VIVA

维亚生物科技控股集团

VIVA BIOTECH HOLDINGS

(Incorporated in the Cayman Islands as an exempted company with limited liability)

Stock Code: 1873

2022

ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT

CONTENTS

ABOUT THE REPORT

Overview of the Report

Viva Biotech Holdings (the "**Company**", together with its subsidiaries, "**Viva Biotech**", the "**Group**" or "**we/us**") is pleased to release the fourth Environmental, Social and Governance Report (the "**Report**") to society, in a bid to disclose the relevant performance of the Group in environmental, social and governance (the "**ESG**") aspects in the past year in a transparent and open manner and address the concerns and expectations of various stakeholders on the sustainable management of the Group.

Reporting Scope

The Report covers the performance of Viva Biotech Holdings and its subsidiaries in fulfilling corporate social responsibility in the ESG aspects, and a time span from January 1, 2022 to December 31, 2022 (the "**Reporting Period**" or the "**Year**").

Basis of Preparation

The Group prepared the Report in accordance with the Environmental, Social and Governance Reporting Guide (the "**Guide**") as set out in Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "**Hong Kong Stock Exchange**"). The Report has complied with the "Comply or Explain" provisions contained in the Guide and followed the four reporting principles of materiality, quantitative, balance and consistency as the basis of preparation.

Reporting Principles

- Materiality: Stakeholder communication and materiality assessment have been incorporated into the preparation of this ESG report as a basis for identifying material ESG issues.
- Quantitative: The Report presents environmental and social KPIs in the form of quantitative data, accompanied by explanations to illustrate their purposes and impacts. We also provide comparative data on environmental KPIs in the Report.
- Balance: This ESG report follows the principle of balance and presents our ESG performance in an impartial manner.
- Consistency: The methodologies for working out this ESG report are consistent with those adopted in the 2021 ESG report to ensure comparability of information.

Release Channel

The Report is available for inspection and download at the "HKEXnews" website of the Hong Kong Stock Exchange (www.hkexnews.hk) and the website of Viva Biotech (www.vivabiotech.com).

Feedback to the Report

Your valuable advice serves as impetus for our continuous improvement. If you have any comments or suggestions on the Report or our related efforts, please contact the Group via the following means:

- Tel: +86(0) 21 6089 3288
- Fax: +86(0) 21 5824 3936
- Website: www.vivabiotech.com
- Email: info@vivabiotech.com

CHAIRMAN'S STATEMENT

The past year of 2022 remained challenging for the Company. Despite the inevitable impact from a global biopharmaceutical investment and financing slowdown and the repeated COVID-19 outbreaks, we achieved resilient business growth through expanding our business development team, pursuing the synergy of our biopharmaceutical and chemical segments, and establishing active presence in emerging technology platforms.

Based on our strategic positioning for a one-stop comprehensive service platform for early stage structure-based drug discovery to commercial drug delivery, on the one hand, we strengthened post-acquisition integration with Langhua Pharmaceutical, stepped up the construction of CMC R&D centers, and made plans for CDMO production capacity increase in future. On the other hand, we remained committed to reinforcing post-acquisition integration of SYNthesis med chem (Hong Kong) Limited with our in-house chemical CRO team, to sharpen our competitive edges in the CRO chemical field.

I wish to look back on our results and operating highlights achieved in 2022 together with you:

- During the Reporting Period, revenue of the Group surged to RMB2,379.6 million from RMB2,104.0 million in 2021, representing a year-on-year increase of approximately 13.1%. Gross profit continued to increase to RMB815.7 million from RMB651.0 million in 2021, representing a year-on-year increase of approximately 25.3%.

- As a global leading structure-based drug discovery service provider, during the Reporting Period, the Company delivered approximately 14,534 new protein structures to our clients, representing a year-on-year increase of 10.66%, and launched R&D on 68 new independent drug targets. Besides, the cumulative number of our clients increased to 1,224, and our utilization of synchrotron radiation source reached 2,064 hours during the Reporting Period.

Dr. Mao Chen Cheney
Chairman and Chief Executive Officer of Viva Biotech

- For our CRO business, we have built several core technological platforms, including the PROTAC technology platform, protein production, preparation and structure research platform, Cryo-EM technology platform, membrane protein research technology, drug screening technology, Bioassay platform, computer-aided drug design (CADD), pharmaceutical chemistry, etc. Looking ahead, the Company will continue to strengthen and improve its presence in emerging technology platforms to fuel its sustainable revenue growth.

- During the Reporting Period, revenue from our CMC business continued to ramp up and the Company made constant efforts to improve CDMO capacity. In respect of CMC capacity building, the Company recorded revenue of approximately RMB50.0 million, and a CMC R&D center of approximately 10,000 square meters has been entirely put into use. The number of our CMC R&D personnel reached 155. Although the segment was still in a loss-making early stage during the Reporting Period, it is expect to gradually achieve breakeven as its revenue ramps up in future. In respect of CDMO capacity construction, T10 plant has started normal operation and is able to support revenue growth of our API business. At present, our total available capacity reached 860 cubic meters. In addition, Langhua Pharmaceutical plans to launch a new production capacity of 400 cubic meters in 2024. Such capacity additions will provide adequate support to our future revenue growth.

- In respect of the EFS investment & incubation business, further progress has been secured for the pipeline candidates of our incubation portfolio companies. In 2022, the total number of pipeline projects increased to 215, of which 36 had entered the clinical stage. In addition, we realized investment exits or partial exits from two of our portfolio companies during the Reporting Period, and we have 11 potential exits for our portfolio companies in the next one to three years. Furthermore, the Company is proactively applying for a fund manager license in the PRC, and intends to conduct incubation business through the establishment of investment funds in future.

- During the Reporting Period, we completed the inauguration ceremony for our headquarters in Zhoupu, Shanghai. Currently, we have well-established laboratories as well as supporting properties and facilities in Shanghai, Chengdu, Jiaxing and Suzhou to cater for our business development needs and workforce expansion plan, and provide the Company with stable R&D, production and operation premises. In addition, Shanghai Supercomputing Center passed acceptance, and has been officially put into operation. At present, it can support computer aided drug design (CADD) calculation, artificial intelligence in drug discovery (AIDD) related calculation, and crystal structure and Cryo-EM (Micro-ED) calculation.

CHAIRMAN'S STATEMENT

The Company has been committed to aligning pursuit of business development with fulfilment of its environmental and social responsibilities, and while proactively propelling business growth, the Group has integrated the ESG philosophy into the whole process of business development. Dedicated to operation with integrity, we have made constant efforts to improve corporate governance standards and optimize our ESG governance structure. Meanwhile, the Company has been pursuing sustainability in each and every process of its production and operation activities, in an endeavour to reduce emission and enhance efficiency, conserve resources and contribute to the establishment of an environmental-friendly society and ecological value chain.

We believe that our growth is indispensable from the trust and support of various stakeholders, including our shareholders, employees, clients and business partners. This is the fourth environmental, social and governance report of the Company since its listing on the Hong Kong Stock Exchange, which demonstrates the achievements made by the Group in the environmental, social and governance aspects during the Reporting Period, as well as how we actively responded to the expectations and concerns of our stakeholders with concrete acts. Looking ahead, the Company will continue to improve business performance, cement our foundation with core competitiveness, bear in mind our corporate social responsibilities along our journey forward and live up to our mission to be innovation-driven, empowered by cutting-edge technology, strive for excellence and benefit patients all around the world, aspiring to realize our vision of becoming a long-term partner of global innovative biotech companies.

Dr. Mao Chen Cheney
Chairman and Chief Executive Officer of Viva Biotech
April 20, 2023

STATEMENT OF THE BOARD OF DIRECTORS

Viva Biotech recognizes the importance and necessity of sustainable development for its business, and is committed to improving its sustainability governance system and mechanism and earnestly integrating sustainability requirements into its operations and management, in an endeavor to create sustainable value for employees, shareholders and society. As the highest responsibility owner for managing and publicly disclosing ESG issues of the Company, the Board of Directors (the "**Board**") plays a leading and supervisory role and assumes full responsibility.

The Group regards ESG and sustainability as a guarantee for its long-term stable development, and incorporates ESG factors into the course of decision-making and daily operations to continuously improve its risk resistance. The Board is the highest responsibility owner and decision-maker for ESG issues of the Group. The Board assumes ultimate responsibility for ESG management policies, ESG strategies, formulation of ESG goals, review of progress towards the goals and ESG performance, and plays a leading and supervisory role in overall ESG strategy and ESG risk management of the Group. In business operation, the Board is responsible for assessing and determining ESG risks, and ensuring that the Group has established an adequate and effective ESG risk management and internal monitoring system.

Directors review and approve our sustainable development goals through regular meetings. Through the ESG working group, directors guide and monitor the development and implementation of our ESG vision, strategy and structure; review important ESG issues, major ESG risks and opportunities; monitor communication channels and methods with shareholders; and review the ESG related disclosures. The Board holds a hearing to review Environmental, Social and Governance Report of the Group annually, and checks the implementation progress against the defined ESG goals.

The Board and all directors warrant that there are no false representations or misleading statements contained in, or material omissions from, the Report and jointly and severally accept responsibility for the truthfulness, accuracy and completeness of the Report. The Report has been considered and approved by the Board on April 21, 2023.

ABOUT VIVA BIOTECH

Business

Established in 2008, Viva Biotech (01873.HK) provides one-stop integrated services from early-stage structure-based drug discovery to commercial drug delivery to global biopharmaceutical innovators. As a CRO service provider with well-established leadership in structure-based drug discovery ("SBDD"), we offer leading early-stage to late-phase drug discovery expertise by integrating our cutting-edge technology platforms and state-of-the-art equipment in X-ray crystallization, Cryo-EM, ASMS, SPR, HDX-MS, CADD, etc. Our team led by senior pharmaceutical chemists and drug discovery biologists provides drug design, pharmaceutical chemistry (H2L, LO), compound synthesis, chemical analysis and purification, kilogram scale-up, polypeptide synthesis and relevant biological activity assay services. Through our subsidiary Langhua Pharmaceutical, we offer our worldwide pharmaceutical and biotech partners one-stop integrated CMC (Chemical, Manufacturing, and Control)/CDMO services from preclinical to commercial manufacturing. In addition, we are committed to the identification of and investment in biopharmaceutical start-ups with high potential. Viva has embedded an equity for service (EFS) model to high potential start-ups to address unmet medical needs.

As of December 31, 2022, Viva Biotech has provided drug R&D and production services to 2,076 biotech and pharmaceutical clients around the world. We have invested and incubated 91 biotech start-ups in total. In the future, the Company will continue to strengthen its technical barriers, and improve its R&D and production level and service capacity, so as to provide high-quality and diversified services for more drug discovery start-ups, as well as the medium and large pharmaceutical enterprises around the world. We hope to benefit more patients through Viva's platform.

2,076 biotech and pharmaceutical clients worldwide

2,601 employees worldwide

66 domestic and foreign patents

91 portfolio companies

Technology platforms

CRO Technology Platform

- Biophysical technology
- PROTAC technology
- Protein production, preparation and structure research
- Cryo-EM technology
- Membrane protein research technology
- Drug screening technology
- Bioassay
- CADD and AIDD
- Medicinal chemistry
- Pharmacokinetics
- Therapeutic antibody discovery technology

CDMO Technology Platform

- API R&D platform
- Preparation R&D platform
- Production platform

ABOUT VIVA BIOTECH

Corporate Culture

We provide one-stop integrated services from early-stage structure-based drug discovery to commercial drug delivery to global biopharmaceutical innovators.

Vision

To become a long-term partner of global innovative biotech companies

Mission

To be innovation-driven, to be empowered by cutting-edge technology, to strive for excellence, and to benefit patients all around the world

Our values

Innovation
Integrity and Professionalism
Customer Success
Win-win Cooperation

Honors

Time of Award	Honor
February 2022	Certified as a Shanghai Municipal Enterprise Technology Center
August 2022	Included in the Top 20 Chinese Pharmaceutical CRO Companies in 2022
November 2022	Won the title of the "Top 100 Chinese Brands of Life Science Service Providers in 2022"
December 2022	Selected as the Best Preclinical CRO/CDMO Enterprise (Matured) in 2022
August 2022	Our subsidiary Langhua Pharmaceutical was included in the Top 20 Chinese Pharmaceutical CDMO Companies in 2022
November 2022	Our subsidiary Viva Sichuan was certified as a Sichuan Provincial High-tech Enterprise

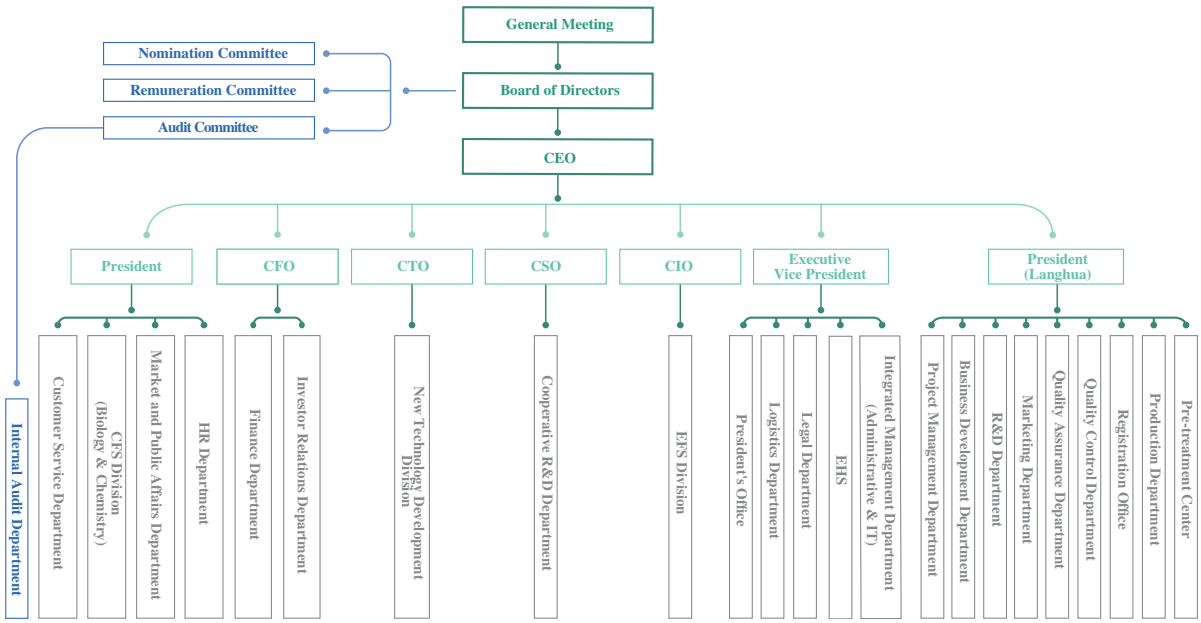
1. COMMITMENT TO RESPONSIBLE CORPORATE GOVERNANCE

Viva Biotech is committed to compliance and operates in good faith. Responsible corporate management is the foundation for the healthy development of the Group's business. We always strictly follow professional ethics, establish and improve business ethics and anti-corruption rules and regulations, and refine internal risk management and internal control systems to ensure open and transparent corporate governance.

1.1. ESG Governance System

Corporate Governance

Good corporate governance standards are the basis for the Group to protect the interests of shareholders, enhance corporate value, develop business strategies and policies, and improve transparency and the sense of responsibility. The Group strictly abides by the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, the Corporate Governance Code contained in Appendix 14 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited and other laws, regulations and regulatory documents. In June 2022, we adopted a special resolution to issue the second edition of the Articles of Association of Viva Biotech Holdings, as revised and restated (the "**Articles of Association**"). We have also formulated and implemented internal policies such as the Management Measures of the Audit Committee of the Board of Directors to ensure that the Group's business activities and decision-making procedures are properly and prudently supervised and its governance mechanism is constantly improving.



1. COMMITMENT TO RESPONSIBLE CORPORATE GOVERNANCE

The Board of Viva Biotech has three committees, namely, the Nomination Committee, the Remuneration Committee and the Audit Committee. The Board provides guidance to the management directly and indirectly through these committees, including formulating strategies and overseeing their implementation, monitoring the Company's operational and financial performance, and ensuring that sound internal control and risk management systems are in place. The terms of reference of each committee of the Board have been published on the website of the Group and the website of the Hong Kong Stock Exchange and are available for inspection by shareholders upon request.

