual honors: one of them was selected for the national "1000 Talent Plan", and obtained the honorary title of "Specially-invited Expert"; three were selected in Tianjin's "1000 Talents Plan"; three were honored as the "Specially-invited Experts" in Tianjin City. In addition, Pierre Armond MORGON, the INED of the Company, have been recognized in 2013 as one of the Top 50 most influential personalities in the world of vaccines.

V ENVIRONMENT

(I) Environmental Management

We are in strict compliance with relevant environmental laws and regulations including the *Environmental Protection Law of the People's Republic of China* (《中華人民共和國環境保護法》), the *Law of the People's Republic of China on the Prevention and Control of Environmental Noise Pollution* (《中華人民共和國環境噪聲污染防治法》), the *Law of the People's Republic of China on Prevention and Control of Water Pollution* (《中華人民共和國水污染防治法》) and the *Law of the People's Republic of China on Solid Waste Pollution Prevention* (《中華人民共和國固體廢物污染環境防治法》), strictly fulfilling our environmental responsibilities.

Based on the Company's office and production characteristics, we have established an environmental management system for the usage and management of chemicals, the treatment and management of wastes and the treatment of wastes and waste liquid in labs. We have a special Environmental, Health and Safety (EHS) Department, which leads the Company's overall environmental management and system implementation to enhance employees' awareness of environmental protection.

Our impact on the environment and natural resources is mainly from resource consumption and emissions from office and production. We have taken appropriate measures to regulate the use of resources and the treatment processes of emissions, promote energy conservation and emission reduction by focusing on environmental performance in office and production processes, seeking to live in harmony with the environment.

During the reporting period, we did not make any major violation against any Chinese environmental law or regulation.

(II) Use of Resources

Our resources used mainly include power, natural gas and running water in office and production. In order to fully utilize the resources and mitigate impacts on the natural environment, we appropriately manage the use of energy and water resources and advocate the concept of green office.

In terms of the use of power, we are replacing incandescent lights with LED luminaries and the temperature of air-conditioners in office is set at 26 degrees Celsius in summer.

In terms of the use of natural gas, we adjust the power of gas boilers during the idling period to improve the usage efficiency of gas.

In terms of the use of water resources, we enhanced employee's awareness of water conservation and advocate the recycling of resources, and strengthened the daily maintenance of water facilities and pipelines so as to prevent any leakage.

Key Performance Indicators for Energy and Resource Consumption[1]

Indicator	2018 KPI
Total energy consumption[2] (MWh)	32,103.26
Direct energy consumption, including: Natural gas (MWh)	22,255.56
Indirect energy consumption, including: Electricity (MWh)	9,847.70
Energy consumption per floor area (MWh per square meter)	6.29
Total water consumption[3] (tonnes)	196,148.00
Water consumption per floor area (tonnes per square meter)	38.46

Notes:

(1) During the reporting period, we have not yet commercialized our products. Packaging materials is not applicable for us.

(2) Total energy consumption is calculated based on the total power and natural gas consumption and the conversion factors in the *National Standards of People's Republic of China General Principles for Calculation of the Comprehensive Energy Consumption* (GB/T 2589-2008).

(3) Our water resources come from the municipal water supply, without any problem in seeking for suitable water sources.

(III) Emissions

Main emissions of the Company include Greenhouse Gas ("GHG") and oxynitride. GHG mainly comes from the use of power and the burning of natural gas in office and production process. Oxynitride mainly comes from the burning of natural gas at production site. We reduce the emissions by improving the usage efficiency of natural gas.

Wastewater of the Company mainly includes industrial and domestic wastewater, which is treated by the wastewater treatment plant affiliated to the production plants. It will be discharged into the municipal pipe network after meeting the local discharge standards. We have installed wastewater monitors to monitor the key indicators and to ensure that discharge concentration of the key indicators meet the national and regional discharge standards.

Non-hazardous wastes mainly come from domestic wastes relating to office activities. We have entered into a treatment agreement with the environmental protection department of the development zone and the latter is responsible for collecting our domestic wastes and other non-hazardous wastes for harmless treatment. In addition, we advocate the reuse of office papers to reduce non-hazardous wastes.

Hazardous wastes mainly include inorganic and organic waste liquid, heavy metal liquid, empty reagent bottles, waste drugs, carcasses, contaminated wastes in labs, engine oil, contaminated wastes by engine oil and ion exchange resin. We have developed a system for treating hazardous wastes and have a special temporary warehouse in adjacent to the production plants for central collection, classification, pre-treatment and storage of the wastes. We have entered into an agreement on the treatment of the hazardous wastes with agents who are qualified for collection, storage and treatment of hazardous wastes. The agents will process all the hazardous wastes on a regular basis. During the pre-treatment stage, we dismantle paper packaging materials of the waste drugs to reduce hazardous wastes.

