

PharmaBlock

Environmental, Social and
Governance (ESG) Report

For **2022**



PharmaBlock Sciences (Nanjing), Inc.

CONTENTS

01 PREFACE

- About the Report 01
- 2022 Key Performance 03
- About PharmaBlock 05

02 ESG MANAGEMENT

- Stakeholder Identification and Communication 15
- Material Issue Analysis 16
- Responses to UN Sustainable Development Goals 17

03 TOPICS SPOTLIGHT

- Technological Innovation for Green Chemistry 21
- Intelligent Construction for Digital Transformation 23

04 CORPORATE GOVERNANCE

- Governance of "Three Meetings" 27
- Investor Relations Management 29
- Risk Control and Management 31
- Business Ethics 33

05 INDUSTRIAL VALUE

- Innovative Research and Development 35
- Quality Assurance 45
- Customer Services 49
- Sustainable Supply Chain Management 53

06 GREEN AND SUSTAINABLE DEVELOPMENT

- Environmental Protection 59
- Energy Management 62
- Resource Utilization 65
- Pollution Prevention and Control 67

07 SOCIAL RESPONSIBILITY

- Employees' Rights 75
- Health and Safety 87
- Social and Community 93

08 FUTURE OUTLOOK

- Future Outlook 95

09 APPENDIX

- Appendix I: Performance Tables 97
- Appendix II: Index 101
- Appendix III: Feedback Form 102

About the Report

Report Description

This is the first environmental, social and governance (ESG) report issued by PharmaBlock Sciences (Nanjing), Inc. to describe the Company's management strategies, practices and performance in the areas of environmental, social and corporate governance. The Board of Directors of the PharmaBlock adopted this report on April 21, 2023 and undertakes that the contents of this report do not contain any false statements, misleading statements or material omissions.

Time Span

The reporting period is from January 1st, 2022 to December 31st, 2022. The data from previous years may be presented in this report adequately in order to enhance the comparability and completeness of the report.

Report Scope

The scope of this report covers PharmaBlock and its subsidiaries. It is consistent with the scope of the Company's annual report.

Appellation Explanation

Phrases	Explanation
The PharmaBlock, The Company, The Group, We	PharmaBlock Sciences (Nanjing), Inc.
PharmaBlock Shandong	PharmaBlock Pharmaceuticals (Shandong) Co., Ltd.
PharmaBlock Zhejiang	Pharmablock Pharmaceuticals (Zhejiang) Co., Ltd.
PharmaBlock USA	PharmaBlock(USA), Inc.
CDMO	Contract Development and Manufacturing Organization (CDMO) provides pharmaceutical services to multinational pharmaceutical companies as well as biotechnology companies, especially for process development and preparation, process optimization, scale-up production, registration and validation of batch production, and commercialized production of innovative drugs.
CRO	Contract Research Organization (CRO) is an organization that provides preclinical drug discovery, preclinical research and clinical trials for pharmaceutical companies and biotechnology companies.
CMC	Chemistry, Manufacturing, and Controls (CMC) is the collection and control of pharmacological research data such as production process, impurity studies, quality studies and stability studies in the process of new drug development.
GMP	Good Manufacturing Practice is a set of mandatory standards which is applicable to pharmaceutical, food and other industries, it requires enterprises from raw materials, personnel, facilities and equipment, production process, packaging and transportation, quality control and other aspects of the relevant national regulations to achieve health and quality requirements, forming a set of operational specifications to help enterprises improve the enterprise health environment, timely detection and improvement of problems in the production process.

Basis of Preparation

- ◆ Shenzhen Stock Exchange *Guidelines 2 for Self-regulation of Companies Listed on Shenzhen Stock Exchange: Standardized Operation of Companies Listed on GEM*
- ◆ ESG Expert Committee of China Social Responsibility 100 Forum *China CSR Reporting Guide (CASS-ESG 5.0)*
- ◆ The Stock Exchange of Hong Kong *Environmental, Social and Governance Reporting Guide*
- ◆ Global Reporting Initiative *the Sustainable Reporting Guidelines* (GRI Standards)
- ◆ United Nations *Sustainable Development Goals* (SDGs)

Data Sources

The information and data in this report are obtained from PharmaBlock's official documents, statistical reports, financial reports, and ESG practice information of each functional department and business unit, which have been complied, summarized and reviewed by the Company. All currency units mentioned in this report are in RMB, unless otherwise specified.

Assess to the Report

This report is prepared in Chinese and English respectively. In case of any discrepancy between the English and Chinese versions, the Chinese version shall prevail.

The electronic version of this report is available for viewing and downloading on Juchao's website (www.cninfo.com.cn) or the Company's official website (www.pharmablock.com/cn).

Feedback

If you have any questions or feedback about this report, please contact us through the following ways.