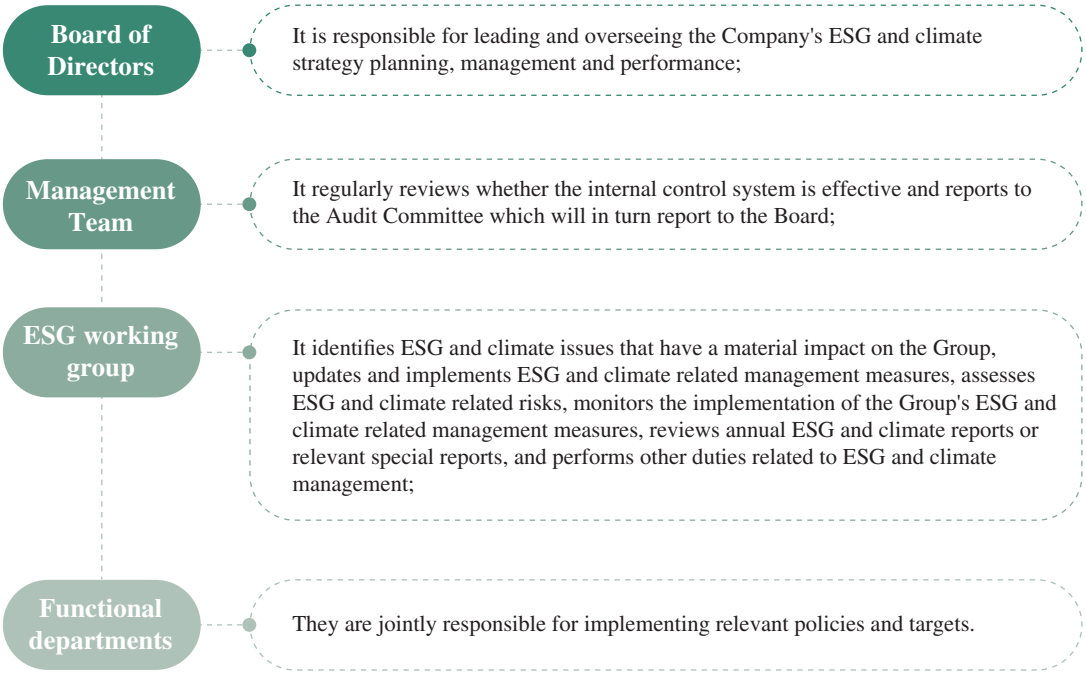
We are convinced that the diversity of the Board will facilitate the Company's ESG performance and help achieve the Group's strategic objectives and sustainable development. The Board adopts and implements a Board diversity policy in strict accordance with the Articles of Association and other relevant regulations. When selecting the members of the Board, the Group will consider the diversity of the Board from many aspects, including but not limited to professional experience, skills, knowledge, gender, age, cultural and educational background, ethnicity and term of office to ensure that directors maintain an appropriate balance in diversity of skills, experience and perspectives, so as to enhance the effectiveness of the Board. As at the end of the Reporting Period, the Board consisted of seven directors, including three executive directors, one non-executive director, and three independent non-executive directors; there was one female director. In the future, the Board will continue to supervise the implementation of the Board diversity policy and review such policy from time to time to ensure its continued effectiveness.

In addition, we continue to strengthen the independence of the Board, as we understand that it is positively correlated with our corporate governance capabilities. The Audit Committee and the Remuneration Committee under the Board of the Group are chaired by independent non-executive directors. By improving governance capabilities of independent directors over the Group, we seek to enhance the efficiency and quality of operations, promote stable business development, and make contributions to employees, shareholders and society.

Sustainability Governance

Sustainable development is an important part of Viva Biotech's corporate governance. The Group continuously improves corporate governance for sustainable development by establishing and improving the governance structure for sustainable development and having organizations at all levels implement their functions on the management of sustainability-related issues. With the approval of the Board, Viva Biotech established an ESG working group in 2020. At present, the Group's governance structure for sustainable development is divided into four levels, i.e. the Board, the management, the ESG working group and functional departments, in a bid to jointly promote the sustainable development of the Group.

1. COMMITMENT TO RESPONSIBLE CORPORATE GOVERNANCE



1.2. Communications with Stakeholders

Viva Biotech regards stakeholders as indispensable partners for its sustainable development. The expectations of stakeholders are an important consideration for the Group to develop ESG work plans and improve ESG performance. We attach importance to the opinions of stakeholders, listen to their voices by building well-established and smooth communication channels, and actively respond to issues of common concern.

During the Reporting Period, we reviewed and identified important stakeholders based on the two dimensions of "impact by the Group" and "impact on the Group", and ultimately confirmed the following seven types of stakeholders as the most important stakeholders of the Group. The following table sets forth the concerns of various stakeholders, as well as the communication channels and response of the Group.

Stakeholders	Focus issues	Communication channels and response of the Group
Government and regulators	• Compliance with laws and regulations • Promote employment • Drive local economic development • Address climate change	• Abide by laws and regulations and strictly implement the government's policy requirements • Actively participate in government-enterprise cooperation projects
Shareholders/investors	• Information disclosure • Financial performance • ESG governance • Business consolidation after the acquisition of Langhua Pharmaceutical	• Convene general meetings • Improve information disclosure and issue financial reports and other special reports • Hold investor conferences, conduct roadshows and reverse roadshows, publish newsletters or WeChat official account articles, and communicate online
Portfolio companies/ clients	• Product quality and safety • Privacy and security • Intellectual property protection • Efficient delivery • Increase R&D investment	• Improve the customer service mechanism • Conduct customer satisfaction surveys • Organize regular visits to customers • Regular teleconferences

1. COMMITMENT TO RESPONSIBLE CORPORATE GOVERNANCE

Stakeholders	Focus issues	Communication channels and response of the Group
Suppliers	• Fair trading • Win-win cooperation	• Improve the procurement and tender system • Strengthen supplier management and annual supplier evaluation
Business partners	• R&D platform and investment • Supply chain management	• Hold meetings for communication • Actively participate in industry cooperation and exchanges
Employees	• Compensation and benefits • Occupational health and safety • Employment compliance • Talent attraction and retention • Career development and growth	• Employ staff legally, formulate and implement sound employment policies • Provide comprehensive and competitive compensation and benefits • Provide comprehensive safety protection for employees and strictly implement epidemic prevention and control policies • Hold employee communication meetings regularly • Set up an employee suggestion box • Improve the training system and carry out training activities
Media	• Information disclosure and transparency	• Hold press conferences • Attend media events and accept media interviews

1. COMMITMENT TO RESPONSIBLE CORPORATE GOVERNANCE

Materiality Assessment

Materiality assessment can help Viva Biotech identify risks and opportunities related to sustainable development, understand where to make improvements, and enhance the transparency of the Report, so as to better share the progress of the Group's sustainable development with all stakeholders. During the Reporting Period, with the assistance of third-party consultants and in accordance with the Guide of the Hong Kong Stock Exchange, we readjusted the material issues after a comprehensive consideration of the mainstream industry guidelines for sustainability and sustainable development trends at home and abroad.

Materiality Assessment Steps

Identification and update of material issues:

With reference to the authoritative sustainability standards such as the Guide of the Hong Kong Stock Exchange and the Global Reporting Initiative as well as industry benchmarks and our current conditions, we adjusted and updated the pool of material issues, which are classified into three dimensions namely environmental, social, and governance. "Anti-corruption", "Intellectual property management" and "Responsible investment", being material issues for the previous year, are included into the "Governance" level. "ESG governance" is introduced as a new material issue, to reflect the concerns and considerations of Viva Biotech in corporate governance, ESG governance, stakeholder communication and risk control. The material issue of "Anti-corruption" is revised to "Business ethics and anti-corruption" to more comprehensively reflect the Group's emphasis and achievements in awareness of business ethics, operational compliance, ethics and anti-corruption training, and whistleblowing mechanisms. We ultimately incorporated 19 issues into the pool of material issues for the Year.

Materiality ranking:

In 2021, we invited stakeholders to determine the materiality of the selected material issues by scoring. During the Reporting Period, the Group adjusted the ranking of certain issues based on sustainable development trends at home and abroad, regular stakeholder communication results and its corporate development strategies, and thus worked out 11 highly material issues, 6 moderately material issues and 2 low-materiality issues.

Confirmation and application:

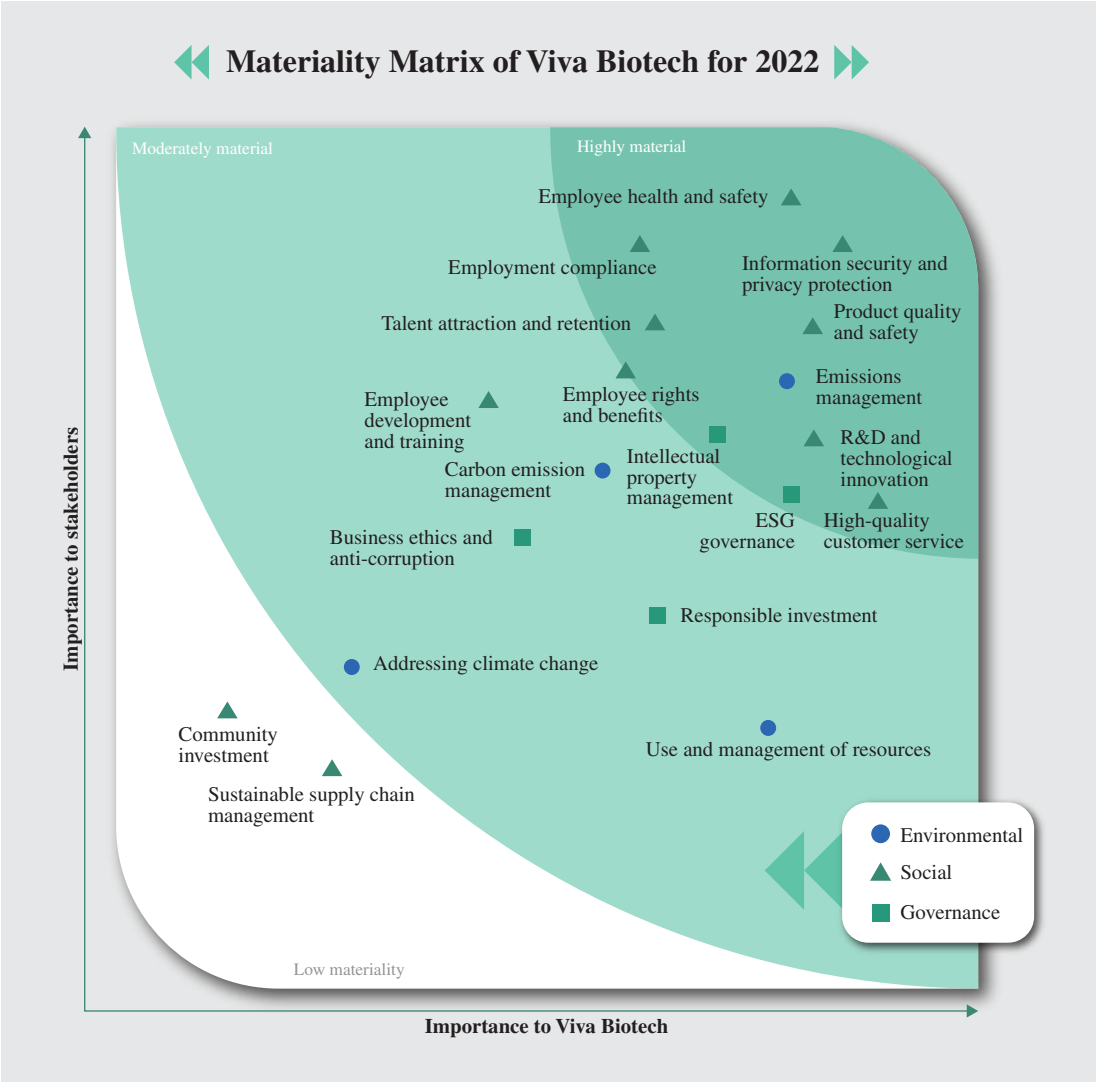
We developed a materiality matrix from the two dimensions of "importance to Viva Biotech" and "importance to stakeholders", and screened out highly material issues based on the scores of each issue.

Review and approval by the Board:

The materiality matrix was submitted to the Board for review, to finalize the importance ranking of the material issues upon approval.

1. COMMITMENT TO RESPONSIBLE CORPORATE GOVERNANCE

Materiality Matrix



Based on the materiality matrix, during the Reporting Period, we identified a total of 11 highly material issues, i.e. employee health and safety, information security and privacy protection, product quality and safety, employment compliance, emissions management, talent retention and attraction, R&D and technological innovation, intellectual property management, ESG governance, employee rights and benefits, and high-quality customer service. The Report will respond to and disclose the material issues, particularly the highly material issues.

Highly material issue	Relevant section
Employee health and safety	People-oriented and Harmonious Community – Occupational Health and Safety
Information security and privacy protection	Innovation-driven Approach to Shared Value Creation – Protection of Clients' Rights and Interests
Product quality and safety	Innovation-driven Approach to Shared Value Creation – Quality Management
Employment compliance	People-oriented and Harmonious Community – Employee Rights and Benefits
Emissions management	Environmental Benefits and Ecological Protection – Green Production
Talent retention and attraction	People-oriented and Harmonious Community – Employee Rights and Benefits; Human Capital Development
R&D and technological innovation	Innovation-driven Approach to Shared Value Creation – Product R&D
Intellectual property management	Innovation-driven Approach to Shared Value Creation – Product R&D
ESG governance	Commitment to Responsible Corporate Governance – ESG Governance System
Employee rights and benefits	People-oriented and Harmonious Community – Employee Rights and Benefits
High-quality customer service	Innovation-driven Approach to Shared Value Creation – Protection of Clients' Rights and Interests

1.3. Business Ethics and Anti-corruption

Business Ethics and Anti-corruption

Viva Biotech has been committed to operating its business on the basis of honesty and trustworthiness, legal compliance, integrity and self-discipline. We uphold the business ethics and act in strict accordance with relevant laws and regulations on corporate governance and the Corporate Governance Code. We observe the highest ethical and professional standards in our interactions with the Board members, employees, shareholders and investors, government and regulators, suppliers, clients, partners, communities and the public, and maintain a zero tolerance policy against bribery, extortion, fraud and money laundering.

The Group strictly follows the Criminal Law of the People's Republic of China, the Company Law of the People's Republic of China, the Anti-unfair Competition Law of the People's Republic of China and other relevant laws and regulations, has established an anti-fraud working group, and has formulated the Anti-money Laundering Management System and the Anti-fraud Management System which set out prohibited acts and corresponding penalties to promote the systematic management of anti-corruption activities. In 2022, we updated the Anti-fraud Management System to clarify and better define major acts of fraud and the management procedures.

1. COMMITMENT TO RESPONSIBLE CORPORATE GOVERNANCE

In order to integrate the awareness of business ethics into its operations and daily management of employees, the Group has set forth in detail the requirements of business ethics covering anti-money laundering, anti-fraud, business gifts and conflicts of interest in the Employee Handbook. Employees are required to sign the Anti-bribery/Anti-corruption Commitment Letter, to ensure that every employee of the Group remembers and practices the business ethics and compliance. During the Reporting Period, three executive directors and relevant employees signed the commitment letter.

During the Reporting Period, the Group updated its anti-fraud system and held an anti-corruption training session for directors and employees to publicize the new rules. All executive directors participated in the anti-fraud training session. In addition, through two routine anti-corruption training sessions themed "Anti-corruption Training – Learning Lessons from Others' Mistakes and Ringing the Alarm Bell" and "Reasons for the High Incidence of Corruption and Preventive Measures" with 24 and 27 participations respectively, we comprehensively elaborated on the basic knowledge of anti-corruption, risk control and related cases to enhance employees' awareness of corruption prevention. There were also no legal cases regarding corrupt practices which were brought against the Company or its employees during the Reporting Period.

Whistleblowing Mechanism

In order to collaborate with stakeholders in and out of the Group to supervise its responsibility fulfillment in respect of compliance requirements and business ethics, Viva Biotech has developed and publicized transparent and open whistleblowing procedures, and set up a number of whistleblowing channels including telephone hotline and e-mail. Through such channels, employees at all levels and stakeholders who have direct or indirect economic relations with the Group may report cases or suspected cases of violation of professional ethics or fraud by employees of the Group. The telephone hotline also receives complaints about accounting, internal control or auditing matters.

Whistleblowing email:
✉ fanwubi@vivabiotech.com

Viva Biotech encourages employees to raise questions or concerns. We protect whistleblowers to the greatest extent possible, to avoid unfair treatment of or retaliation for them due to their whistleblowing actions. The anti-fraud working group will keep a written record of the real-name or anonymous reports lodged by employees or external suppliers, and archive the reported fraud cases after investigation and handling. Where a whistleblowing report involves any senior management personnel of the Group, the anti-fraud working group and the officers of relevant departments of the Group will jointly form a special investigation team to conduct investigation subject to the approval from the Board and the Audit Committee. When conducting such an investigation, if necessary, external experts will be invited to participate in the investigation, and to evaluate the internal control of the affected business units and make improvement suggestions.