Key Performance Indicators for Emissions

Indicator	2018 KPI
Total GHG emissions[1] (Scope 1 and 2) (tCO_2e)	11,372.20
Direct GHG emissions (Scope 1), including: Natural gas (tonnes)	4,351.77
Indirect GHG emissions (Scope 2), including: Power (tonnes)	7,020.43
GHG emissions per floor area (tCO_2e per square meter)	2.23
Total oxynitride emissions (tonnes)	1.51
Total hazardous waste (tonnes)	25.37
Total non-hazardous waste[2] (tonnes)	25.10
Total hazardous waste per floor area (tonnes per square meter)	0.0050
Total non-hazardous waste per floor area (tonnes per square meter)	0.0049
Wastewater (tonnes)	156,985.60
Chemical oxygen demand (tonnes)	5.77
Ammonia nitrogen (tonnes)	0.11

Notes:

(1) GHG inventories include carbon dioxide, methane and nitrous oxide, mainly produced from the purchased power and fuels. GHG emissions are presented in carbon dioxide equivalents and are calculated based on the *2017 Baseline Emission Factors for Regional Power Grids in China for CDM* and *CCER* issued by the Ministry of Ecology and Environment and the *2006 IPCC Guidelines for National Greenhouse Gas Inventories* issued by the Intergovernmental Panel on Climate Change (IPCC).

(2) The non-hazardous wastes mainly come from the domestic wastes in office activities and such wastes are treated by the environmental protection department of the development zone. As the non-hazardous wastes cannot be calculated separately, we estimate the wastes in accordance with the *First National Census on Pollution Sources – Manual for Waste Generation and Discharge Coefficients in Urban Households*.

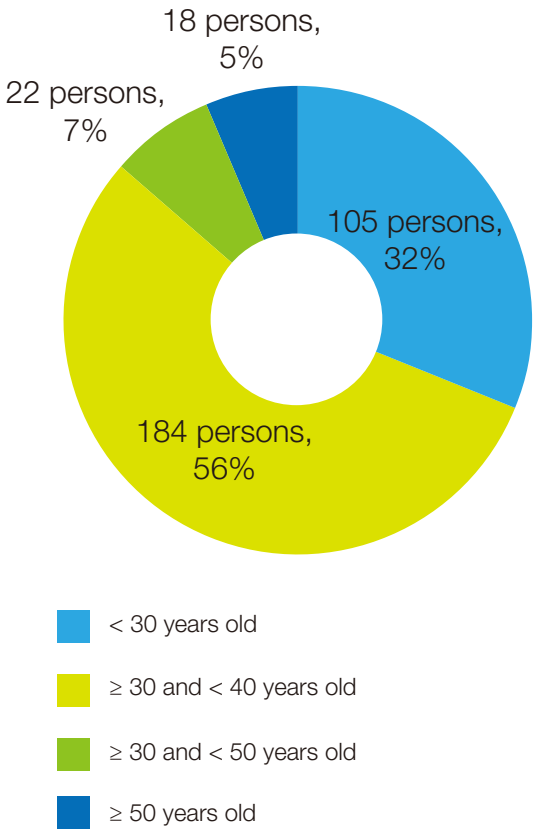
VI EMPLOYMENT AND LABOR STANDARDS

We attach equal importance to the growth of employees as to the success of the Company. We strive to create a comfortable and harmonious workplace and vigorously promote employee's development by safeguarding their rights and interests, caring for their health and safety and conducting employee trainings.

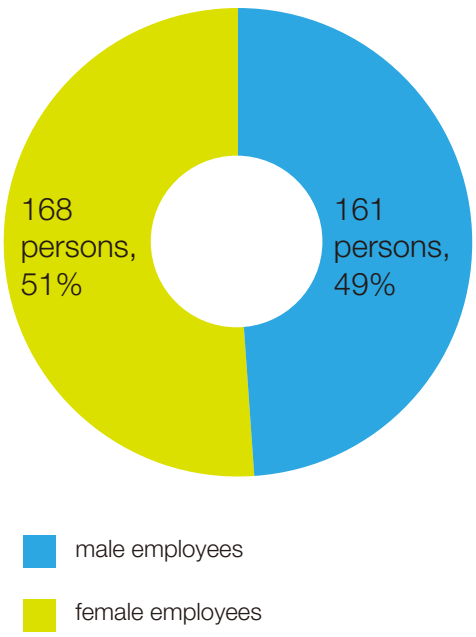
As of the end of the reporting period, we have 322 employees and 7 consultants in service.

We have a balanced and energetic team:

TOTAL WORKFORCE BY AGE



TOTAL WORKFORCE BY GENDER



(I) Employment and Labor Standards

In strict accordance with relevant laws and regulations such as the *Labor Law of the People's Republic of China* (《中華人民共和國勞動法》), the *Labor Contract Law of the People's Republic of China* (《中華人民共和國勞動合同法》) the *Provisions on Prohibition of Child Labor* (《禁止使用童工規定》), the R*egulation on Work-Related Injury Insurance* (《工傷保險條例》) and the *Special Rules on the Labor Protection of Female Employees* (《女職工勞動保護特別規定》), we strictly forbid the employment of child labor and incidents of forced labor. During the reporting period, we did not have cases of child labor and forced labor.

We have developed an internal management system to manage such affairs as recruitment, dismissal, remuneration, welfare, performance and promotion (see below).

1. Recruitment and Dismissal

We have developed a recruitment management system to standardize the recruitment process and make recruitment plans based on the Company's annual business plan and development strategy. We seek for talents who meet the Company's development demands through on-line social recruitment, campus recruitment, special job fairs and internal self-recommendation. We are committed to creating a diverse and equal working environment and avoiding sexual, ethnic and religious or any other discrimination in the course of recruitment.