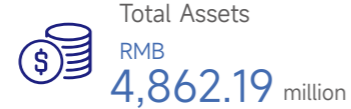
✉ E-mail: PB-Securities@PharmaBlock.com

☎ Telephone: 025-86918230

📍 Address: 81 Huasheng Road, Jiangbei New District, Nanjing

2022 Key Performance

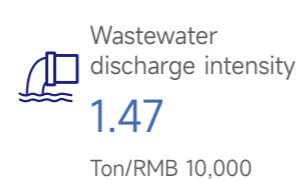
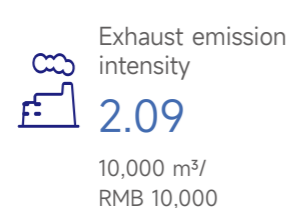
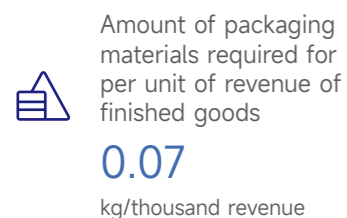
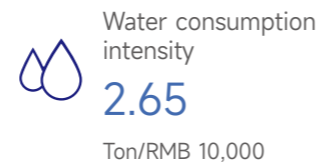
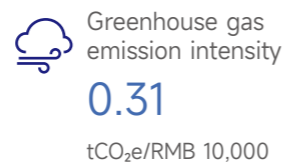
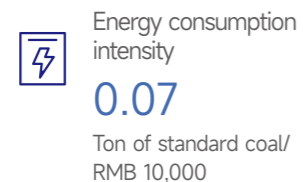
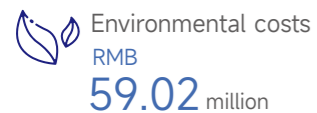
Continuous Growth in Performance



Revenue by Business Segment



Environmental Performance



Social Performance



Safety Performance



About PharmaBlock

Company Introduction

PharmaBlock is a global one-stop provider of innovative products and services for pharmaceutical R&D and manufacturing. The Company has always been committed to helping its partners improve the efficiency of new drug discovery and development through innovations in chemistry and low-carbon technologies in the process of development and manufacturing, and to moving projects to market at full speed. Since starting operations in 2008, PharmaBlock has partnered with all of the top 20 pharmaceutical companies and hundreds of small to medium-sized biotech companies around the world.

PharmaBlock has built an integrated CMC platform to provide efficient and high-quality process development and manufacturing services for intermediates, active pharmaceutical ingredients (APIs) and drug products for innovative drug development and commercialization projects, and to facilitate drug discovery with its novel and unique molecular block and related compound library screening technologies. At the same time, the Company integrates its accumulation of capabilities in flow chemistry, micro-packed bed, catalytic technology, intelligent manufacturing and other cutting-edge technologies for years, to actively explore green, safe and intelligent advanced manufacturing and service models in the field of biomedicine and promote the innovative development of the industry.



VISION

To provide better products and services through innovation of chemistry and low carbon technology in R&D and manufacturing

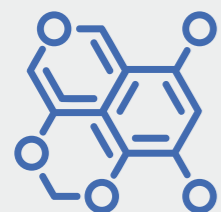
MISSION

Innovative chemistry for a better future

VALUES

Equality Enterprising Innovation Cooperation

Services and Solutions



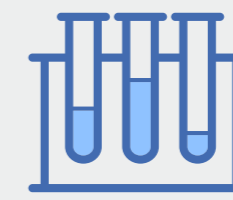
Drug Discovery

Novel and diverse building blocks
Drug discovery technology services,
chemistry/biology services



Drug Development and Production

Supply of registered starting materials, intermediates,
APIs and drug products for customized development
and production
Scaling up of building blocks



Innovative Technology

Effectively optimize cost, quality,
speed and EHS compliance through
chemical and technological innovation

Development History

Oct 2008

PharmaBlock Sciences (Nanjing), Inc. was officially operated.



Jan 2016

PharmaBlock Pharmaceuticals (Shandong) Co. Ltd was established to build pilot & manufacturing site by acquisition.



Jan 2018

PharmaBlock (USA), Inc. established Pennsylvania Facility for customer services and process R&D.



Sep 2021

The production base for drug products of PharmaBlock Pharmaceuticals (Shandong) Co. Ltd was put into use.



May 2012

PharmaBlock (USA), Inc. was established in Silicon Valley, California.



Nov 2017

PharmaBlock Sciences (Nanjing), Inc. was listed on Shenzhen Stock Exchange.



Oct 2018

PharmaBlock Pharmaceuticals (Zhejiang) Co. Ltd was established to build pilot & manufacturing site by acquisition.