During the Reporting Period, the Group did not receive any whistleblowing reports and there were no judicial proceedings against the Group or its employees for corruption, bribery, extortion, fraud or money laundering.

1.4. Risk Management

The Group regards risk management as a guarantee for its long-term stable development. The Group has incorporated ESG factors into its decision-making and daily operations, and adopted reliable risk identification and management measures to improve its risk resistance.

We strictly abide by the Company Law of the People's Republic of China, the Articles of Association and other internal policy requirements, and have formulated and implemented a series of internal control policies and procedures such as the Basic Standards for Internal Control of the Company, the Risk Management System and the Business Continuity Management. We carry out ongoing risk-oriented internal audit to identify risks and exercise timely control over the existing and new risk exposures.

In terms of internal control, we further improved our internal control management system. In accordance with the Anti-unfair Competition Law of the People's Republic of China, the Foreign Corrupt Practices Act (FCPA) of the United States and other laws and regulations, we conducted fraud risk audit within the scope of annual audit to effectively prevent and manage compliance risks and support our sustainable development with integrity and compliance.

1. COMMITMENT TO RESPONSIBLE CORPORATE GOVERNANCE

In order to effectively manage and control risks, the Board of the Group is responsible for assessing and determining the nature and extent of risks that the Group is willing to take to achieve its strategic objectives, and establishing and implementing compliant and effective risk management measures and internal control systems. The Audit Committee of the Group is responsible for assisting the Board in strengthening the risk management and internal control systems, and for obtaining important findings on risk management and internal control issues.

During the Reporting Period, we continued to strengthen our ESG risk management and gradually integrated ESG risk management into the comprehensive risk management system of the Group. All our major ESG risks are reported to the ESG working group and the Board in a timely manner. The Board will also assess the corresponding risks and develop response plans to ensure operational stability and safety of the Group. In 2022, we continued to deepen the risk management measures on ESG issues such as carbon emission management, emissions management, supply chain social responsibility and anti-fraud, and analyzed the impact of ESG risks on the Company's development and operations from the aspects of laws and regulations, market, technology, reputation and low-carbon transformation.

Risk Management and Internal Control Framework of Viva Biotech

Board of Directors	It manages and monitors the risk management and internal control systems
Audit Committee	It guides risk avoidance, and supervises and verifies the implementation and effectiveness of risk management and internal control systems
Internal Audit Department	It leads the risk management and internal control of day-to-day operations and establishes a risk avoidance and internal control system to improve the Group's operation and management process and effectively address and reduce overall operational risks
Various departments	They monitor and manage daily operational processes and procedures, identify major risks, conduct self-inspection, and implement main monitoring processes

2. INNOVATION-DRIVEN APPROACH TO SHARED VALUE CREATION

Over the years, based on innovation and deep integration of resources, Viva Biotech has been providing clients with one-stop integrated services from early-stage structure-based drug discovery to commercial drug delivery. Remaining honest and diligent, we consistently ensure the quality of products and services, continuously improve customer communication and satisfaction, and proactively build an open, win-win ecosystem for cooperation of biopharmaceutical innovators around the world.

2.1. Product R&D

Technological Innovation

Under the corporate vision to "become a long-term partner of global innovative biotech companies", Viva Biotech is always highly enthusiastic about technological innovation. During the Reporting Period, the Group's R&D investment amounted to RMB135.8 million, an increase of 47.0% over the same period last year.

For CRO business, we proactively built capabilities in biophysical technology, protein research technology, medicinal chemistry, Cryo-EM technology, protein production, preparation and structure research, drug screening technology, pharmacokinetics, computer-aided drug design, etc. For CDMO business, we pressed ahead with automation transformation during the Reporting Period to further improve the level of production automation. In terms of technology platform, we continued to develop proteolysis targeting chimera ("**PROTAC**") technology platform, biological activity assay ("**Bioassay**") platform, therapeutic antibody discovery technology platform, API R&D platform, preparation R&D platform, production platform, etc. As of the end of the Reporting Period, the Group has obtained 66 domestic and foreign patents.

A Start of the New Journey – Inauguration of the New Headquarters of Viva Biotech

On November 10, 2022, the headquarters of Viva Biotech was completed in Zhoupu Town, Pudong New Area, Shanghai, marking a key milestone for the Group. The newly completed headquarters building includes an integrated R&D center for innovative drugs with a total GFA of 40,000 square meters.

2. INNOVATION-DRIVEN APPROACH TO SHARED VALUE CREATION

The headquarters building equipped with a top-notch R&D team, sophisticated R&D laboratories and cutting-edge technology platforms will serve as the core R&D base of Viva Biotech. We have a series of well-established early-stage drug R&D and operation facilities including industry-leading protein preparation and purification platform and crystal structure research center, sophisticated Cryo-EM platform and drug screening platforms (ASMS, HDX, SPR, etc.), cutting-edge Bioassay platform, medicinal chemistry experimental area and therapeutic antibody discovery platform, and have established a CMC/CDMO R&D center covering small molecule R&D and production, which includes four GMP synthesis areas for APIs, two GMPD level clean areas, and one GMP area for preparations.

We believe that the new headquarters building can enhance comprehensive R&D capabilities of the Group and help us to build more diversified and robust one-stop CRO-CDMO service chain. Leveraging our unique strengths in SBDD, we will build up technical barriers, improve operational efficiency, strengthen the construction of our one-stop drug R&D and production service platform, deepen the synergy between CRO and CDMO operations, and proactively build an open, win-win ecosystem for cooperation of biopharmaceutical innovators around the world.

2. INNOVATION-DRIVEN APPROACH TO SHARED VALUE CREATION

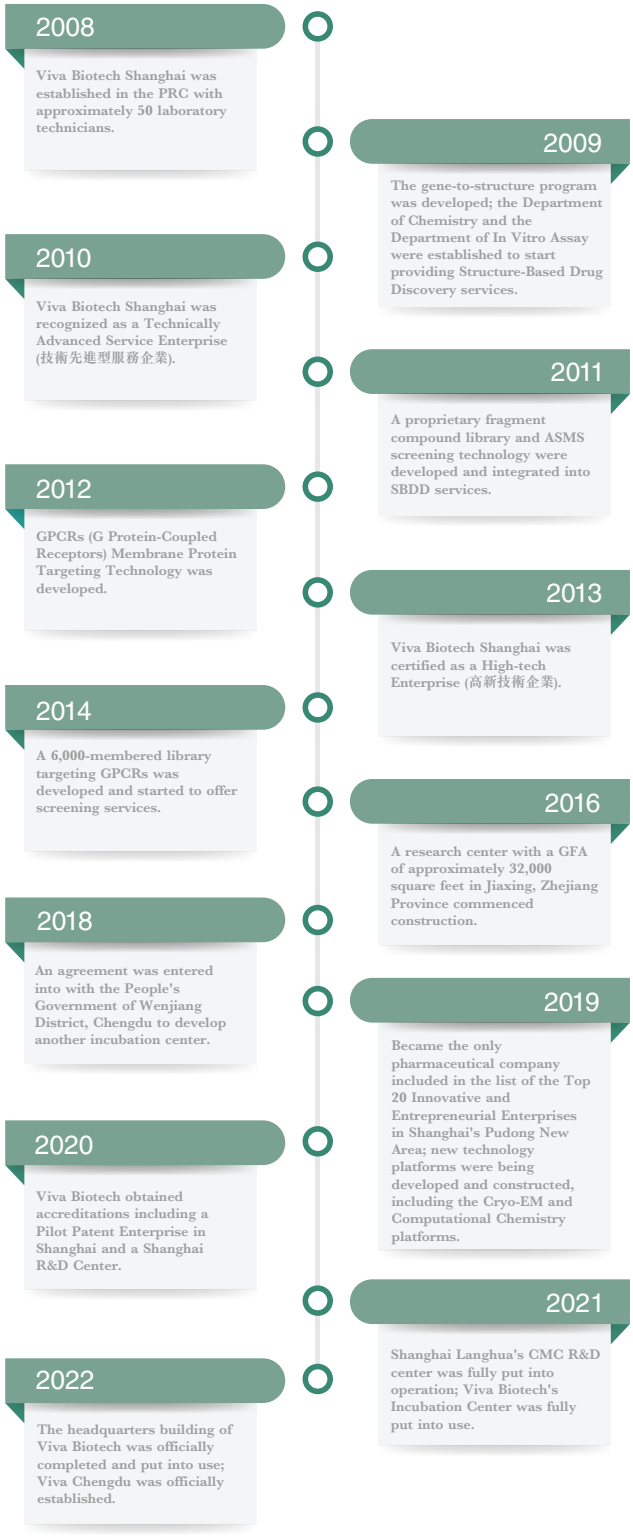
Intellectual Property Protection

Viva Biotech upholds the mission "to be Innovation-Driven, to be Empowered by Cutting-Edge Technology, to Strive for Excellence, and to benefit patients all around the world". In a series of innovation-oriented business activities aiming for win-win cooperation, we realize that patented core technologies and proprietary expertise are the foundation for us to raise technical barriers, enhance business competitiveness and win over clients. In order to better protect, manage and use intellectual property rights and tap the rising potential of intellectual property rights, Viva Biotech strictly abides by the Patent Law of the People's Republic of China, the Trademark Law of the People's Republic of China, and the Copyright Law of the People's Republic of China and other laws and regulations related to intellectual property rights and their implementation rules. In the meantime, as a biopharmaceutical company targeting the international market, the Group strictly complies with the Patent Cooperation Treaty and other relevant international provisions and treaties.

In accordance with the requirements of the Enterprise Intellectual Property Management Standards (GB/T 29490-2013), the Group has established a dedicated intellectual property department, and obtained the enterprise intellectual property management system certification during the Year. The Company's intellectual property department, equipped with full-time and part-time staff, undertakes the responsibilities of formulating intellectual property development plans, establishing a performance evaluation system for intellectual property management, supervising and evaluating other relevant management bodies, and managing the Company's intellectual property rights. In addition, the Group has developed intellectual property control procedures covering the management of resources (human resources, infrastructure, financial resources and information resources), basic management (acquisition, maintenance, application, protection, contract management and confidentiality of intellectual property), implementation and operation (project initiation, research and development, procurement, sales and after-sales service), and audit and improvement (internal audit, analysis and improvement) to implement the responsibility to protect intellectual property, so as to ensure that intellectual property rights are effectively managed in all aspects.

2. INNOVATION-DRIVEN APPROACH TO SHARED VALUE CREATION

R&D Milestones of Viva Biotech



2.2. Quality Management

The Group adheres to the self-imposed requirement of "providing high-quality products with high standards", and persistently improves product quality management capabilities to empower clients and the industry. The Group strictly abides by the Product Quality Law of the People's Republic of China and other relevant laws and regulations on production and quality. In view of the higher requirements for product health and safety in the pharmaceutical industry, the Group pays special attention to and complies with relevant industry laws and regulations including the Drug Administration Law of the People's Republic of China, the Regulations for the Implementation of the Drug Administration Law of the People's Republic of China, the GMP of China, the Measures for the Supervision and Administration of Drug Production, and the Measures for the Administration of Drug Registration.

In terms of CDMO business, Langhua Pharmaceutical has passed the GMP quality management system certification of the State Food and Drug Administration and the certifications of the FDA, the WHO and the EDQM, and has become a qualified supplier and R&D and production base of many renowned multinational pharmaceutical companies. During the Reporting Period, all API products of Langhua Pharmaceutical passed China's GMP certification, and its main products obtained such international certifications as EU-GMP, WHO-PQ, and Accreditation of Foreign Manufacturers (AFM) in Japan. During the Reporting Period, Langhua Pharmaceutical obtained the MPP license to produce APIs for Molnupiravir, an oral anti-COVID-19 drug; and obtained a license from the Zhejiang Provincial Drug Administration for exporting spironolactone API to the European Union.

The Group, as always, is committed to improving the quality management system. We have established a complete set of procedures for quality review and assessment and quality and safety emergency response, and regularly re-examine, sort out and revise internal regulatory documents. We constantly reiterate the quality-first philosophy in the aspects of risk management, internal audit and correction, personnel training, supplier verification and training in relation to quality control, and has established a consistent and effective quality control system.

2. INNOVATION-DRIVEN APPROACH TO SHARED VALUE CREATION

Case Highlight: Langhua Pharmaceutical Obtained the MPP License to Produce APIs for Molnupiravir, an Oral Anti-COVID-19 Drug

In 2022, our subsidiary Langhua Pharmaceutical became one of the five global companies authorized to produce APIs for Molnupiravir. We draw upon our extensive project experience and solid expertise to deliver on the mission and corporate social responsibility of Viva Biotech.

Case Highlight: Quality Month Training Program of Langhua Pharmaceutical

During the Reporting Period, our subsidiary Langhua Pharmaceutical launched a Quality Month Training Program, providing three quality training sessions for employees with a total of 469 participations.

We invited officers of Langhua Pharmaceutical including Huang Zhengfu, a quality chief, and Chen Ruqiang, a production chief, to serve as trainers. The topics discussed included "Findings from Official FDA Inspections in Recent 5 Years", Learning Based on "Selected Complaint Cases" and "5 Why & RCFA Training".

In 2022, in the context of continuous business growth, the Group maintained strict control over product quality and safety. During the Reporting Period, the Group did not have any product recalls for health and safety reasons.

2.3. Protection of Clients' Rights and Interests

Customer Services

The Group adheres to an ethical, scientific and objective approach to product marketing and promotion. We take customer feedback very seriously and provide high-quality services to clients. For responsible marketing, the Group strictly abides by the Advertising Law of the People's Republic of China and other local legal requirements and industry standards. The Group has developed marketing-related measures, such as the Brand Strategy Management System and the Anti-unfair Competition and Fair Marketing Procedures, which stipulate that all marketing materials and forms shall be reviewed by the Company to ensure they are compliant, authentic, scientific and accurate, and it is strictly prohibited to release deceptive and misleading promotional information and materials, so as to protect the legitimate rights and interests of customers. During the Reporting Period, the Group did not have any legal proceedings related to false marketing claims.

2. INNOVATION-DRIVEN APPROACH TO SHARED VALUE CREATION

We always standardize and improve our services with the highest standards in the industry. Deeply engaged in CRO drug R&D services and CDMO R&D and production services through the years of accumulation and development, the Group has built a well-established customer service system from drug R&D to production delivery. We uphold the customer-centric philosophy and actively communicate with clients to understand their evaluation of our services and improve service standards and quality. In terms of ensuring customer satisfaction, in order to objectively and comprehensively understand the customer satisfaction with the Group's service quality and their needs, opinions and suggestions, the Group has formulated the Customer Questionnaire Management Process, conducts customer satisfaction surveys on a regular basis to investigate the satisfaction of key and new clients with regard to service quality, response speed, intellectual property protection and service charges, and quickly respond to the problems and suggestions raised in the process and analyze and rectify the problems involved. In 2022, the Group's customer satisfaction score based on surveys was 95.36.

Customer Response Mechanism

Answer clients' inquiries within one working day

Communicate with clients on project progress on a weekly or bi-weekly basis

Regularly invite clients to visit us and have deep communication

Viva Biotech provides smooth channels for customer complaints and carefully listens to customers' opinions and suggestions. The Group has formulated the Operational Procedures for Handling Customer Complaints to standardize the complaint handling and feedback mechanism. For each customer compliant, the relevant department head and project head, the internal control department and the customer service department will discuss the reasons for the complaint and propose solutions to the compliant. We also summarize and evaluate the customer complaint handling process from time to time, draw lessons from experience, and put forward suggestions for improvement, so as to continuously improve the operations management and business processes and enhance the quality and level of customer service. During the Reporting Period, the Group received a total of 20 complaints from clients, all of which had been properly addressed in a timely manner.

2. INNOVATION-DRIVEN APPROACH TO SHARED VALUE CREATION

To prevent product safety risks, our subsidiary Langhua Pharmaceutical has established the complaint management procedures, including management procedures for deviation handling, procedures for management of corrective and preventive measures, quality risk management procedures, etc. Furthermore, Langhua Pharmaceutical has a well-established product recall and disposal process, which is implemented in accordance with the Administrative Measures on Drug Recalls, to ensure that customer complaints are handled properly and drugs with quality issues are recovered timely and effectively where necessary, in order to protect patients' interests and public health. In addition, we have formulated the QC Procedures for Laboratory Inspection Process Management to prevent the pollution or cross-pollution of samples in circulation which will affect the accuracy and validity of inspection data. During the Reporting Period, the Group did not experience any product recalls in effect.