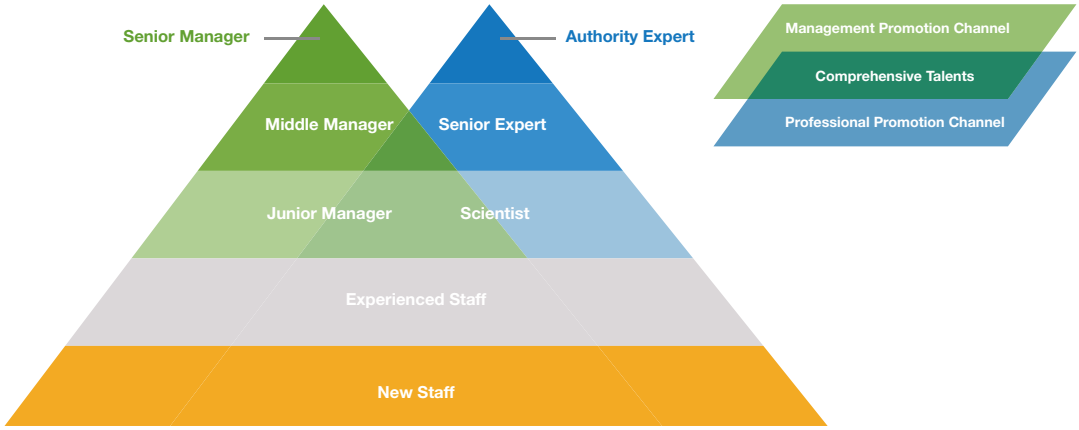
We sign standard labor contract with all employees on a voluntary basis and both parties are fully aware of their rights and obligations. We are in strict accordance with relevant laws and regulations and developed a standard process for handling employee's resignation. Instructions for the termination of employment are detailed in the Labor Contract and the Employee Manual.

2. Remuneration and Welfare

We have developed a remuneration and welfare management system that provides employees with competitive remuneration and pay five types of social insurances (including pension, medical insurance, unemployment insurance, work-related injury insurance, and maternity insurance) and housing fund for employees in strict accordance with relevant laws. We provide a diverse welfare system, including paid annual leave above the legal standard, option incentives, year-end performance bonus, meals and shuttles, festival gifts for important festivals, heatstroke prevention subsidy and winter heating allowance. In addition, we provide health and accident insurance for employees and interns who are untitled to statutory work-related injury insurance based on practical conditions.

3. Assessment and Promotion

We provide a dual development channel including management development and professional development for employees and we encourage them to select suitable pathways to achieve personal and corporate development based on their own abilities and interests. We have developed a performance management system, and conduct comprehensive annual performance assessment for all employees to assess their working results and capabilities in an objective and impartial way. Through such measures, we help employees to summarize their success and failures in working as well as specify future working goals and areas for improvement for them.



4. Work-Life Balance

We promote efficient work and encourage employees to fulfil their work tasks within working hours. We have developed an attendance management system to manage employee's working hours, specifying the principles of overtime compensation to guarantee employee's break hours.

We focus on combining work and leisure by organizing employee activities on a regular basis to help them relieve working pressure, enrich spare time, and enhance team cohesiveness and sense of belonging. During the reporting period, we have organized a series of theme activities:

- ***Family Day***
  On 28 June 2018, we organized the "Family Day in 2018" in the Tianjin Photosynthetic Valley. Nearly 200 employees brought their children to the event. In this event, we carried out a variety of fun games to enhance communication between parents and children, and improved team cohesiveness while helping employees relax.

- ***Christmas Party***
  On the Christmas Day in 2018, we held the annual "Christmas Party". Before the Party, three senior executives of the Company "dressed up" as Santa Claus and provided employees with festival gifts. During the Party, employees gathered together to find gifts they prepare for each other under the Christmas tree, enabling more communication and exchange of blessings between employees.

5. Communication

We have established a variety of internal communication channels to strengthen connections between management and employees and among employees, so that employee's requests, suggestions or opinions can be heard and responded on a timely basis. At the company level, we hold quarterly, mid-year and year-end summary meetings on a regular basis, and set up complaint boxes and mailboxes to receive employee's opinions and suggestions. At the departmental level, we provide open communication channels for employees including regular department meetings, performance communications, one-to-one communications, and new employee's adaptation plans.

(II) Health and Safety

In strict accordance with relevant laws and regulations including the *Labor Law of the People's Republic of China* (《中華人民共和國勞動法》), the *Fire Control Law of the People's Republic of China* (《中華人民共和國消防法》), and the *Regulation on Work-Related Injury Insurance* (《工傷保險條例》) and industrial norms, we strive to provide a healthy and safe working environment for employees.

We have developed a systematic safety management system, including potential risk identification and management, production management, fire control, education and training, emergency response and accident management, and have designated EHS department to manage and control risks relating to occupational health and safety. We have established standard operating procedures at all critical safety locations (such as labs, switching rooms, and warehouses) and posts (such as early R&D posts, fermentation posts, and cell culture posts), and for all critical safety factors (such as gas cylinders, chemicals and wastes and waste liquid in labs).

We have taken multiple measures to mitigate safety risks: (i) all fire-fighting devices are configured in accordance with the latest national fire codes; (ii) assign special personnel and install CCTV for uninterrupted monitoring and management, for the purposes of quick response and treatment in the case of any emergency; (iii) equip each building with emergency medical kits and escape route maps; and (iv) conduct safety trainings and organize emergency drills for all employees on an annual basis to help them acquire safe production skills and improve their safety awareness and abilities to respond to emergencies.