Global Presence Serving Global Markets

2008

Officially Operation

2017

IPO

2400+

Employees

74000M²

R&D area

505 M³

Total Volume of Reactor

1000+

Global Partners

Enterprise Honors



Government Honors

- Jiangsu Province Science and Technology Innovation Development Award Outstanding Enterprise
- Molecular Fragment Compound Library in Jiangsu Province and Nanjing
- Nanjing Engineering Research Center for Small Molecule Drug Molecular Fragment Library
- Jiangsu Province and Nanjing Enterprise Technology Center
- High and New Technology Enterprise Recognition
- National-level Postdoctoral Workstation
- Foreign Expert Workstation in Jiangsu Province
- Nanjing Health Enterprises
- Southern Jiangsu National Independent Innovation Demonstration Zone and Nanjing Gazelle Enterprises
- Engineering Technology Research Center



Industry Recognition

- The Pride of the Republic's Pharmaceutical Enterprises
- 2023 ACS GCI RP CMO Excellence in Green Chemistry Award
- 2022 Best Pre-Clinical CRO/CDMO Company
- 2022 China's top 100 life science service service companies brand
- 2021 and 2022 Top 20 CXO Companies in China
- Top 20 Most Influential CXO Companies in 2021
- 2020 Top 10 CDMO Companies in China
- 2019 China CRO Top 20



Business Value

- Forbes China "2021 Top 50 Most Innovative Companies in China"
- Forbes China "2020 Top 50 Potential Public Companies"
- Forbes "2022 & 2021 Asia's Top 200 Small and Medium-Sized Public Companies"
- JRJ "Golden Intelligence Award" 2020 Pharmaceutical and Biological Industry - Business Value Practice Award
- Top 500 New Economy Companies in China



2022 Forbes Asia Top 200 Small and Medium Public Companies



2022 Top 100 Life Science Service Company Brands in China

ESG Management

The Board of Directors of PharmaBlock carries out ESG work from the management perspective, and sets ESG work objectives and action paths to integrate the core ESG concepts into the Company's daily operations after understanding the potential impact, risks and opportunities of environmental, social and corporate governance on the Company's business model. Through the preparation of the 2022 ESG report, we sort out the Company's management strategies, practical actions and key performance in ESG to further strengthen ESG governance capacities.

Stakeholder Identification and Communication

With the joint efforts of PharmaBlock and all stakeholders, we have built an efficient communication mechanism and diversified communication platform to improve the transparency of the Company's operations. Through daily communication and exchange, stakeholders can further get to know the management strategies, practices and effectiveness of the Company in the areas of environmental responsibility, social responsibility, value creation and corporate governance, thus helping the Company to improve ESG governance and put social responsibility into practices.

Stakeholder Identification	Topics of Concern	Communication Method
Shareholders and Investors	Governance Structure ESG Governance Investor Relations Management Information Disclosure Risk Management Product & Service Quality R&D and Innovation Intellectual Property Management Return on Investment	Information Disclosure General Meeting of Shareholders Roadshow Events Site Visits
Government and Regulatory Agencies	ESG Governance Information Disclosure Compliant Operation Paying Taxes in accordance with the Law Responding to Climate Change Business Ethics and Anti-Corruption	Official Correspondence Supervision and Inspection Information Disclosure
Employees	Diversity and Equality Employee Rights and Benefits Employee Health and Safety Talent Nurturing and Career Development	Communication Platform Employee Conference Employee Training Employee Activities Satisfaction Survey
Customers and Partners	Product and Service Quality R&D and Innovation Customer Service Industry Communication Intellectual Property Management Privacy and Data Security Business Ethics and Anti-Corruption	Market Research Customer Service Hotline After Sales Service Satisfaction Survey Industry-Academia-Research Cooperation Industry Forum
Suppliers	Supply Chain Management Business Ethics and Anti-Corruption Employee Health and Safety R&D and Innovation Industry Communication	Supplier Evaluation Supplier Communication and Training
Community & Public	ESG Governance Information Disclosure Community Environment Public Welfare	Information Disclosure Exchange and Interviews Community Activities Volunteering

Material Issue Analysis

Material Issue Analysis Process

Assessment of Material Issue

We sort out the domestic and international ESG policies and regulations and rating systems, combining with industry development trends and benchmarking peer cases to conclude 25 material topics;

Stakeholder Communication

Based on our business scope and nature of operations, we identify and collaborate with our stakeholders to determine the level of materiality of issues in two dimensions: "Importance to Stakeholders" and "Importance to the Company";

Material Issue Analysis

The Company's Board of Directors, in conjunction with a team of external ESG experts, conduct in-depth discussions and develop the following matrix of material topics;



Responses to UN Sustainable Development Goals

Corporate Governance



- Governance of "Three Meetings"
- Investor Relations Management
- Risk Management
- Business Ethics