Privacy Protection and Information Security

Protection of information security and privacy of multiple stakeholders such as the Company, customers and clinical participants is a fundamental principle in responsible business operation of Viva Biotech. We strictly abide by the relevant laws, regulations and rules on information security and privacy protection, including the Cybersecurity Law of the People's Republic of China, the Data Security Law of the People's Republic of China and the Personal Information Protection Law of the People's Republic of China.

The information security team, which is accountable to the Group's Public Management Department, is responsible for publishing information security-related documents, conducting information security training, preventing information leakage, and continuously improving the information security process. In terms of information security management, the Group strictly abides by laws and regulations, and has formulated the Standards for Computer Information Security Management and the Computer Management System to specify the management requirements for computer use, data management, information backup, user management, system security, virus prevention and computer information system security inspection, thus ensuring the stability of the Group's IT network and its information security. In 2022, in order to further enhance employees' awareness of the significance of cybersecurity, enhance their consciousness of complying with rules and regulations and labor discipline, and avoid cybersecurity accidents, we formulated the Information Security Education and Training Guide, which sets forth the system, methods and content of cybersecurity training for all employees.

In terms of customer privacy protection, we have developed and implemented the Regulations on Confidentiality of Customer Information as the standards for customer information management, which require us to protect patients' security and privacy in accordance with our internal rules and standards, including obtaining the informed consent of each patient participating in clinical trials and providing adequate information on clinical trials and the potential risks and benefits. Based on such information, patients can make informed decisions to participate in clinical trials under voluntary participation agreements.

In 2022, Viva Biotech did not receive any complaints about infringement of customer privacy or loss of customer data.

2.4. Sustainable Supply Chain

Viva Biotech understands that responsible procurement and sustainable supply chain are the foundation for the stable and healthy development of the Group. In the process of procurement and operations, Viva Biotech strictly abides by the laws and regulations of the countries and regions where it operates, including the Law of the People's Republic of China on Tenders and Bids. The Company has formulated and implemented the Supplier Access Regulations, the Supplier Management Procedures and the Bidding Management System, and our subsidiary Langhua Pharmaceutical has formulated and regularly updates the Supplier Management System. We maintain clear rules on supplier access, selection, classification, acceptance inspection, evaluation and management with a fair and impartial attitude of cooperation.

Supplier Approval

The Group continues to give top priority to building a green supply chain in supplier management. By integrating green procurement into the entire process of purchasing raw materials, equipment and services, we led upstream and downstream companies in the supply chain to continuously enhance the utilization efficiency of resources and energy, improve environmental performance, and achieve sustainable development. In the procurement process, Viva Biotech pays attention to the environmental performance of suppliers, and requires that the products provided by suppliers shall be friendly to the human body and the environment; the use of the products does not generate excess energy consumption and waste; and the product packaging is simple, reasonable and degradable. For suppliers of controlled chemicals, we require them to provide licenses for production, operation or transportation of hazardous chemicals. For suppliers providing product-related services, we require them to present relevant certificates such as ISO9001 Quality Management System, ISO14001 Environmental Management System and ISO45001 Occupational Health and Safety Management System certificates. In terms of logistics and warehousing, the Group, with an aim to achieve green logistics, actively leverages the advantages of information technology, strengthens the application of automation, and realizes the effective management of toxic and hazardous materials. We realize responsible storage and transportation in the supply chain through initiatives such as inventory optimization, recycling and reuse of waste raw materials and reagents, and noise pollution reduction during transportation as well as low-carbon transportation and storage measures.

In addition, we implement a standardized operating model with unified planning, price inquiry, and unified procurement. We proactively collaborate with suppliers to solve problems related to product safety and quality assurance, and support raw material suppliers and technical service providers to obtain relevant certifications, so as to establish good, win-win partnerships with upstream and downstream players. In addition, the Group guards against potential violations of laws and regulations, corruption and fraud in the supply chain, and cracks down on unfair competition to maintain fair and impartial partnerships. The Group adopts a bidding model for all procurement processes, implements a multi-party supervision mechanism for all procurement contracts through internal audits, and effectively prevents procurement risks through joint review and approval by multiple departments. The payment process also requires multiple approvals to complete the payment. The full purchase process will be filed for record and for customer review.

Our subsidiary Langhua Pharmaceutical has set forth in the Procurement Contract the social responsibilities that the supplier must fulfill. We will terminate the partnership with any supplier that involves the use of child labor, prison labor, forced and compulsory labor, or overtime that poses serious health and safety hazards to employees but fails to take corrective measures.

Supplier Evaluation

We expect suppliers to not only abide by relevant laws and regulations and the standards of Viva Biotech in terms of quality and safety, but also meet our strict requirements on suppliers in the aspects such as finance, anti-corruption, labor protection, employee health and safety, and environment.

The Group regularly reviews supplier performance and implements an annual performance evaluation system for them, to effectively manage potential risks in the supply chain. Regular suppliers are evaluated annually, and qualified suppliers are reviewed once a year.

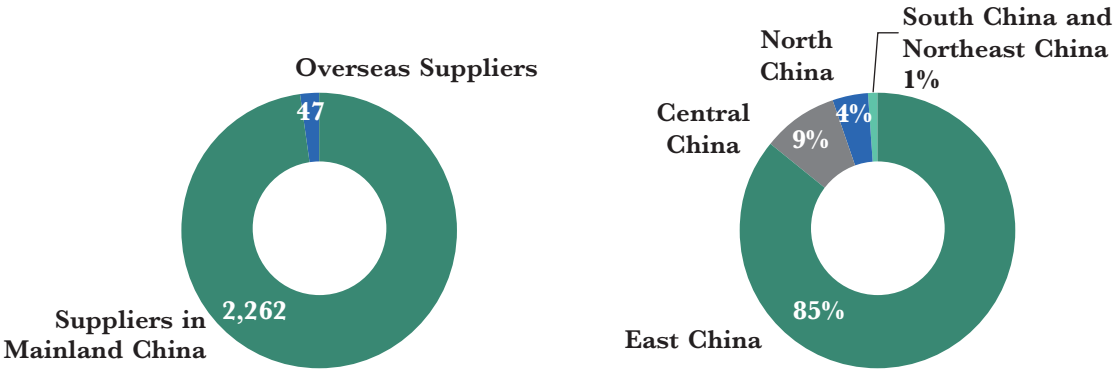
2. INNOVATION-DRIVEN APPROACH TO SHARED VALUE CREATION

We improve the awareness and performance of suppliers in environmental protection and corporate social responsibility through social responsibility questionnaires for suppliers and on-site social responsibility audits of suppliers. Our on-site social responsibility audit covers the performance and measures of suppliers in the aspects of child labor, forced labor, working hours, salaries and benefits, health and safety, and environmental protection, and confirms whether suppliers in relevant aspects are in line with the Supplier Management Procedures and the Group's values of green supply chain. Our procurement department, marketing department and quality department are jointly responsible for the supplier social responsibility review, and we require all suppliers to observe the standards of business ethics, strictly control the quality standards in the process of delivering products and services, respect the rights and interests of employees including equal pay and other employment rights, promote occupational safety and health of employees, and adhere to green production and transportation.

In order to improve the stability and continuity of the supply chain, we try our best to select two or three manufacturers for each type of raw and auxiliary materials and packaging materials, and establish a long-term partnership with them to minimize the frequency of changing suppliers, so as to ensure long-term supply and minimize the supply risk.

During the Reporting Period, the Group had a total of 2,262 suppliers in mainland China, of which approximately 85% are in East China, 9% in Central China, 4% in North China, and 1% in South China and Northeast China. All suppliers are subject to the Group's supplier engagement and management regulations.

Number of Suppliers by Region



3. INDUSTRY LEADERSHIP AND MULTI-DIMENSION EMPOWERMENT

For years, Viva Biotech has been deeply engaged in investment and incubation business with a focus on global biopharmaceutical innovation. We integrate the concept of responsible investment into our dual drivers – cash-for-service ("**CFS**") business and equity-for-service ("**EFS**") business and continuously deepen industry cooperation, in an effort to promote the development of the global biopharmaceutical industry.

3.1. Responsible Investment

Viva Biotech commits itself to better satisfying the medical needs of patients around the world through drug discovery services and active responsible investment. Viva Biotech Innovator ("**VBI**") serves as our innovation center, and is a core department for our investment, incubation and EFS operations. We integrate the concept of responsible investment into our dual drivers – CFS business and EFS business, and apply it in pre-and post-investment management, covering due diligence, post-investment participation in the decision-making of portfolio companies, systematic analysis of ESG factors, etc. Through prudent and responsible investment decisions, we promote the growth of biotech start-ups and the sustainable development of the biopharmaceutical industry, thus contributing to the realization of the UN Sustainable Development Goal of "Good Health and Well-Being".

Our Investment Strategy

Groundbreaking innovation concept	The target company should have a unique vision to address the unmet medical needs or overcome the technical challenges
Strong team	The founder and management team should have proven integrity and track record of business expansion, and extensive experience in the healthcare industry
Commercial viability	It is able to benefit patients and unlock significant market potential in the next 5 to 10 years
Strategic fit	We focus on investing in early-stage players, and prefer to provide assistance to portfolio companies through a combination of cash capital and physical services

3. INDUSTRY LEADERSHIP AND MULTI-DIMENSION EMPOWERMENT

Professional Post-investment Management and Support

VBI focuses on identifying, investing in, and serving innovative biopharmaceutical concepts with significant medical value in various indications and fields around the world, as well as high potential start-ups aiming to address unmet clinical needs through groundbreaking or creative solutions. Drawing upon the new drug R&D experience and technological strengths of Viva Biotech accumulated over the years, VBI will alongside its investment continuously optimize a series of post-investment value-added platform services, including R&D, site and logistics support, industry partnership, investment and financing, based on the various needs of new drug R&D and in the growth stage, to accelerate the "zero-to-one" transformation and commercialization process of new drug R&D.

Our Post-Investment Management and Support

Capital	Provide subsequent fundraising and financial support
Industrial connectivity	Assist in utilizing internal or external resources (VC, MNC, CDMO) Early warning of market dynamic changes
Operation	Laboratories and offices in Shanghai, Jiaxing, Chengdu, Suzhou and other cities Provide multi-dimension support services covering human resources, accounting, procurement, business development and financing
Expert support	Business partners (business operation & compliance experts) Scientific consultants (scientific research & drug development experts)

During the Reporting Period, in an ongoing effort to explore business opportunities around the globe, the Group reviewed a total of over 450 projects globally, added 4 start-ups to its portfolio companies, and made additional investment in 9 existing portfolio companies, covering various indications, modalities and regions. As of December 31, 2022, the Group had invested in a total of 91 portfolio companies.

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3. INDUSTRY LEADERSHIP AND MULTI-DIMENSION EMPOWERMENT

New Portfolio Companies Added During the Year

No.	Company Name	Type	Indications/Primary Technology /Business
1	GT Apeiron Therapeutics	Strategic investment	Committed to the development of new small molecule medicines for tumor
2	Domain Therapeutics	Strategic investment + EFS	Committed to the discovery and development of innovative candidate drugs targeting G protein-coupled receptor (GPCR)
3	Antag Therapeutics	Strategic investment	Committed to the development of new treatments for metabolic diseases
4	Lucy Therapeutics	EFS	Committed to the development of new small molecule medicines for nervous system diseases

Portfolio Highlight: Domain received a milestone payment of millions of US dollars from Merck for the clinical development of M1069, an immuno-oncology drug

In June 2022, Domain Therapeutics ("**Domain**"), a biopharmaceutical company incubated by Viva Biotech and specialized in R&D of immuno-oncology drugs targeting G protein-coupled receptor (GPCR), announced that it received a milestone payment of millions of US dollars from Merck. This is a milestone payment within the €240 million (US$261 million) payment as agreed between the parties.

M1069, a candidate A2a/A2b antagonist co-developed by Domain Therapeutics and Merck, has entered the first human body study stage, which is designed to evaluate safety, tolerance, PK/PD and clinical activities of M1069 in patients with metastatic or locally advanced unresectable solid tumors.

Portfolio Highlight: Focus-X Therapeutics, a portfolio company incubated by Viva Biotech, successfully entered into an acquisition agreement with Fulian Pharmaceutical

In November 2022, Focus-X Therapeutics ("**Focus-X**"), a nuclide drug company incubated by Viva Biotech, successfully entered into an acquisition agreement with Fulian Pharmaceutical Technology Co., Ltd. ("**Fulian Pharmaceutical**").

Focus-X is a company that develops targeted radiopharmaceuticals for cancer treatment based on its proprietary peptide engineering technology, with its angel funding round led by Viva Biotech in the third quarter of 2020. In addition to funding support, Viva Biotech provided comprehensive incubation services to Focus-X, helping it achieve the transformation from concept to product. The acquisition is estimated to be completed in the first quarter of 2023. This is another preclinical project to be acquired following Dogma and Totient among the portfolio companies incubated by Viva Biotech, demonstrating again the deal sourcing capability and professional post-investment support of our investment team.

3.2. Promoting Industry Cooperation

Viva Biotech deepens technology development, model development and cooperation to facilitate the construction of a one-stop platform for drug discovery, production and cooperation. During the Reporting Period, we built an industry ecosystem and promoted industry exchanges and cooperation at home and abroad by holding forums and reaching strategic agreements, among other industry exchange and cooperation means.

Case Highlight: Focusing on Innovation to Empower Cooperation – The Third Session of Viva Biotech Partnership Summit

Viva Biotech 2022 Partnership Summit, the third session of the summit series, was successfully held from June 16 to 20, 2022. As one of our largest annual events, the summit is committed to bringing together various resources from research institutions, start-ups, biopharmaceutical industry and capital, to jointly help global biopharmaceutical start-ups achieve the "zero-to-one" transformation. More than 260 representatives of global investors, R&D representatives and business development heads of pharmaceutical companies attended the summit, and held over 300 one-on-one meetings with founders of nearly 70 portfolio companies through the Partnering Platform.

3. INDUSTRY LEADERSHIP AND MULTI-DIMENSION EMPOWERMENT

Case Highlight: Zelixir Biotech Reached a Strategic Partnership Agreement with Viva Biotech to Accelerate the Efficiency of Innovative Drug Discovery

In August 2022, Shanghai Zelixir Biotech Co., Ltd. ("**Zelixir Biotech**") and Viva Biotech jointly announced the signing of a cooperation agreement to govern their cooperation relationship. Based on the synergy and complementarity of their respective businesses and technologies, the parties intend to launch in-depth cooperation on the research on AI-based high-throughput assisted drug design and new drug molecule discovery.

Zelixir Biotech will provide the ZCloud cluster system to help Viva Biotech focus on innovative drug R&D and start innovation from the source. The algorithm software provided in the ZCloud system has been significantly improved and optimized in prediction accuracy and computational efficiency. The ZCloud system includes high-throughput computing modules in various stages from structural analysis, target discovery, molecular generation, virtual screening, reverse screening to lead compound optimization, etc. Furthermore, the R&D team continues to develop the large-scale high-performance AI computing platform, so as to meet customers' needs for high-precision and high-throughput computing power.

In the future, both parties will give full play to their respective expertise. Based on the strong preclinical drug development capabilities of Viva Biotech and combining Zelixir Biotech's strengths in AI-based protein structure calculation, molecular screening design, molecular dynamics simulation and free energy perturbation, we aim to explore new paths for innovative drug development and further improve the accuracy and efficiency of new drug molecule discovery and optimization.

3.3. Empowering Industry Development

Viva Biotech maintains an unchanged commitment to empowering industry development through responsible practices. We build up a resource platform for portfolio companies and reach out to external partners, seeking to empower sub-sectors including biopharmaceuticals, medical services, medical informatization, digital therapy, nutrition and health, and enhance drug accessibility and medical convenience at home and abroad.

Case Highlight: Anji Pharma and PHP Entered into Strategic Cooperation to Jointly Tackle High-incidence Diseases

Anji Pharma, a portfolio company of Viva Biotech, officially announced the entering of a strategic cooperation with Population Health Partners ("**PHP**"), pursuant to which both teams will work closely together to tackle the challenge of high-incidence diseases of human. PHP will work closely with Anji Pharma to support its R&D, strategy and operations, and jointly carry forward its clinical projects under development. These projects have significant potential to improve the life quality and reduce the disease burden for millions of patients.