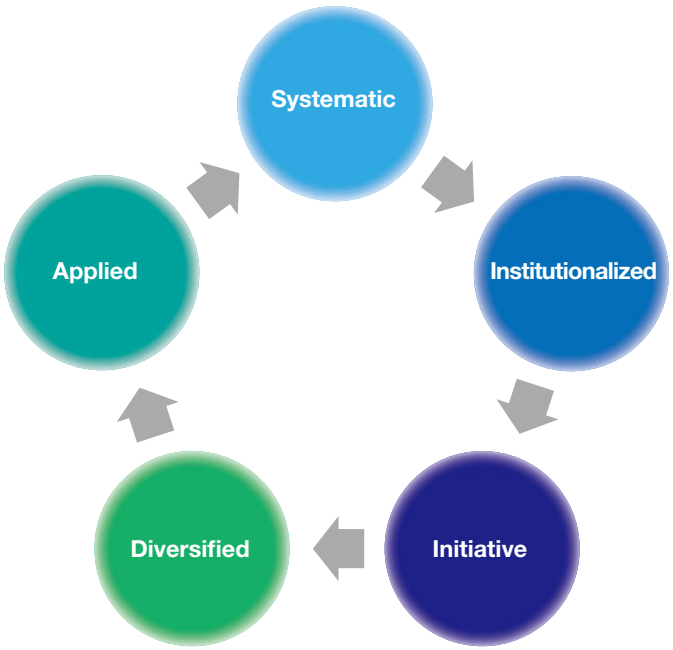
Considering the nature of our business, the Biosafety Level of the Company represents Level 2. We have developed and implemented relevant guidelines on work safety in accordance with relevant Chinese laws and regulations concerning storage, management, disposal and the use of viruses and bacteria, such as the *Regulation on the Bio-safety Management of Pathogenic Microbe Labs* (《病原微生物實驗室生物安全管理條例》). These guidelines include those relating to the recording and inspection of batches of viruses and bacteria, a multi-departmental approval process to obtain viruses and bacteria from our inventory, as well as the safe disposal of viruses and bacteria. We possess qualified bio-labs, workshops and production plants in safety level P2 and conduct safety inspections on a regular basis. All operations concerning bio-safety in daily business are conducted in bio-safety cabinets in qualified labs. The bio-active wastes and solutions produced in the tests and production are inactivated by steam at high temperatures and are handed over to the EHS department for disposal (in compliance with relevant regulations) as hazardous wastes. Employees in equipment operation and animal research are all equipped with relevant qualifications and are required to wear appropriate safety equipment during operation. Employees exposed to viable bacteria and viruses are also required to receive appropriate vaccines to ensure their safety.

In addition, we provide pre-employment physical examinations and regular in-service physical examinations for employees to help them learn about their physical health.

(III) Training and Development

We encourage our employees to improve their comprehensive capabilities and achieve self-worth in their development. To this end, we are committed to creating an atmosphere of "continuous learning" and "continuous sharing". We provide employees with professional development resources and comprehensive training courses in an aim to promote diversified development.

We have a training management system and have established a training system centered on the principles of "systematic, institutionalized, initiative, diversified, and applied."



- **Systematic:** Employee training is a full-featured, all-encompassing systematic work throughout employees' career.
- **Institutionalized:** Establish and improve the training management system; routinize and institutionalize training to ensure effective implementation.
- **Initiative:** Emphasize employee engagement and interaction; leverage employee initiative.
- **Diversified:** Employee training should take into account the level and type of the trainee, providing diversified training content and form.
- **Applied:** Take the practical condition into consideration, closely combine training with different job characteristics based on the development of the enterprise and the circumstances of employees.

Through various channels of training including internal training, expatriate training and online correspondence training, we met the training needs of employees during their onboarding phase and employment, encouraged self-advancement and self-training, and continuously upskilled our employees at all levels.

We help new employees quickly fit into the Company by offering induction training and on-the-job training from their entry to regularization. Such training courses include introduction of company profiles, company systems, product knowledge, safety awareness, quality awareness, IT operations, departmental training, and job-specific training.

We believe that jobs are the best learning opportunities for employees. We provided a variety of training courses tailored to different positions to enhance employees' professionalism and professional competence, which include business knowledge build-up, GMP awareness enhancement, office skills training, and comprehensive quality improvement. In addition, we provide management training to management in order to further enhance their comprehensive capabilities.

During the reporting period, 96% of our male employees and 94% of female employees participated in various training activities conducted by the Company.

Internal Training

External Training

VII. SUPPLY CHAIN MANAGEMENT

During the reporting period, our major suppliers included equipment suppliers, raw material suppliers and service providers. Adhering to the procurement principle of "fair, just and open", we implemented standardized supplier management, and maintained stable business relationship with them.

(I) Procurement and access

We have standard price enquiry and tender procedures, industrial procurement procedures and other systems to manage tender process. We promoted "sunshine procurement". Normally we select or invite 3 or more potential suppliers with relevant capabilities for comparison or bidding in the sourcing stage, and select the most qualified one. All bulk purchases were completed through the tendering process, and any single source procurement require review and approval by the manager of purchasing department.

During the supplier introduction process, we investigate and evaluate suppliers, and strictly review their background, relevant qualifications and other legal compliance information to ensure that they have relevant capabilities and sound credit records.