After the cooperation between Anji Pharma and PHP begins, the near-term focus will be on accelerating the development of two major clinical pipelines of Anji Pharma. ANJ900 (a new delayed release formulation of metformin) is undergoing phase III clinical trials. Previous clinical trials have shown that ANJ900 can achieve clinically significant hypoglycemic effect at very low drug plasma concentration. This discovery is expected to provide a new treatment strategy for CKD patients who are currently contraindicated for the use of metformin. In addition, ANJ908 (pradigastat) as an innovative DGAT1 inhibitor has successfully completed Phase II clinical trials in patients with chronic functional constipation (NCT04620161). This proof-of-concept study was conducted in 25 clinical trial centers in China and the United States, which verified the excellent effectiveness, safety and dosage range of pradigastat in constipation patients (Rome IV standard). Chronic functional constipation affects nearly one-seventh of the US population, and a large number of patients worldwide are seeking prescription drug treatment. Anji Pharma is expected to publish the preliminary results of the study within this year.

3. INDUSTRY LEADERSHIP AND MULTI-DIMENSION EMPOWERMENT

Case Highlight: AIxplorerBio Cooperates with the Immunology Institute of Tsinghua University to Explore and Promote New Drug R&D in Autoimmunity

AIxplorerBio, a portfolio company of Viva Biotech, reached cooperation with the Immunology Institute of Tsinghua University ("**Tsinghua Immunology Institute**"), pursuant to which the parties will demonstrate and explore target selection and validation, pathogenesis and other fields in autoimmunity, to help AIxplorerBio build an innovative drug pipeline with global competitiveness. On July 19, the first pipeline strategy seminar was held by the parties in Beijing.

Viva Biotech expects that the insights and contributions of Tsinghua Immunology Institute will help AIxplorerBio gain a more comprehensive understanding of diseases and provide directional guidance for new drug R&D projects. We believe that the close cooperation ahead between both teams will help further accelerate the delivery of more precise, accessible, and efficacious innovative drugs for patients with autoimmune diseases.

In 2022, we rolled out a series of special knowledge sharing and live webcast programs themed "Viva Pharma Vision" on our official WeChat account, focusing on the frontier research in the global biopharmaceutical industry to share sector dynamics with industry participants and enlighten biopharmaceutical innovators in drugs R&D and production. We invited biopharmaceutical industry experts to share frontier research and successful experience in CRO, CMC and CDMO fields, covering a wide array of popular directions such as protein crystal structure research, biophysical technology, medicinal chemistry, antibody R&D, pharmaceutical research, green chemistry, drug registration and declaration, GMP production, etc.

3. INDUSTRY LEADERSHIP AND MULTI-DIMENSION EMPOWERMENT

Case Highlight: "Viva Pharma Vision" | Delving into the PROTAC Technology for Breakthroughs in Undruggable Targets

In April 2022, Dr. Cai Jianhua, a Senior Vice President of Viva Biotech, delivered a presentation on "Delving into the PROTAC technology for breakthroughs in undruggable targets" based on real cases in our free webcast program "Viva Pharma Vision".

In targeted protein degrader (TPD), a hot field of small molecule drug R&D in recent years, proteolysis targeting chimera (PROTACs) has emerged as one of the most mature directions, with more than ten drugs entering the clinical trials. Among them, several drugs have entered Phase II clinical trials, demonstrating sound safety, efficacy and tumor inhibitory activity in preliminary clinical study.

Drawing upon its successful experience in PROTAC new drug R&D over the years, Viva Biotech has served a number of cutting-edge biotech companies at home and abroad and multinational pharmaceutical enterprises focusing on PROTAC new drug R&D. We helped customers complete a series of projects, including the structure research on ternary complex of PROTAC molecules and E3 ligase and target degradable protein, the research on PROTAC molecular biological activity, medicinal chemistry synthesis, drug screening, and the pharmacokinetic research on the ternary system of PROTAC molecules and E3 ligase and target degradable protein. We wish to share our knowledge, experience and expertise in PROTAC technology with industry partners and students in a timely manner through our live webcast program "Viva Pharma Vision".

4. ENVIRONMENTAL BENEFITS AND ECOLOGICAL PROTECTION

As an active player in the global biopharmaceutical industry, Viva Biotech always regards environmental benefits as the key to business value creation, keeps a close eye on the impact of its business activities on the environment, and adheres to proactively responding to the calls of the industry and society for green development. By formulating strict rules and regulations and performing high-standard environmental obligations, we have integrated the sustainability into the genes of our corporate culture.

4.1. Supporting the Climate Actions

In view of frequent global climate disasters and the increasingly challenging climate change, countries around the world are working together more decisively to protect our homeland in the planet. From China's "3060" carbon neutrality and carbon peaking goals to the 27th United Nations Climate Change Conference (COP27) reaffirming the importance of climate adaptation and mitigation, climate change has become the focus of attention at home and abroad, as well as a key issue that every company must face for long-term and sustainable development.

From energy consumption policy to daily operations, Viva Biotech is on track to fulfill its corporate responsibility to reduce greenhouse gas emissions in an all-out effort to address climate challenges. In our daily activities, we closely monitor the dynamics of climate change, and continue to identify the transition risks that may arise in business development, production and operations, including legal risk and policy risk, as well as physical risks caused by rising temperatures and extreme weather. We also make preliminary estimates of the potential financial impact and risk response costs, such as the increased cooling energy consumption caused by temperature rise and the safety risks from volatile solvent losses, as well as the material impact of environmental emergencies caused by extreme weather disasters such as typhoons and floods on our production and operational continuity. Meanwhile, we believe that challenges and opportunities are behind the risks. For example, the introduction of laws and regulations related to climate change and the upgrades of low emission technologies in the industry will increase the investment cost of enterprises in technological transformation of processes, equipment and facilities in the short term, but will also improve the competitiveness of enterprises and reduce their daily operating costs in the long run.

In order to better respond to environmental risks, Langhua Pharmaceutical has completed an environmental risk assessment report and an environmental emergency resource investigation report based on the Response Plan for Environmental Emergencies during the Reporting Period. The reports contain detailed analysis of environmental risks, weaknesses in emergency response measures, organization of emergency team and emergency equipment resources, to ensure that the response time can be minimized in case of environmental emergencies to maximize the protection for personal safety and financial security. Furthermore, we organized training sessions related to climate disaster response, such as the Safety Education and Training on Typhoon Prevention, to help employees have a correct understanding of various climate disasters and better grasp the knowledge about disaster prevention and relief.

4. ENVIRONMENTAL BENEFITS AND ECOLOGICAL PROTECTION

Energy Conservation and Emission Reduction Actions

To better address climate change and reduce greenhouse gas emissions, Viva Biotech has developed a series of management measures, including the Energy and Resource Management Procedures, the Measures for Energy Procurement and Approval Management, the Management Measures for Energy Production, and the Measures for Energy Performance Evaluation, Rewards and Punishments, to regulate the use of energy and resources. By improving management systems and production process, we seek to reduce energy and resource consumption and improve the utilization rate of energy and resources, in an effort to achieve coordinated development of the economy and the environment.

During the Year, the Group vigorously promoted energy conservation and emission reduction, continuously exploring new potential of carbon reduction through measures such as new energy applications, energy-saving equipment upgrades, and process and management optimizations. Moreover, the Group is fully aware of the importance of energy management in reducing greenhouse gas emissions and achieving low-carbon development. As such, we have set emission reduction goals according to our own conditions to lower energy consumption and reduce the intensity of Scope 1 and 2 greenhouse gas emissions, and we plan to gradually reduce carbon footprint of product life cycle to effectively address climate change. In the CDMO segment, our subsidiary Langhua Pharmaceutical plans to reduce its emissions by 50% in 2025 compared with 2022. The emission reduction target has been validated through scientific methods including scenario analysis, and is currently being evaluated under the Science Based Targets initiative (SBTi). In order to achieve the goals of energy conservation and emission reduction, Langhua Pharmaceutical has launched the Energy Conservation Plan to strengthen energy management with clearly defined duties and work procedures and tap the potential of energy conservation. In addition, it proactively conducts dynamic management of relevant policies and measures and holds regular meetings under the Energy Conservation Plan on a quarterly basis, to maintain the appropriateness, adequacy and effectiveness of the Energy Conservation Plan. During the Reporting Period, Langhua Pharmaceutical revised its greenhouse gas inventory management procedures to standardize its greenhouse gas emission inventory management and improve the quality of data disclosure. In addition, Langhua Pharmaceutical put into use a hazardous waste treatment unit that can generate steam as a byproduct during the Year. While promoting clean production, it helped to reduce purchased heat by approximately 87% compared with the previous year, thus greatly improving energy conservation and emission reduction in production.

4. ENVIRONMENTAL BENEFITS AND ECOLOGICAL PROTECTION

Energy Conservation and Emission Reduction Efforts of the Group in 2022

- Installed intelligent lighting control in the factory area;
- Vigorously promoted the use of new energy vehicles, and all the Group's shuttle buses are new energy vehicles;
- Installed novel ventilation storage cabinets in the laboratories, which achieved 240,000 kWh or 40% energy saving compared to traditional equipment;
- Introduced novel regenerative thermal oxidizers ("**RTOs**") and other emission reduction equipment in the production process;
- Implemented closed management on workshop equipment and facilities;
- Continuously promoted the use of solar photovoltaic units. Based on the existing rooftop photovoltaic units in the factory area, Zhoupu Park further expanded the scale of photovoltaic application during the Reporting Period. In addition, the Group's 10,000 square meter factory photovoltaic project will be preliminarily initiated in the near future to step up the construction of photovoltaic power generation, including laying rooftop photovoltaic panels and using photovoltaic street lights.

By installing solar photovoltaic panels, we generated and used 62.99 MWh of renewable electricity in 2022.

New energy shuttle buses of Viva Biotech

4. ENVIRONMENTAL BENEFITS AND ECOLOGICAL PROTECTION

During the Reporting Period, the types of energy used by Viva Biotech in production and laboratories were mainly purchased electricity and heat. We use diesel in self-power generation and regenerative thermal oxidizers, and some of our own vehicles use petrol. During the Reporting Period, the energy consumption intensity of the Group was 24.91 MWh per RMB million of revenue, down 37.55% compared with the previous year.

Indicator	2021	2022	Unit
Energy consumption			
Petrol consumption	28,991.00	**28,128.00**	liter
Diesel consumption	330,417.50	**496,110.00**	liter
Renewable energy[1]	66.83	**62.99**	MWh
Total direct energy consumption	3,750.37	**5,453.78**	MWh
Direct energy consumption intensity	1.78	**2.29**[2]	MWh per RMB million of revenue
Consumption of purchased electricity	30,906.36	**47,659.52**[3]	MWh
Consumption of purchased heat	49,278.51	**6,161.43**[4]	MWh
Total indirect energy consumption	80,184.87	**53,820.95**	MWh
Indirect energy consumption intensity	38.11	**22.62**	MWh per RMB million of revenue
Total energy consumption	83,935.24	**59,274.73**	MWh
Energy consumption intensity	39.89	**24.91**	MWh per RMB million of revenue

1 During the Reporting Period, the Group generated and used renewable energy electricity by installing solar photovoltaic panels.

2 The Group's revenue for 2022 was RMB2,379.6 million, and its revenue for 2021 was RMB2,104.1 million.

3 During the Reporting Period, consumption of purchased electricity increased as the Group's headquarters in Zhoupu was put into operation.

4 During the Reporting Period, consumption of purchased heat significantly decreased as the waste liquid and wastewater incinerator used in production can generate steam reusable for production, while consumption of diesel increased for the Year.

4. ENVIRONMENTAL BENEFITS AND ECOLOGICAL PROTECTION

Indicator	2021	2022	Unit
Greenhouse gas emissions			
Direct emissions from energy use (Scope 1)[5]	958.11	**1,404.35**	tCO_2e
Indirect emissions from energy use (Scope 2)[6]	36,499.03	**27,484.36**	tCO_2e
Forestry emission reduction	0.99	**1.73**	tCO_2e
Total greenhouse gas emissions[7]	37,456.15	**28,886.99**	tCO_2e
Greenhouse gas emission intensity	17.80	**12.14**	tCO_2e per RMB million of revenue

[5] The greenhouse gas emissions (Scope 1) were calculated with reference to the Accounting Methods and Reporting Guidelines for Greenhouse Gas Emissions from Enterprises in Other Industries (Trial) issued by the National Development and Reform Commission.

[6] Among the greenhouse gas emissions (Scope 2), the electricity emissions from production were calculated with reference to the Notice on the Preparation of the Management of Corporate Greenhouse Gas Emissions Reporting in 2022 issued by the Ministry of Ecological Environment of the People's Republic of China in 2022; the electricity emissions from non-production areas were calculated with reference to the Average Carbon Dioxide Emission Factors for 2011 and 2012 of Regional Power Grids in China published by the State and the Notice on the Adjustment of the Relevant Emission Factor Values of the City's Greenhouse Gas Emissions Accounting Guidelines issued by Shanghai Municipal Bureau of Ecology and Environment in 2022. The thermal emission data was calculated based on the default value of carbon dioxide emission factor for thermal power in the accounting guidelines of various industries published by the National Development and Reform Commission.

[7] Due to the limitation of the calculation method, the indirect emissions from energy use (Scope 2) represented by the data include only carbon dioxide emissions and exclude other types of greenhouse gas emissions.

In the future, Viva Biotech will stay updated on the trend of international climate actions, embrace low-carbon development opportunities, commit more resources in application of energy conservation and emission reduction technologies and equipment as well as the use of renewable energy, and proactively carry out low-carbon transformation projects in production and laboratories. We will work with stakeholders to jointly address climate change and contribute to the national carbon neutrality strategy.

Case Highlight: Carbon Disclosure Project ("CDP[8]") Filings and Revision to the Greenhouse Gas Inventory Management Procedures of Langhua Pharmaceutical

Langhua Pharmaceutical continued to monitor and manage energy consumption and greenhouse gas emissions, to improve the transparency of carbon emission information disclosure. During the Reporting Period, we completed the first-year CDP climate change questionnaire, reported the emissions of Scope 1 and Scope 2, and obtained a B- score. Through the CDP environmental information disclosure practices, we have established a clearer plan for the future path of low-carbon development. To standardize our greenhouse gas emission inventory management and provide effective data support for the CDP questionnaire, we revised the greenhouse gas inventory management procedures. In addition to clarifying the relevant accountable entities in the Company, we refer to the ISO14064 international standard for greenhouse gas emissions, to further strengthen our efforts in greenhouse gas information management, documentation and records in such areas as identification of greenhouse gas emission sources, distribution of the Greenhouse Gas Emission Source List, data statistics and submission, emission calculation and review. In addition, we plan to continuously improve the disclosure of Scope 3 emissions and establish relevant emission reduction goals in the future, to upgrade our climate information disclosure and risk management level throughout the entire value chain.

4.2. Green Production

Viva Biotech understands the profound significance of green production for the pharmaceutical industry. We strictly abide by local laws, regulations and standards, and ensure green compliance in production through prudent management and supervision mechanisms. In terms of environmental protection and pollution control, we implement environmental management throughout the entire process of R&D, production and operation through the green actions embedded in our daily activities, timely evaluate our environmental impact, and proactively fulfill our corporate environmental responsibilities. In terms of emission management, we have established robust measures and procedures for waste gas emissions, wastewater management, hazardous waste management and non-hazardous waste management, and reduced the pollution of emissions through equipment upgrade and technological innovation.

[8] CDP: The Global Environmental Information Center, formerly known as the Carbon Disclosure Project, is a non-profit organization that runs a global information disclosure system for investors, businesses, cities, provinces/states and regions and helps manage environmental impacts.

4. ENVIRONMENTAL BENEFITS AND ECOLOGICAL PROTECTION

Our Management Approach

Viva Biotech is committed to maximizing environmental benefits while ensuring its economic development, in an effort to reduce the environmental impact of its development. The Group strictly abides by the Environmental Protection Law of the People's Republic of China, the Law of the People's Republic of China on Environmental Impact Assessment, the Water Pollution Prevention and Control Law of the People's Republic of China, the Atmospheric Pollution Prevention and Control Law of the People's Republic of China, the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste, the Law of the People's Republic of China on the Prevention and Control of Noise Pollution, the Law of the People's Republic of China on the Prevention and Control of Soil Pollution, the Regulations on the Management of Medical Waste and other environmental laws, regulations and industry standards.