(II) Supplier management

We have a list of qualified suppliers and established procedures for managing and evaluating them on a regular basis. In the first quarter of each year, we rate suppliers' basic strength, product status, cooperation performance and after-sales service, and grade them accordingly. According to the results of the scoring, different cooperation modes are adopted, and the unqualified suppliers will be removed on a timely basis.

We focus on ESG risk management of our suppliers. For raw material suppliers, we conducted on-site audits to assess their management in product and production safety, health and environmental protection, as well as on-site control of production materials. For construction projects, we signed safety construction management agreements, civilized construction management agreements and finished products protection agreements with suppliers to specify the safety and environmental responsibilities and obligations of both parties.

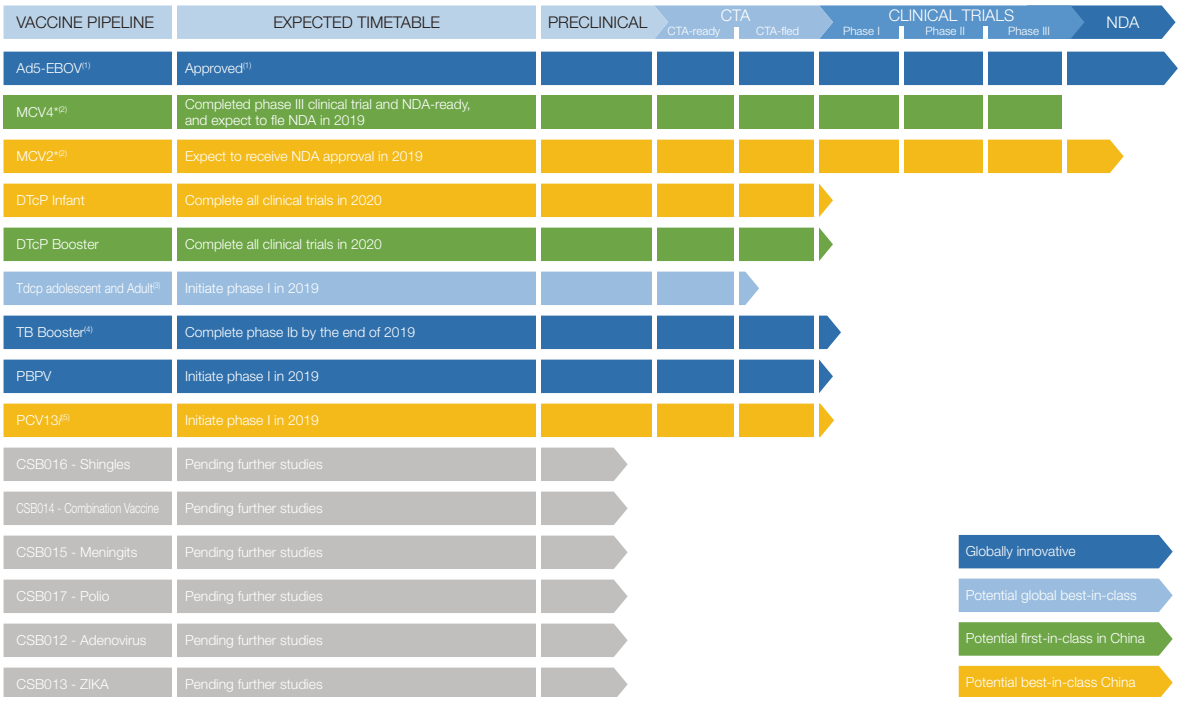
(III) Management of clinical trials

We chose third-party pharmaceutical R&D contract outsourcing service organizations (CROs), which have rich experience and good reputation in the field of vaccine clinical research and have good cooperative relations with research institutions, as partners. We closely monitored and managed the cooperative CROs, including but not limited to: (i) requiring them to strictly abide by the Good Clinical Practice for Drug Trials (GCP)（《藥物臨床試驗質量管理規範》), Guidelines for Quality Control of Vaccine Clinical Trials (Trial)（《疫苗臨床試驗質量管理指導原則(試行)》） and other related regulations; (ii) requiring them to carry out work in strict accordance with the requirements of the Clinical Trial Program（《臨床試驗方案》); (iii) conducting audits on them, and (iv) conducting timely and strict review on the work documents provided by them.

VIII. PRODUCT RESPONSIBILITY

Our vaccine pipeline can be summarized into three categories: (i) globally innovative vaccines (such as Ad5-EBOV, our TB Booster candidate and our PBPV candidate); (ii) potential first-in-class vaccines in China (such as our DTcP vaccine candidates and MCV4 candidate); and (iii) potential best-in-class vaccines in China developed to compete with the imported products in the PRC market (such as our PCV13*i* candidate).

As at the date of this report, we are developing 15 vaccine candidates for 12 disease areas. In addition to our three near-commercial assets covering meningococcal diseases and Ebola virus disease, we have six vaccine candidates in clinical trial stage or CTA stage. We also have six pre-clinical vaccine candidates, including one combination vaccine candidate. The following table summarizes our vaccine product line:



* denotes a Core Product.

(1) Ad5-EBOV received NDA approval in China in October 2017 only for emergency use and national stockpile.

(2) We received umbrella CTA approvals for our MCV4 and MCV2 candidates and did not conduct phase II clinical trials for these candidates based on communications with the CFDA.

(3) We plan to initially file a CTA for our Tdcp Adolescent and Adult candidate in the EU.

(4) The phase I clinical trials of our TB Booster candidate are being conducted in Canada.

(5) We received the CTA Approval for PCV13*i* from the National Medical Products Administration on 19 April 2019.

(I) Quality Control

The production of vaccine products for commercial sales shall comply with relevant laws and regulations including *Drug Administration Law of the People's Republic of China* (《中華人民共和國藥品管理法》), *Measures for Supervision and Administration of Drug Manufacturing* (《藥品生產監督管理辦法》), *Measures for the Administration of Lot Release of Biological Products* (《生物製品批簽發管理辦法》) and *GMP* (《藥品生產質量管理規範》).

To ensure compliance with GMP, Pharmacopoeia and labeling regulations and other applicable laws and regulations, the Company has established a comprehensive quality management system and a quality management committee supervised and maintained by management team, set quality objectives and quality guidelines, and divided responsibilities between different departments and management personnel. We have also provided necessary resources, rational planning, effective coordination, and have adopted a periodical quality review system. Major quality issues are documented and handed over for senior management's review. We also conduct formal risk assessments and provide explanation in accordance with the standards and procedures under our quality management system and policies.

We have a quality center, which is directly led by a quality director and is responsible for the Company's overall quality management. The Quality Center consists of three departments: Quality Assurance Department, Quality Control Department and Verification Department. The Quality Assurance Department is responsible for the establishment and maintenance of quality management procedures. The Quality Control Department is responsible for sampling, inspecting and verifying the raw materials, packaging materials, intermediate products and finished products according to the prescribed methods, and is responsible for confirming and verifying the inspection methods to ensure that the composition, content, purity and other properties of all materials and products conform to established quality standards. The Verification Department is responsible for establishing and maintaining the confirmation and verification system for plant facilities and equipment as well as the verification system for production process and guarantees their implementation.

(II) Complaints and Recall Procedures

As of the end of the reporting period, we have not yet commercialized our products. However, we have established a product complaint and response process and recall procedures in accordance with relevant regulations including the *Administrative Measures for Drug Recalls* (《藥品召回管理辦法》) and GMP.

The Marketing Department is responsible for accepting complaints and executing the return process. For complaints that have caused adverse reactions, we have designated the Medical Clinic Department to handle and have adverse reaction procedures. All adverse reaction incidents are subject to quality investigation procedures and subsequent processing performed by the quality department.

During the reporting period, we did not receive any customer complaint or have product recall.

(III) Research and Development

As a leading vaccine development company, we have built up strong R&D capabilities and are committed to developing, manufacturing and commercializing high quality, innovative and affordable vaccines. We have developed four platform technologies covering key advanced technologies in vaccine development, including: (i) Adenovirus-based viral vector vaccine technology; (ii) Conjugation technology; (iii) Protein structure design and recombinant technology; and (iv) Formulation technology. These platform technologies lay the foundation for, and demonstrate our capabilities in, the research and development of vaccines. Moreover, our platform technologies complement each other and produce a synergistic effect for our research and development efforts, enabling us to develop vaccines in a cost-effective manner and build a comprehensive portfolio of vaccine products.

We have an in-house R&D team that participates in all stages of product development, from pre-clinical research to laboratory research to clinical trials, regulatory filings and process development. The in-house R&D team is further divided into the pre-clinical R&D team, the medical/clinical team, and the regulatory filing team. The pre-clinical R&D team is primarily responsible for proof-of-concept pre-clinical evaluation, establishment of manufacturing processes and formulation, analysis and testing, and new technology and project initiation. The medical/clinical team is primarily responsible for clinical trial study design and management, including the selection of clinical trial sites. The regulatory filing team is mainly responsible for the vaccine approval process and oversees our R&D programs to ensure compliance with related Chinese laws and regulations.

As of the end of the reporting period, our internal R&D team consisted of 93 employees, of whom 67.7% hold graduate degree or above and 95.7% hold bachelor degree or above, with a major in biology, medicine or pharmacology. During the reporting period, our total R&D expenditure reached approximately RMB114 million.

(IV) Intellectual Property Rights

We recognize the importance of intellectual property rights (IPRs) to our business and are committed to IPR development and protection. We actively sought patent protection for our vaccines and vaccine candidates and filed additional patent applications, when appropriate, to cover certain antigens, strains, formulation and production process in accordance with IPR-related laws in China and in other jurisdictions including the *Trademark Law of the People's Republic of China* (《中華人民共和國商標法》) and the *Patent Law of the People's Republic of China* (《中華人民共和國專利法》).

We have a special IPR committee to manage and review patent development, patent applications, patent awards and publication of scientific papers. At the same time, the Company signed cooperation agreements with a number of IPR and trademark offices and companies, and we have professional IPR lawyers/agents provide professional advice on the Company's intellectual property layout and handle IPR applications on our behalf.

We control the IPR risks of every aspect of our business. We have signed the "Intellectual Property and Non-Disclosure Agreement" and the "Confidentiality and Non-Competition Restriction Agreement" with our employees, and provide stipulations regarding intellectual property rights, trade secret protection, confidentiality obligations and non-competition restrictions; when we enter into cooperation with third-party companies on technology or other areas, we stipulate detailed IPR clauses, clarify the ownership of IPRs, and sign confidentiality agreement with the companies in the early stage of cooperation to protect the Company's IPRs from infringement.