The Environmental Protection Management Rules of the Group, as a programmatic environmental management system, defines the Group's environmental work principles and organizational structure responsibilities, covers all environmental management issues that may be involved in production and operations, and provides detailed rules for specific operational processes. We constantly improve our environmental management system, have set up a dedicated environment, health and safety ("**EHS**") department, and strengthen emission management, resource management and pollution prevention and control in the course of production and operation to reduce environmental impact and maintain environmental quality. We encourage our companies to promote the certification of environmental systems. In addition, we have formulated the Procedures for Identification and Evaluation of Environmental Factors to ensure that we can exercise timely control over important environmental factors through standardized environmental factor identification, evaluation and management processes, so as to promote the formulation and implementation of the corresponding improvement plan. During the Reporting Period, Langhua Pharmaceutical further optimized its EHS management system based on ISO14001 (environmental management system) and China's production safety standards, and obtained the renewed ISO14001 certification. The EHS management system has passed Pharmaceutical Supply Chain Initiative (PSCI) audit and special audits by a number of multinational companies, and has been awarded a Silver Medal by EcoVadis.

Sound insulation measures for air compressors in Shanghai Zhoupu Park

Waste Gas Emissions

Viva Biotech manages waste gas emissions in a holistic way according to the Environmental Protection Management Rules. During the Reporting Period, we revised the waste gas management procedures, refined duties of relevant departments, added definitions of technical terms, updated the waste gas disposal process and specific requirements on waste gas management, and updated the procedures based on the latest normative documents such as the Emission Standards for Air Pollutants in the Pharmaceutical Industry, to ensure code-compliant waste gas emissions. In addition, we have newly developed operating rules for three-chamber RTOs and the procedures for resin-based adsorption of halogen waste gas, to ensure stable, effective and safe operation of relevant facilities and process systems for up-to-standard waste gas emissions. In terms of emission reduction, Langhua Pharmaceutical continued to carry out volatile organic compounds ("**VOCs**") emission reduction program, and achieved sound results during the Reporting Period.

4. ENVIRONMENTAL BENEFITS AND ECOLOGICAL PROTECTION

Three-chamber RTO facilities

Viva Biotech strictly abides by the waste gas emission requirements and the emission rules of the places where it operates, and constantly improves the management of waste gas emissions. The Group's waste gas emissions during the Reporting Period are as follows:

Indicator	2021	2022	Unit
Waste gas emissions			
VOCs	10,385.71	**8,264.15**	kg
Sulfur oxides[9]	/	**264.95**	kg
Nitrogen oxides	/	**1,028.00**	kg
Vehicle air pollutant emissions[10]			
Carbon monoxide (CO)	707.21	**857.22**	kg
Hydrocarbons (HC)	38.72	**43.44**	kg
Nitrogen oxides (NOx)	1,301.70	**1,665.50**	kg
Inhalable particulate matter (PM_{10})	42.25	**54.24**	kg
Fine particulate matter (PM2.5)	38.10	**48.88**	kg
Sulfur oxides (SOx)	1.05	**1.19**	kg

9 It is the first time that Viva Biotech discloses in the Report the total emissions of sulfur oxides and the total emissions of nitrogen oxides.

10 The vehicle air pollutant emissions were calculated with reference to the Technical Guide for Compilation of Emission Inventory for Air Pollutants from Road Motor Vehicles (Trial) issued by the Ministry of Ecology and Environment of the People's Republic of China.

4. ENVIRONMENTAL BENEFITS AND ECOLOGICAL PROTECTION

Wastewater management

In terms of wastewater management, Viva Biotech gives priority to ensuring the compliance of wastewater discharge. We have established wastewater management procedures according to the Group's Environmental Protection Management Rules, discharge wastewater to the municipal pipe network after treatment in accordance with the local government requirements, and regularly monitor wastewater to prevent excessive discharge. Among our wastewater treatment facilities newly built in Zhoupu, Faladi road and Chengdu parks during the Reporting Period, the first two facilities except for Chengdu Park have been put into use, with treatment capacity of 90 tons/day and 30 tons/day, respectively. According to the tests by a third party, sewage discharge has been significantly reduced. In addition, the wastewater treatment facilities in Chengdu Park are under construction, with a wastewater treatment capacity of 300 tons/day upon completion.

New water treatment facilities in Faladi Road Park

Integrated intelligent sewage treatment unit in Zhoupu Park

In the CDMO segment, Langhua Pharmaceutical updated the wastewater management procedures during the Reporting Period, clarified the responsibilities of the wastewater pretreatment workshop, and newly introduced a step of transmitting wastewater to the wastewater pretreatment workshop. We have also developed the Operational Procedures for Wastewater Treatment to adopt appropriate methods for transportation, collection and treatment of different types of wastewater generated from production and operations, including high-concentration wastewater from workshops, low-concentration wastewater such as floor cleaning wastewater, domestic sewage, etc. We use wastewater treatment technology to separate rainwater and wastewater, clean water and wastewater, and different types of wastewater. In addition, we engage a qualified third party to carry out leak detection and repair of pipes on a regular basis.

4. ENVIRONMENTAL BENEFITS AND ECOLOGICAL PROTECTION

During the Reporting Period, our wastewater mainly included wastewater from production and laboratories, wastewater from equipment and site cleaning, and domestic sewage. Details of wastewater discharge are as follows:

Indicator	2021	2022	Unit
Wastewater discharge			
Industrial wastewater	190,905.52	**165,087.16**	tons
Including: COD	15.20	**10.86**	tons
Ammonia nitrogen	0.09	**0.16**[11]	tons
Domestic sewage	96,943.71	**81,306.91**	tons

Case Highlight: Annual VOCs Emission Reduction Project of Langhua Pharmaceutical

In 2022, Langhua Pharmaceutical continued to carry out seven VOCs emission reduction projects, including upgrade of workshop equipment, upgrade of RTO facilities and workshop waste gas renovation. With a total investment of over RMB120 million, all these emission reduction projects were successfully completed during the Reporting Period. By optimizing and upgrading technical equipment and improving waste gas collection and treatment technologies, we effectively reduced VOCs emissions in the course of production.

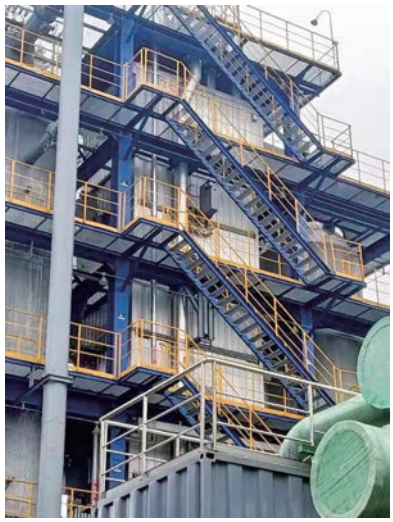
[11] Ammonia nitrogen emissions increased due to the product type adjustment by Langhua Pharmaceutical in 2022.

4. ENVIRONMENTAL BENEFITS AND ECOLOGICAL PROTECTION

Hazardous Waste Management

As a pharmaceutical enterprise, Viva Biotech attaches great importance to code-compliant treatment of hazardous waste. When dealing with hazardous wastes, the Group strictly abides by the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste, the National Catalogue of Hazardous Wastes, the Technical Guidelines for the Formulation of Hazardous Waste Management Plans and Management Records, the Management Measures for the Transfer of Hazardous Wastes, the Technical Specifications for the Application and Issuance of Pollutant Discharge Permits – Industrial Solid Wastes (Trial), and other relevant laws and regulations. The Group adheres to the principles of "unified collection, classified disposal, centralized incineration and elimination of hidden dangers", aims for "reduction, recycling and harmless treatment" of hazardous wastes, and has developed the Hazardous Waste Management Measures and the Procedures for Solid Waste Management. The Group takes initiatives to develop the annual hazardous waste management plan, to define the annual hazardous waste reduction measures and the hazardous waste transfer and disposal methods.

We have defined the duties of relevant departments and personnel in key positions and made detailed regulations on inspection, warehousing, storage, collection and transportation of hazardous wastes to ensure standardized management of all steps of hazardous waste handling. The hazardous waste generated by us is handed over to agencies qualified for hazardous waste disposal for centralized disposal, and is sealed in the collection and transportation process, thus ensuring no pollution to the environment and protecting the health and safety of employees. For the small amount of hazardous waste in domestic waste, we follow the domestic waste management regulations of the places where we operate to classify and dispose of such waste as harmful waste. During the Reporting Period, we entered into waste treatment cooperation with professional third-party companies regarding wastes such as solutions from chemical laboratories. Langhua Pharmaceutical exercises intelligent supervision over hazardous waste, and has built and put into use a set of 60 ton/day waste liquid and wastewater incineration system and flue gas incineration and purification unit to treat the waste liquid and wastewater generated, which helped to mitigate the risk of hazardous waste transportation while effectively reducing solvent waste. In 2022, we adjusted and optimized the disclosure basis of hazardous wastes, and expanded the disclosure scope of certain indicators. During the Year, our hazardous waste intensity was 5.16 tons per RMB million of revenue.



Waste liquid incinerator with exhaust heat boiler

4. ENVIRONMENTAL BENEFITS AND ECOLOGICAL PROTECTION

During the Reporting Period, the main types of hazardous wastes generated by Viva Biotech included waste fuels, chemicals and glass from chemical laboratories; and the hazardous wastes generated by the CDMO segment were mainly waste residue, waste activated carbon, waste solvent, high-boiling residue, waste salt, waste samples, waste packaging materials, wastewater treatment sludge, waste mineral oil, etc. Relevant figures are set out as follows:

Indicator	2021	2022	Unit
Hazardous waste			
Waste fuel and chemicals[12]	3,399.07	**5,289.22**	tons
Organic waste liquid	386.31	**338.04**	tons
Laboratory solid waste and glass	92.38	**127.05**	tons
High-boiling residue	2,298.60	**2,265.65**	tons
Waste salt	1,625.75	**2,394.95**[13]	tons
Sludge	105.07	**543.33**[14]	tons
Other hazardous waste[15]	824.44	**1,323.19**	tons
Total amount of hazardous waste	8,737.57	**12,283.16**[16]	tons
Hazardous waste intensity	4.15	**5.16**	tons per RMB million of revenue

[12] During the Year, Viva Biotech refined this indicator and expanded the disclosure scope to cover its subsidiary Langhua Pharmaceutical. Scope of the indicator includes waste acid, waste alkali, waste organic solvent, etc.

[13] During the Reporting Period, waste salt increased due to the increase in production volume of relevant products in the CDMO segment.

[14] During the Reporting Period, sludge increased as the CDMO segment carried out a regular sludge cleaning once in every four years for the wastewater treatment system.

[15] During the Reporting Period, the scope of other hazardous waste was adjusted and expanded, which now includes waste residue, waste activated carbon, waste packaging barrels, waste packaging bags, waste mineral oil, waste samples, fly ash, slag, etc.

[16] During the Reporting Period, total amount of hazardous waste increased due to the increase in production volume and the addition of customized products in the CDMO segment.

Non-hazardous Waste Management

Viva Biotech proactively sets the targets of reducing solid waste based on its product structure and production plan. In the CDMO segment, Langhua Pharmaceutical undertakes to reduce solid waste generation per RMB10,000 of revenue by 50% by 2025.

To strictly supervise and manage non-hazardous waste in the collection, storage and disposal process, Langhua Pharmaceutical has developed the Procedures for Solid Waste Management to specify the methods for collection and disposal of various wastes, and endeavors to realize the recycling and harmless treatment of all types of solid waste in compliance with national laws and regulations, so as to achieve the purpose of saving resources and controlling environmental pollution. Specifically, domestic waste is primarily transported away by the sanitation department on a regular basis, and general industrial waste is handed over to qualified solid waste disposal agencies for disposal. In 2022, our non-hazardous waste intensity was 0.2 ton per RMB million of revenue, down 50% from the previous year.

During the Reporting Period, the non-hazardous waste generated by Viva Biotech mainly included general solid waste and domestic waste generated from daily office operations and production. Relevant figures are set out as follows:

Indicator	2021	2022	Unit
Non-hazardous waste			
Waste paper	40.09	**51.37**	tons
Waste glass	7.76	**1.18**	tons
Waste plastic	43.45	**36.13**	tons
Scrap metal	475.58	**102.32**[17]	tons
Fly-waste and waste cotton	88.08	**46.93**	tons
Waste packaging	38.04	**67.54**[18]	tons
Kitchen waste	61.30	**57.42**	tons
Other waste	91.79	**117.73**	tons
Total amount of non-hazardous waste	846.08	**480.62**	tons
Non-hazardous waste intensity	0.40	**0.20**	tons per RMB million of revenue

[17] Langhua Pharmaceutical carried out environmental upgrades to its workshops in 2021, therefore the amount of scrap metal generated in 2021 has increased. The corresponding figure has returned to normal level in 2022.

[18] To further clarify the disclosure scope, Langhua Pharmaceutical optimized statistical classification of waste packaging in 2022, resulting in an increase in figures.

4. ENVIRONMENTAL BENEFITS AND ECOLOGICAL PROTECTION

Case Highlight: Construction Progress of "Waste-free Factory" of Langhua Pharmaceutical in 2022

Langhua Pharmaceutical has been constructing the "Waste-free Factory" since 2021, and endeavored to reducing pollutant generation from the source and achieving full-process control and comprehensive waste utilization in production through its efforts in pollution prevention and control of industrial solid waste and domestic waste, energy conservation and emission reduction, organizational management, rules and regulations, and science education.

During the Reporting Period, we carried out key tasks as follows:

(1) Designed and used a waste liquid and wastewater incinerator with a processing capacity of 60 tons/day, effectively reducing the total amount of waste solvents and the risk of hazardous waste;
(2) Used a waste salt treatment unit combining desalination dryer and disc dryer to convert saline wastewater into waste salt with a moisture content lower than 5%, ensuring environmental safety in disposal while reducing the external transportation volume;
(3) Realized full-process intelligent supervision over hazardous waste through the common Zhejiang Solid Waste Code to reduce environmental risks; and
(4) Standardized the waste management process to reduce disposal cost.

4.3. Resource Management

Viva Biotech believes that robust resource management can effectively reduce operating costs while promoting resource conservation, thus achieving win-win with both economic and environmental benefits. To achieve resource conservation and rational use, in addition to the aforementioned energy conservation measures, we have also established internal management rules and procedures in water resources and packaging materials, and actively optimized our resource utilization system to create a green and intensive production ecosystem.

Water Resource Management

Water resources are a major type of resource in our production and operation. Sustainable water supply is the basic strategic requirement for our healthy development. We take initiatives to set water use and water saving targets to meet the potential challenges of water shortage. In the CDMO segment, Langhua Pharmaceutical undertakes to reduce water consumption per RMB10,000 of revenue by 25% by 2025.

To this end, the Company strictly regulates the procedures for water resources management, and actively explores new possibilities for product structure transformation and water-saving technology in production. We have installed two large cooling water circulation tanks in the factory area and constantly improved the water circulation system. During the Reporting Period, we also reduced the number of personnel staying in the factory area by optimizing work shifts, leading to an annual unproductive water saving of 10,000 to 20,000 tons. In addition, we raise the water-saving awareness of all employees through measures such as posting water conservation signs in the factory area, so as to improve the utilization rate of water resources in production and operations and avoid the waste of water.

The Group's water resources are obtained from the municipal water network, and the Group had no issue in sourcing water that is fit for purpose. During the Reporting Period, the water use intensity of the Group was 104.70 tons per RMB million of revenue, down 4.99% compared with the previous year. Our water consumption is as follows:

Indicator	2021	2022	Unit
Use of water resources			
Water consumption	231,877.02	**249,148.99**	tons
Water use intensity	110.20	**104.70**	tons per RMB million of revenue

Packaging Materials Management

The packaging materials used for finished products by Viva Biotech mainly include cartons, paper barrels, and packaging bags. We try to reduce the use of packaging materials while ensuring that the product quality is intact.

Our consumption of packaging materials during the Reporting Period is as follows:

Indicator	2021	2022	Unit
Consumption of packaging materials			
Total consumption of packaging materials	129.23	**174.88**[19]	tons
Packaging material consumption intensity	0.06	**0.07**	tons per RMB million of revenue

[19] During the Reporting Period, consumption of packaging materials increased due to the increase in production volume of relevant products in the CDMO segment.

4. ENVIRONMENTAL BENEFITS AND ECOLOGICAL PROTECTION

4.4. Green Operation

Viva Biotech has adhered to embedding the green concept into all aspects of its business activities. From supply chain procurement, production, R&D to daily office operations, we firmly believe that comprehensive green development is the sustainable path for our enterprise.