Through training and publicity, we raised our employees' awareness against IPR risks. We respect and encourage originality, and we have internal systems such as the "Procedures for the Administration of Patents and Research Papers" and the "Invention Reward Programs" to encourage employees to invest in and protect innovations.

We also respect other parties' IPRs. Prior to the introduction of new products, the establishment of new projects and the use of new technologies, the Company will conduct global IPR searches on products and technologies to evaluate IPR risk. During new employee background check, the obligations of confidentiality or non-competition restrictions between the candidate and the third-party company are identified; in large procurement contracts or technical cooperation agreement signed by the Company, the contractual counterparty is obliged to fulfill the promise of "no existence of infringement of others' IPR" to prevent companies from directly or indirectly infringing on the intellectual property rights of others.

During the reporting period, we developed patent layout and newly obtained 2 invention patent licenses and 2 trademark licenses. As of the end of the reporting period, we owned 7 patents in China and 1 patent in the United States; 17 trademarks including 13 trademarks in China, 2 in Hong Kong, 1 in EU and 1 in the United States. As of the same date, we had filed multiple PCT patent applications in China, in the United States, and in EU and Canada. In addition, we obtained sole and exclusive license from McMaster University with respect to our TB Booster vaccine and Phase I Clinical Trials.

(V) Privacy and Data Protection

We protect the privacy of our company and our customers through technical means. We have an independent data center and local area network, and assign computer and work mailbox for all employees. All office documents of the Company are encrypted to prevent information leakage.

We signed confidentiality agreements with all employees detailing the employee's responsibility for the Company's trade secret protection and liability for breach of contract. We also advised employees on their confidentiality obligations by issuing employee handbook.

We signed confidentiality agreements with our suppliers and partners, urging each of its employees, managers, affiliates and external technical consultants to comply with confidentiality obligations to protect customer information.

We strictly abide by the *Good Clinical Practice for Drug Trials (GCP)*（《藥物臨床試驗質量管理規範》）and Guidelines for *Quality Management of Vaccine Clinical Trials (Trial)*（《疫苗臨床試驗質量管理指導原則(試行)》）to protect clinical data and other private information of clinical trial subjects. During the reporting period, our clinical research on vaccines was reviewed by the Medical Ethics Committee and completed by the cooperative disease prevention and control institutions, sample testing units, statistical units and CROs. We were unable to directly obtain any private information of the subjects other than necessary data for research. In addition, we require partners to conduct clinical trials in strict accordance with relevant laws and regulations, closely monitor and manage the clinical trial process, ensure data security and seek to reduce data leakage risks by including confidentiality clauses in collaboration agreements and conducting regular audits of partners.

During the reporting period, we did not find any major bribery, extortion, fraud or money laundering case.

(VI) Advertising and Publicity

During the reporting period, we have not yet commercialized our products. We strictly abide by the relevant regulations on drug advertisements in the *Administrative Measures for the Classification of Prescription Drugs and Over-the-Counter Drugs (Trial)* (《處方藥與非處方藥分類管理辦法(試行)》) and the *Measures for the Examination of Pharmaceutical Advertisements* (《藥品廣告審查辦法》) when managing advertising and publicity work. Based on these laws and regulations, we have not advertised our products to the general public.

IX. ANTI-CORRUPTION

We advocate the creation of a clean and honest working environment and strictly abide by relevant laws and regulations including the *Anti-Unfair Competition Law of the People's Republic of China* (《中華人民共和國反不正當競爭法》) and the *Company Law of the People's Republic of China* (《中華人民共和國公司法》).

We require our employees to follow the code of professional ethics and prohibit employees from profiting from any economic activity that violates laws and regulations. We issued employee handbooks and set internal rules and reporting procedures to prevent employees from directly or indirectly giving or receiving gifts and treats that exceeds normal courtesy to or from customers and other business service entities. These rules and procedures also clarify that employees have the obligation to report any form of violation of the law such as money laundering and corruption. In the event of a violation, employees will receive such disciplinary measures as written warnings, suspension, demotion and dismissal.

We value moral hazard management involved in procurement activities. We have signed anti-corruption agreements with all of our suppliers, urging them to work with us to build a just and fair cooperation environment through avoiding commercial bribery and corruption. We encourage suppliers to report fraud and offer reward for authentic reports. We have a Blacklist of Corruption to record and monitor suppliers with major violation records. Project collaboration with such suppliers will be terminated or subject to certain limits.

We have online and offline complaints and reporting channels, including telephone, email and correspondence. We disclose these channels and designate special personnel to manage each channel, receive corruption complaints and protect the privacy of whistle-blowers. Any risk that may affect the Company will be notified to management as soon as they are being identified. We will further pursue legal actions against any violations of the law.

During the reporting period, we did not find any major corruption and fraud case.

X. COMMUNITY INVESTMENT

We attach great importance on communicating and building harmonious relations with surrounding communities by actively discovering their public welfare needs and organizing medical and biological science education activities that fit with our business features. We also practiced corporate citizenship, participated in poverty alleviation activities, and supported charitable organizations.

- **Popularization of scientific knowledge**

  In order to increase the general public's knowledge on the field of vaccines and biomedicine, we used our production park as a vivid science popularization base, and established a special vaccine knowledge exhibition hall open to universities and social organizations.