Digital Transformation

Viva Biotech embraces the digitalization trend and firmly believes that digital transformation can not only help the Company improve its business, but also greatly promote the green operation practices by streamlining business processes and reducing resource waste. As discussed above, we have applied and utilized digital technology in supply chain, production and R&D for green and efficient management through the construction of automated storage and transportation and intelligent hazardous waste management. In daily affairs management, we have further upgraded and optimized the office automation system, integrating a series of daily office and management processes including business management, personnel management, material requisition, process approval, etc. into the OA workbench so as to promote efficient information and resource circulation and greatly reduce unnecessary use of resources. During the Reporting Period, the Group's headquarters building was completed and put into use, further enhancing its green operation capabilities through digital construction. In addition, we plan to carry forward the construction plan of digital management system to realize more comprehensive digital enterprise resource planning and project management.

Green Office

Viva Biotech attaches importance to environmental management and green concept promotion in its daily activities. We have issued the Proposal on Energy Conservation and Emission Reduction and the Proposal on Green Office to employees to promote a series of green office measures. We encourage employees to lead by example and jointly promote energy and resource conservation, in a drive to create a greener and more eco-friendly office environment. We also carry out environmental knowledge training and promotion via multiple channels and by various means. During the Reporting Period, we continued to create a green and beautiful office environment for our new headquarters, and conducted environmental protection management training and a series of "Waste-free City" promotion series activities for employees. Through environmental protection bulletin boards in the office area and factory area, we continuously improved employees' awareness and recognition of sustainable development, so as to help achieve the green, healthy and sustainable development of the Group. The Group also plans to promote green building projects and has established a dedicated team for relevant planning.

Roof garden at our new headquarters

5. PEOPLE-ORIENTED AND HARMONIOUS COMMUNITY

Viva Biotech always regards people-oriented as the core concept of corporate development. We are shouldering greater social responsibilities in extending our business presence. From our employees to every partner in the community where we operate, we always pay regard to appeals of stakeholders, bearing in mind our obligations as a corporate citizen to seek more profound social significance in goodwill and with warmth alongside our economic value creation.

5.1. Employee Rights and Benefits

Employment Management

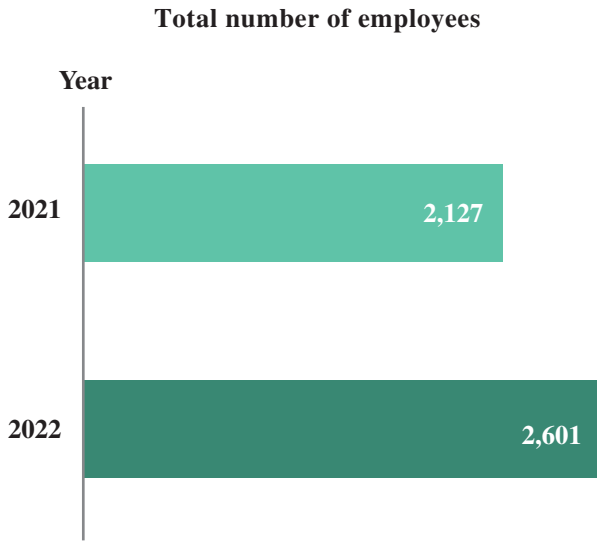
Viva Biotech always regards employees as its most valuable asset. In terms of employee employment, we adhere to the concept of legality, compliance, and meritocracy. We strictly abide by the Labor Law of the People's Republic of China, the Labor Contract Law of the People's Republic of China, the Law of the People's Republic of China on the Protection of Women's Rights and Interests and other relevant national and local laws and regulations. Internally, we have formulated a series of rules and regulations including the Salary Management Procedures, the Working Time Management Procedures and the Anti-discrimination Management Procedure to standardize the measures and procedures for recruitment and employment management, to ensure compliance and fairness in recruitment, employment, post arrangement, promotion, remuneration, training and dismissal, and ensue that there is no employment discrimination based on gender, disability, family and marital status, sexual orientation, age, political and philosophical beliefs, religious beliefs, trade union activities, race, social, cultural or nationality factors.

Viva Biotech is committed to building a diverse and equal recruitment and employment mechanism. For the employment of female employees, we strictly abide by the Special Provisions on Labor Protection of Female Workers and other relevant policies and regulations to ensure the fairness and impartiality of the employment and work systems and protect the legitimate rights and interests of female employees. We adopt a "zero tolerance" policy and resolutely prohibit child labor, forced labor and prison labor. In accordance with the Provisions on Prohibition of Child Labor issued by the State Council and the Law of the People's Republic of China on the Protection of Minors, we have formulated relevant policies, procedures and remedial measures to prevent the recruitment of child labor, and impose the same requirements on contractors/suppliers who cooperate with the Company in management, practices and employment. Our recruitment system automatically excludes all job applicants under the age of 18, and we check the identity documents of applicants in the process of employee recruitment, employment approval and registration to ensure the authenticity of their information. During the Reporting Period, there were no incidents of child labor or forced labor within the Group.

In terms of employee remuneration, the Group has developed detailed salary management procedures to define the salary calculation method and enhance the transparency of labor remuneration, subsidies and benefits, the form and time of salary payment, and relevant policies and rules. In terms of working time management, the Group strictly complies with relevant national laws, and has set clear rules on overtime, working hour calculation, attendance, statutory leave, annual leave and statutory holidays. For special occupations, the Group will reasonably and legally determine the work hour system based on the actual conditions, and flexibly adopt a system with comprehensive calculation of working hours or a system with irregular working hours.

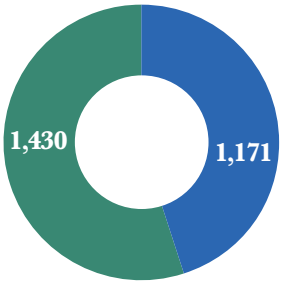
As of the end of the Reporting Period, the Group had a total of 2,601 employees, an increase of 22.3% over the previous year. In terms of employee diversity, our female employees accounted for 45.02% of the total, an increase of 2.71% over the previous year. Our employees are located in Shanghai, Jiaxing, Chengdu, Ningbo, Taizhou, Suzhou, Hong Kong and overseas.

Total Number of Employees, Number of Employees by Gender, Number of Employees by Age, Number of Employees by Employment Type, Number of Employees by Region, and Number of Employees by Employee Category

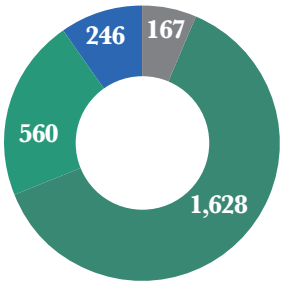


5. PEOPLE-ORIENTED AND HARMONIOUS COMMUNITY

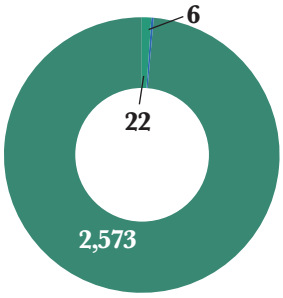
Number of employees by gender



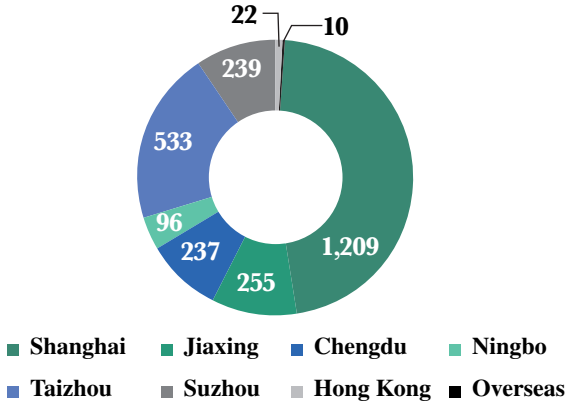
Number of employees by age



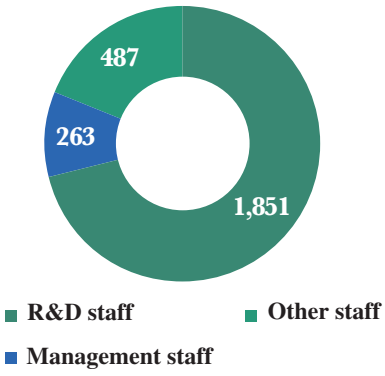
Number of employees by employment type



Number of employees by region



Number of employees by employee category[20]



[20] To support the growth of CRO business, Viva Biotech optimized the breakdown by employee category in 2022, to better reflect career development direction of employees.

Indicator		2022
Total employee turnover rate[21]		**21%**
Employee turnover rate by gender	Male	**21%**
	Female	**22%**
Employee turnover rate by age	Aged under 30	**23%**
	Aged 31-40	**20%**
	Aged 41-50	**17%**
	Aged over 50	**11%**
Employee turnover rate by region	Shanghai	**20%**
	Jiaxing	**14%**
	Chengdu	**28%**
	Ningbo	**3%**
	Taizhou	**23%**
	Suzhou	**30%**
	Hong Kong	**0%**
	Overseas	**0%**

[21] The employee turnover rate is a percentage arrived at by dividing the number of employees in the specified category leaving employment during the Reporting Period by the sum of the number of employees in the specified category at the end of the Reporting Period and the number of employees in the specified category leaving employment during the Reporting Period.

5. PEOPLE-ORIENTED AND HARMONIOUS COMMUNITY

Employee Benefits

The Group has established a people-oriented employee benefit system. Pursuant to the requirements of the country and the places where we operate, we contribute to five insurance plans and a housing provident fund in line with or above the basic standards and provide commercial insurance, annual leave, parental leave, etc. for employees. In addition to statutory benefits, we have also formulated a diversity of benefit policies such as lunch allowance, commuting allowance, tourism activity allowance, high-temperature allowance, employee physical examination, holiday benefits, birthday benefits, etc. By continuously improving material benefits, we provide more support to employees, dispel their worries, and fully consider their experience with work to improve employee satisfaction. In response to the individual demands of employees, we seek to develop flexible and down-to-earth benefit policies. For example, apart from the strict attendance system, we provide a two-hour ad hoc leave for all employees once a month for them to deal with contingencies. Considering actual conditions of different employee groups, we have introduced an allowance system for expatriate employees; and offer transitional housing for fresh graduates and interns.

In 2022, we vigorously promoted the construction of benefit system, and took the lead in launching the "Baifude" benefit platform for employees in Shanghai, which integrated benefits such as dining allowance and birthday benefits, with access to our internal canteen and automatic QR code vending machines in the park as well as external platforms including Meituan Food Delivery, Dingdong Fresh, Xiangdao Car Hailing, etc. These benefit options covering shopping, entertainment, catering service, travel, healthcare and other scenarios provide better accessibility and convenience for employees.

Caring for Employees

The Group always cares about the well-being of employees, listens attentively to their needs, and proactively creates a safe and comfortable working atmosphere for them. During the Reporting Period, the Group's headquarters building located in Zhoupu was completed, providing employees with prime facilities and a beautiful environment for office operations.

Case Highlight: Creating a Harmonious Office Environment with Nature – Into the New Headquarters of Viva Biotech in Zhoupu

Our new headquarters in Zhoupu, a complex with integrated office, conference, R&D laboratory and technical platform facilities and a total GFA of 40,000 square meters, was completed during the Reporting Period. To provide an efficient, professional, energetic and comfortable working atmosphere for employees, we rationally optimized the space design to promote their close collaboration and improve work efficiency with flexible and varied office layouts, and made full use of outdoor green spaces and roofs to create a natural and relaxed place. At the new headquarters, there are leisure spaces for employees such as coffee bar, tea house, shops, rooftop leisure areas and corridor walking areas, as well as sufficient mother and baby rooms and direct drinking water facilities to meet diverse needs of employees. Furthermore, considering the potential short-term inconvenience to employees due to the relocation, we took initiatives to offer monthly allowance to the relocated employees and increase the frequency of shuttle buses connecting Zhangjiang, Chuansha and other places. We also revised the commuting cost reimbursement policy for overtime employees based on actual conditions, in an effort to solve the commuting concerns of employees.

5. PEOPLE-ORIENTED AND HARMONIOUS COMMUNITY

We strive to provide assistance to every employee in need. In 2022, during the peak of the epidemic in China, the Group launched an internal donation event for a critically ill employee to help alleviate his economic pressure and encourage him to bravely fight against the disease. In addition to optimizing epidemic prevention measures and comprehensively protecting employee health, we fully considered the living cost and emotional fluctuations faced by employees. During the production suspension period, instead of the minimum wage standard, we adopted a combination of supplementary shifts, welfare leave and lockdown leave, among others, to ensure stable salary level of employees. For the employees staying in their jobs during the epidemic, we not only extended cares for their work and life by ensuring material supply, but also provided gifts during holidays to create a festive atmosphere and relieve their tension. During the epidemic, we provided gift boxes of rice dumplings for 991 employees staying in their jobs in Shanghai, Jiaxing, Chengdu and Suzhou.

Case Highlight: Cares for the Frontline – "Cooling the Summer" Program Organized by the Trade Union of Langhua Pharmaceutical

Since July, Taizhou City had been hit by hot weather with continuous red warnings of high temperatures. To effectively improve the production and living environment of employees with normalized epidemic prevention and control under high temperature of summer and better safeguard occupational safety and health of employees, the trade union of Langhua Pharmaceutical extended the "Cooling the Summer" program to frontline workers, sending cool and cares to those who stuck to their work posts in high temperature. In addition, we proactively promoted cooling measures such as the "Ice for Workshops" program, distributed heatstroke prevention supplies such as Rendan mini-pills and Huoxiang Zhengqi Liquid, comprehensively strengthened safety education for high-temperature operations, and publicized summer heatstroke prevention and health knowledge to employees through various forms and channels, so as to increase their self-protection awareness and ensure a balance between safety and production.

Employee Communication

Viva Biotech understands that smooth communication is a key factor in improving employee satisfaction and supporting its long-term development. We continue to expand employee communication and complaint channels, improve efficiency of information circulation within the Company, and enhance communication effectiveness by establishing timely and efficient feedback and response mechanisms. For each new employee, the HR Department, the IT Department and relevant business department will provide all-round orientation to help him/her quickly adapt to the work environment and integrate into the Company's atmosphere. In daily work, the Group is vigorously building up a digital office platform, seeking to provide employees with an integrated and convenient communication channel in business communication, submissions and approvals, and important consultations. In addition, employees may inquire or complain about any issues with which they are confused or dissatisfied through complaint mailboxes set up in factories and office locations.

To optimize the departmental communication system and organizational atmosphere, the Company refined the duties of the HR Department during the Reporting Period, and set up dedicated positions of Human Resources Business Partner (HRBP), which are staffed with experienced human resources specialists, in business departments including CRO Biologicals, Process Chemistry, Incubation Division, etc. Employees may directly send their opinions and troubles at work to HRBP, which will be collected and reported by HRBP for timely responses and solutions.

5.2. Occupational Health and Safety

Employee health and production safety in the workplace are top priorities in the daily activities Viva Biotech. The Group strictly abides by the Production Safety Law of the People's Republic of China and the Labor Law of the People's Republic of China, and has obtained ISO45001:2018 Occupational Health and Safety Management System certification. To create a healthy and safe work environment and improve stability and safety of production process, we carry out regular patrol inspections on daily production and laboratory activities, and develop specialized safety manuals for different types of laboratories. On production equipment, we have installed equipment such as hard isolators and mobile dual-chamber glove boxes to ensure operational safety of employees to the greatest extent. We also have an EHS bulletin board within the Company for regularly publishing occupational health related information and educational content.

5. PEOPLE-ORIENTED AND HARMONIOUS COMMUNITY

In terms of occupational disease prevention, the Group has prepared the list of Occupational Hazards for Identification based on relevant units and position titles in accordance with the Law of the People's Republic of China on Prevention and Control of Occupational Diseases, and ensure that employees are aware of the occupational hazards that may occur in the course of work and their consequences before taking up their jobs. Moreover, we provide pre-job and on-the-job training on occupational safety and health to guide employees to correctly use occupational disease prevention equipment and personal labor protection articles. We arrange occupational health check-ups for employees before, during and after their employment, and truthfully inform them of the check-up results. In addition, we provide special allowances for employees in high-risk occupations, and take active measures to prevent and minimize the safety hazards in the workplace for employees.

During the Reporting Period, Langhua Pharmaceutical updated dozens of occupational safety and health documents, covering legal and regulatory compliance management, EHS system management, industrial hygiene management, safety system management, fire protection system management and operating procedures. In addition, it conducted a third-party occupational disease hazard assessment and organized occupational health check-ups for 137 employees. No suspected cases of occupational diseases were found.

To ensure production safety, we attach great importance to emergency responses. The Group has prepared the Comprehensive Emergency Response Plan for Production Safety Accidents in Production and Business Units in accordance with the Emergency Response Law of the People's Republic of China, the Regulations on Emergency Response to Production Safety Accidents, and the Regulations on the Safety Management of Hazardous Chemicals. Based on hazard analysis, we have made contingency plans for fire, electric shock, chemical leakage, natural disasters and equipment accidents, and developed an effective warning information release and emergency organization system, so as to quickly and effectively control and deal with accidents that may occur, protect the personal safety of employees and the Company's property, and reduce the impact of and losses caused by accidents. Before the occurrence of extreme weather, the Company's safety warning system will give an alarm and inform employees of relevant information in a timely manner. In addition, we organize regular emergency drills in different scenarios, review our performance after the drills, test and evaluate our emergency plan and emergency response capabilities, analyze the existing problems and deficiencies, and develop improvement measures. Ultimately, a complete summary of the drill is formed to ensure rationality and effectiveness of the plan. During the Reporting Period, we organized multiple emergency drills including nighttime anti-theft and anti-robbery emergency drills for highly toxic chemicals, comprehensive emergency drills for production safety accidents, environmental emergency drills, and on-site response drills at workshops. Addressing uncertainties of the epidemic, Viva Biotech developed a detailed closed-loop management plan and related procedures for production resumption, to ensure orderly recovery of business operations with strong employee protection. For the production environment, Langhua Pharmaceutical conducted a comprehensive closed-loop production simulation drill in the factory area to test and coordinate the joint epidemic response mechanism among its business units and improve the coordination and collaboration capabilities, in order to ensure production order and employee health to the greatest extent during the epidemic.

Disinfection process at pathways of the factory area

During the Year, the Group had 518.5 lost working days due to work injury, which were mainly attributable to Langhua Pharmaceutical. The relevant accidents mainly occurred in workshops and during commuting time of employee, and did not cause serious consequences. We have properly handled the accidents and made related arrangements in accordance with the relevant provisions of the Group's Work-related Injury Insurance Regulations, and lived up to our commitment to employee health and safety by constantly improving the system and process and strengthening safety training. In addition, the Group had no work-related deaths in the past three years (2020, 2021 and 2022).

Viva Biotech is keenly aware of the importance of occupational health and safety training in employee health and safety management. The Group has formulated the Management Measures for Safety Education and Training of Viva Biotech, and organizes employees to receive training on production safety and occupational health from time to time, so as to ensure that employees are familiar with the Company's safety and health policies, improve employees' safety technical quality and their ability to prevent accidents, and better protect their own and the Company's interests in the case of emergencies. During the Reporting Period, Langhua Pharmaceutical updated its EHS training and education management procedures, clarified the scope of use for performance evaluation methods, and standardized the performance evaluation records. In addition, Langhua Pharmaceutical organized safety training sessions covering accident case study, fire safety, emergency response and occupational health, and set up corresponding performance evaluation and testing environment to ensure that employees truly master the training content. The health and safety training sessions recorded a total of 3,060 participations. Specifically, we conducted 29 safety training sessions and 5 fire drills.

5. PEOPLE-ORIENTED AND HARMONIOUS COMMUNITY

Kick-off training for all employees after the Spring Festival

Education on laboratory operating rules

Comprehensive emergency drill for production safety accidents

5.3. Human Capital Development

Talent Attraction and Retention

Viva Biotech strives to cultivate and retain talents through competitive salaries and benefits, smooth promotion channels, and impartial and reasonable performance management. In order to fully stimulate the enthusiasm and initiative of employees and better motivate, develop and retain talents, Viva Biotech has established standardized procedures for promotion. Each year, Viva Biotech provides two promotion opportunities to employees with outstanding performance or special contributions in April and October, respectively. Promotion is subject to evaluation, approval and defense, where each candidate's morality, competence, performance and potential will be comprehensively considered, with a view to selecting talents through fair, impartial and open competition.

In order to meet its needs from rapid growth and efficient operation, Viva Biotech has developed a mechanism for self-motivation, self-management and self-improvement of employees through performance appraisal. Led and managed by the HR Department, performance appraisal on all employees of the Company is conducted at the end of each year. Each business department is responsible for formulating the indicators for performance appraisal of its employees, implementing, following up and evaluating such indicators, and guiding employees to improve performance through performance interviews. In addition, performance appraisal is also linked to the promotion and dismissal of employees and the annual adjustment of salaries. During the Reporting Period, the Group improved the probationary period appraisal mechanism and conducted performance appraisal on new employees in a standardized and impartial manner, to help them meet job requirements as soon as possible.

To further enhance long-term retention of key talents in the Company, during the Reporting Period, the Group introduced a "Long-term Service Bonus Plan" for employees who have served the Company for at least three years and have an outstanding track record of performance, pursuant to which five-year service contracts are entered into with those who are willing to serve the Company for a long term and bonuses proportional to their salaries are distributed annually. In terms of talent introduction, based on its basic conditions and external market dynamics, the Group endeavors to provide all kinds of personnel with competitive and comprehensive compensation and benefits as well as performance bonuses, innovation subsidies, multi-tranche option incentives, talent apartments and other life services. Pursuant to the national and local talent introduction and incentive policies, we also apply for talent programs and talent subsidies for various scientific and technological talents, high-skilled talents and college graduates. In addition, we assist overseas or other high-level talents to apply for work visas and Chinese green cards, and provide them with commercial insurance plan, paid leave for family visits and relevant benefits and subsidies.

Training and Talent Development

To better cater for the Group's development, we constantly innovate in the training system and vigorously carry out personnel training programs. The Group has developed the Employee Training Management Regulations, based on which we prepare the annual training plan and coordinate the Group's staff training planning. Our training mainly includes centralized teaching and experimental operations to balance theoretical study and experimental operations to the greatest extent, so that employees can have more comprehensive and in-depth learning opportunities. For employees in different career stages, we provide appropriate training programs. For example, for employees at the project manager level, our training is focused on improving management skills; for middle and senior management staff, we pay more attention to the development of management capacity and leadership. While increasing external training efforts, we also try to drive internal training with external training, cultivate internal trainers, and improve the internal training curriculum. In addition, the Group is improving the training effect tracking system, strengthening training evaluation and incentives, and establishing a training feedback and effect evaluation mechanism. After the annual training, the Company will select and reward excellent lecturers based on the results of the survey on students' satisfaction with lecturers. We hope to improve the training effect and get great results from training by combining training and incentives.

5. PEOPLE-ORIENTED AND HARMONIOUS COMMUNITY

During the Reporting Period, we conducted a variety of training activities, including orientation for new employees, multi-theme professional skill training for R&D staff, director and executive training, vocational skill level training, management capability improvement training and English training. In addition, the Group constantly optimized the tutoring system with a hallmark of Viva Biotech. In 2022, the Group introduced a tutoring subsidy policy, which encourages senior members of business divisions and R&D teams to serve as tutors for trainees through one-off subsidies. Under the policy, we provided training on business, job skills and knowledge to new employees, allowing them to quickly understand internal regulations, get familiar with the work environment and corporate culture, and successfully pass the probation period.

Set out below is an overview of our training activities during the Reporting Period:

Indicator		2021	2022	Unit
Total number of employees trained[22]		2,133	**1,145**	persons
Percentage of employees trained by gender[23]	Male	59%	**62%**	/
	Female	41%	**38%**	/
Percentage of employees trained by employee category[24]	R&D staff	62%	**43%**	/
	Management staff	2%	**3%**	/
	Other staff	36%	**55%**	/
Average training hours by gender[25]	Male	21	**15**	hours
	Female	27	**10**	hours
Average training hours by employee category[26]	R&D staff	36	**6**	hours
	Management staff	8	**7**	hours
	Other staff	24	**40**	hours

22 Affected by the epidemic, offline training activity decreased and R&D training activity decreased significantly during the Year.

23 According to the advice on data calculation set out in Appendix 3: Reporting Guidance on Social KPIs to How to prepare an ESG Report of the Hong Kong Stock Exchange, the percentage of employees trained by gender is calculated by dividing the number of employees trained in the specified category by the total number of employees trained.

24 According to the advice on data calculation set out in Appendix 3: Reporting Guidance on Social KPIs to How to prepare an ESG Report of the Hong Kong Stock Exchange, the percentage of employees trained by employee category is calculated by dividing the number of employees trained in the specified category by the total number of employees trained.

25 According to the advice on data calculation set out in Appendix 3: Reporting Guidance on Social KPIs to How to prepare an ESG Report of the Hong Kong Stock Exchange, the average training hours by gender is calculated by dividing the total number of training hours for employees in the specified category by the total number of employees in the specified category.

26 According to the advice on data calculation set out in Appendix 3: Reporting Guidance on Social KPIs to How to prepare an ESG Report of the Hong Kong Stock Exchange, the average training hours by employee category is calculated by dividing the total number of training hours for employees in the specified category by the total number of employees in the specified category.

Orientation for new employees

Quality Month Training

Offline training for millions of employees

Talent Incentives

We believe that talents and innovation are the drivers for corporate development. In order to stimulate the innovation vitality of talents, the Group constantly explores active and effective employee incentive policies, encouraging employees to be self-driven, create social value, and achieve self-worth. We have set up project bonuses, public safety awards and outstanding employee awards in recognition of on-the-job performance of employees, to motivate those performing outstandingly in key fields or areas. In addition, we encourage employees to learn from role models by offering promotion opportunities, performance incentives and annual commendation, so as to form a sound competitive atmosphere in the Company and enhance employees' recognition of our corporate culture and spirit.

During the Reporting Period, we improved the inclusiveness of bonus rules, such as further allocating the project bonuses previously available only for the persons in charge to the lower levels. In addition, to enhance work enthusiasm during the epidemic, ensure work progress, and meet customer needs, we provided various allowances and additional bonuses to the live-in employees.

5. PEOPLE-ORIENTED AND HARMONIOUS COMMUNITY

5.4. Community Responsibility and Contribution

Upholding the corporate values of "giving back to the community", Viva Biotech gives full play to its industry strengths to fulfill its social responsibility. We earnestly pay attention to the needs of the people in the communities where we operate, and support social undertakings such as education and charity by various means. In addition, we organize employees to engage in public welfare activities, with a view to developing their enthusiastic and dedicated volunteer spirit. During the Reporting Period, the Group continued to donate goods and money to charity organizations, and cooperated with a number of universities based on its own advantages to contribute to the cause of education. In 2022, we donated a total of RMB84,554, benefiting approximately 120 people.

Ningbo Institute of Technology, Zhejiang University	• Provided graduation design guidance to graduates for 2022 of the School of Biological and Chemical Engineering • Provided teaching services on theoretical and experimental courses for the School of Biological and Chemical Engineering • Established an internship base with integrated production and education for the School of Biological and Chemical Engineering
Polytechnic Institute, Zhejiang University	• Provided a joint postgraduate program for master's degree in engineering (chemical engineering)
Shenyang Pharmaceutical University	• Sponsored slogan T-shirts • Signed an agreement on practice base for master's degree candidates • Provided internship opportunities for students

Educational public welfare activities

Year 2022 continued to see the industry and society harassed by the epidemic. During the epidemic, hundreds of R&D professionals of Viva Biotech voluntarily stayed in their jobs to provide high-quality services, ensuring efficient and stable drug R&D and production activities. During the epidemic lockdown period in Shanghai, a number of employees voluntarily joined the volunteer team, making positive contributions to the community's fight against the epidemic and demonstrating the commitment of the Viva Biotech people. In addition, Langhua Pharmaceutical, with its extensive project experience and solid technology expertise, was authorized by the Medicines Patent Pool (MPP) as one of the five global manufacturers of the oral anti-COVID-19 drug Molnupiravir, living up to the Group's mission of "benefiting patients all around the world".

APPENDIX: HKEX ESG REPORTING GUIDE CONTENT INDEX

Aspect	Disclosure Requirements	Content Index
A1	**Emissions:** General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste. Note: Air emissions include NOx, SOx, and other pollutants regulated under national laws and regulations. Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride. Hazardous wastes are those defined by national regulations.	4.1 Supporting the Climate Actions 4.2 Green Production
KPIA1.1	The types of emissions and respective emissions data.	4.1 Supporting the Climate Actions 4.2 Green Production
KPIA1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	4.1 Supporting the Climate Actions
KPIA1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	4.2 Green Production
KPIA1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	4.2 Green Production
KPIA1.5	Description of emissions target(s) set and steps taken to achieve them.	4.1 Supporting the Climate Actions 4.2 Green Production
KPIA1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	4.2 Green Production

APPENDIX: HKEX ESG REPORTING GUIDE CONTENT INDEX

Aspect	Disclosure Requirements	Content Index
A2	**Use of Resource:** General Disclosure Policies on the efficient use of resources, including energy, water and other raw materials. Note: Resources may be used in production, in storage, transportation, in buildings, electronic equipment, etc.	4.1 Supporting the Climate Actions 4.3 Resource Management
KPIA2.1	Direct and/or indirect energy 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).	4.1 Supporting the Climate Actions
KPIA2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	4.3 Resource Management
KPIA2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	4.1 Supporting the Climate Actions 4.3 Resource Management
KPIA2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	4.3 Resource Management
KPIA2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	4.3 Resource Management
A3	**The Environment and Natural Resources:** General Disclosure Policies on minimising the issuer's significant impact on the environment and natural resources.	4.1 Supporting the Climate Actions 4.2 Green Production 4.4 Green Operation
KPIA3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	4.1 Supporting the Climate Actions 4.2 Green Production 4.4 Green Operation

APPENDIX: HKEX ESG REPORTING GUIDE CONTENT INDEX

Aspect	Disclosure Requirements	Content Index
A4	**Climate Change:** General Disclosure Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	4.1 Supporting the Climate Actions
KPIA4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	4.1 Supporting the Climate Actions
B1	**Employment:** General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	5.1 Employee Rights and Benefits
KPIB1.1	Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.	5.1 Employee Rights and Benefits
KPIB1.2	Employee turnover rate by gender, age group and geographical region.	5.1 Employee Rights and Benefits
B2	**Health and Safety:** General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	5.2 Occupational health and safety
KPIB2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	5.2 Occupational health and safety
KPIB2.2	Lost days due to work injury.	5.2 Occupational health and safety
KPIB2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	5.2 Occupational health and safety

APPENDIX: HKEX ESG REPORTING GUIDE CONTENT INDEX

Aspect	Disclosure Requirements	Content Index
B3	**Development and Training:** General Disclosure Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities. Note: Training refers to vocational training. It may include internal and external courses paid by the employer.	5.3 Human Capital Development
KPIB3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	5.3 Human Capital Development
KPIB3.2	The average training hours completed per employee by gender and employee category.	5.3 Human Capital Development
B4	**Labour Standards:** General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child or forced labour.	5.1 Employee Rights and Benefits
KPIB4.1	Description of measures to review employment practices to avoid child and forced labour.	5.1 Employee Rights and Benefits
KPIB4.2	Description of steps taken to eliminate such practices when discovered.	5.1 Employee Rights and Benefits

APPENDIX: HKEX ESG REPORTING GUIDE CONTENT INDEX

Aspect	Disclosure Requirements	Content Index
B5	**Supply Chain Management:** General Disclosure Policies on managing environmental and social risks of the supply chain.	2.4 Sustainable Supply Chain
KPIB5.1	Number of suppliers by geographical region.	2.4 Sustainable Supply Chain
KPIB5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	2.4 Sustainable Supply Chain
KPIB5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	2.4 Sustainable Supply Chain
KPIB5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	2.4 Sustainable Supply Chain
B6	**Product Responsibility:** Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	2.2 Quality Management 2.3 Protection of Clients' Rights and Interests
KPIB6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	2.2 Quality Management
KPIB6.2	Number of products and service related complaints received and how they are dealt with.	2.3 Protection of Clients' Rights and Interests
KPIB6.3	Description of practices relating to observing and protecting intellectual property rights.	2.1 Product R&D
KPIB6.4	Description of quality assurance process and recall procedures.	2.2 Quality Management
KPIB6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	2.3 Protection of Clients' Rights and Interests

APPENDIX: HKEX ESG REPORTING GUIDE CONTENT INDEX

Aspect	Disclosure Requirements	Content Index
B7	**Anti-corruption:** General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	1.3 Business Ethics and Anti-corruption
KPIB7.1	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.	1.3 Business Ethics and Anti-corruption
KPIB7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	1.3 Business Ethics and Anti-corruption
KPIB7.3	Description of anti-corruption training provided to directors and staff.	1.3 Business Ethics and Anti-corruption
B8	**Community Investment:** Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	5.4 Community Responsibility and Contribution
KPIB8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	5.4 Community Responsibility and Contribution
KPIB8.2	Resources contributed (e.g. money or time) to the focus area.	5.4 Community Responsibility and Contribution

VIVA

维亚生物科技控股集团

VIVA BIOTECH HOLDINGS