  During the reporting period, we invited students from Tianjin University and members from the Chinese Peasants and Workers Democratic Party to visit laboratories, production plants and special zones in an aim to popularize knowledge in the fields of biomedicine and vaccines.

- **Educational Support**

  We support life sciences education activities to help more students gain knowledge about these areas.

  During the reporting period, we donated RMB54,756 to support the "Sixth College Student Life Science Basic Experimental Skills Competition".

- **Poverty alleviation activities**

  We responded to China's call for poverty alleviation by supporting poverty alleviation activities.

  At the beginning of 2018, we supported the public welfare project of Dayu Village, a poverty-stricken mountainous area located in Bai'an Township, Xingtai city of Hebei Province, and organized the purchase of dried persimmons with a total value of RMB10,032, helping local farmers to get rid of poverty.

  At the end of 2018, we supported the Chinese Peasants and Workers Democratic Party on the Guizhou Bijie Dafang County Poverty Alleviation Project, and organized the purchase of kiwifruit with a total value of RMB33,020, helping local farmers to get rid of poverty.

- **Charitable organization donation**

  We support the operation of charitable organizations and the launch of public welfare projects.

  In 2018, we donated HK$1 million to The Community Chest (Hong Kong) and won the "Community Excellence Award".

APPENDIX: HONG KONG STOCK EXCHANGE ESG REPORTING GUIDE CONTENT INDEX

ESG Guide			Correspondent Chapters
Environmental	**A1 Emissions**	General Disclosure	5.1 Environmental Management 5.3 Emissions
		A1.1 The types of emissions and respective emissions data.	5.3 Emissions
		A1.2 Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	5.3 Emissions
		A1.3 Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	5.3 Emissions
		A1.4 Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	5.3 Emissions
		A1.5 Description of measures to mitigate emissions and results achieved.	5.3 Emissions
		A1.6 Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	5.3 Emissions
	A2 Use of Resources	General Disclosure	5.1 Environment Management 5.2 Use of Resources
		A2.1 Consumption by type (e.g. electricity, gas or oil) in total (kWh in'000s) and intensity (e.g. per unit of production volume, per facility).	5.2 Use of Resources
		A2.2 Water consumption in total and intensity (e.g. per unit of production volume, per facility).	5.2 Use of Resources
		A2.3 Description of energy use efficiency initiatives and results achieved.	5.2 Use of Resources

ESG Guide			Correspondent Chapters
		A2.4 Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	5.2 Use of Resources
		A2.5 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	During the reporting period, the Company have not yet commercialized our products. Packaging materials is not applicable for the Company.
	A3 The Environment and Natural Resources	General Disclosure	5. Environment
		A3.1 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	5. Environment
Social	**B1 Employment**	General Disclosure	6.1 Employment and Labor Standards
		B1.1 Total workforce by gender, employment type, age group and geographical region.	6.1 Employment and Labor Standards
		B1.2 Employee turnover rate by gender, age group and geographical region.	The Company plans to refine management and disclose in the future.
	B2 Health and Safety	General Disclosure	6.2 Health and Safety
		B2.1 Number and rate of work-related fatalities.	The Company plans to refine management and disclose in the future.
		B2.2 Lost days due to work injury	The Company plans to refine management and disclose in the future.
		B2.3 Description of occupational health and safety measures adopted, and how they are implemented and monitored.	6.2 Health and Safety

ESG Guide			Correspondent Chapters
	B3 Development and Training	General Disclosure	6.3 Training and Development
		B3.1 The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	The Company plans to refine management and disclose in the future.
		B3.2 The average training hours completed per employee by gender and employee category.	The Company plans to refine management and disclose in the future.
	B4 Labor Standards	General disclosure	6.1 Employment and Labor Standards
		B4.1 Description of measures to review employment practices to avoid child and forced labor.	6.1 Employment and Labor Standards
		B4.2 Description of steps taken to eliminate such practices when discovered.	During the reporting period, the Company did not have cases of child labor and forced labor.
	B5 Supply Chain Management	General Disclosure	7.1 Supply Chain Management
		B5.1 Number of suppliers by geographical region.	The Company plans to refine management and disclose in the future
		B5.2 Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	7.1 Supply Chain Management
	B6 Product Responsibility	General Disclosure	8. Product Responsibility
		B6.1 Percentage of total products sold or shipped subject to recalls for safety and health reasons.	During the reporting period, the Company had no product recall.
		B6.2 Number of products and service related complaints received and how they are dealt with.	8.2 Complaints and Recall Procedures

ESG Guide			Correspondent Chapters
		B6.3 Description of practices relating to observing and protecting intellectual property rights.	8.4 Intellectual Property Rights
		B6.4 Description of quality assurance process and recall procedures.	8.1 Quality Control
		B6.5 Description of consumer data protection and privacy policies, how they are implemented and monitored.	8.5 Privacy and Data Protection
	B7 Anti-corruption	General disclosure	9. Anti-Corruption
		B7.1 Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	During the reporting period, the Company did not find any major bribery, extortion, fraud or money laundering case.
		B7.2 Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	9. Anti-Corruption
	B8 Community Investment	General Disclosure	10. Community Investment
		B8.1 Focus areas of contribution (E.g. education, environmental concerns, labor needs, health, culture, sport).	10. Community Investment
		B8.2 Resources contributed (e.g. money or time) to the focus area.	10. Community Investment

康希诺生物股份公司
CanSino Biologics Inc.