Industry Value



- Innovative R&D
- Quality Assurance
- Customer Service
- Sustainable Supply Chain Management

Green Development

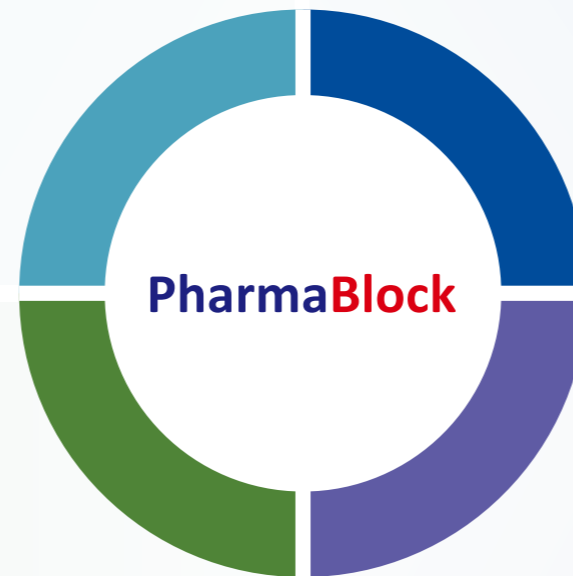


- Environmental Protection
- Energy Management
- Resource Utilization
- Pollution Prevention and Control

Social Responsibility



- Employees' Rights
- Health & Safety
- Social and Community



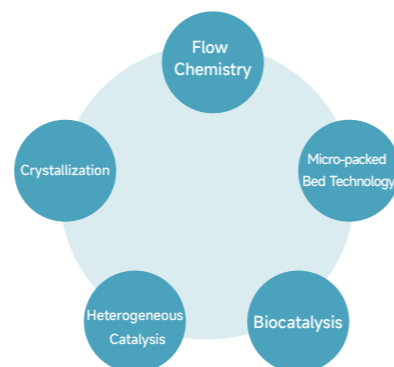
Topics Spotlight

Technological Innovation for Green Chemistry
Intelligent Buildup for Digital Transformation



Technological Innovation for Green Chemistry

The pharmaceutical industry must make fundamental changes in production technology to achieve safe, efficient and green process development and production solutions in order to follow a sustainable path in the future. We have been proactively assuming our corporate social responsibility to respond to the national goal of carbon peaking and carbon neutrality. While doing a good job of lean operations and reducing energy consumption, we give full play to our innovative capabilities in green chemistry and low-carbon technologies to reduce our environmental impact and carbon footprint with more comprehensive and integrated measures, and to promote greener, safer, and more efficient process development and production to achieve sustainable development. For example, we strictly control PMI (Product Mass Intensity, i.e., the ratio of input raw material mass to output product mass in chemical reactions) in the design of source process routes to assess the efficiency and sustainability of chemical reactions and guide the optimization of reaction conditions, select solvents with lower environmental impact and improve solvent recovery through technical means.



During the reporting period, we adjusted and optimized our chemical engineering technology and established the Technology Innovation Center (TIC), to further enhance the strategic competitiveness of our vertical and horizontal integrated services through the integrated use of chemical innovation, process optimization, new technology embedding and equipment integration, and to explore green, safe and intelligent advanced manufacturing models in the field of biomedicine.

Flow Chemistry

Flow chemistry is a cutting-edge technology that is transforming the way of pharmaceutical production. From a sustainability perspective, flow chemistry can be implemented to address various green chemistry and engineering principles raised by American Chemical Society (ACS) Green Chemistry Institute (GCI), including reduced emissions, improved energy efficiency and process safety, etc.

In this technology, we have integrated the capabilities of chemical synthesis, chemical process, and equipment engineering to form the ability to develop and apply the system, to reduce the generation of "three wastes" by improving the yield, and realize the essential safety by miniaturizing the reaction.

As of the reporting period, PharmaBlock has mastered applying this technology to more than 40 types of reactions, and this technology has supported hundreds of development and manufacturing projects.

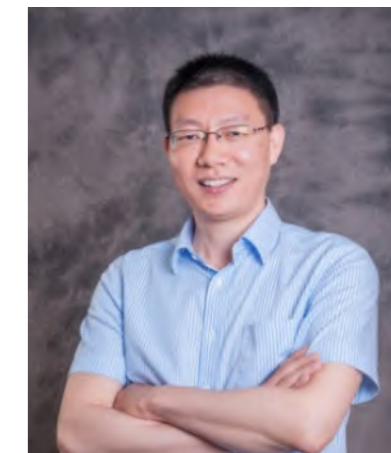


In the past, flow chemistry was rarely used for post-reaction processing, but the post-reaction processing often produces the largest proportion of wastes and energy consumption. In response to this industry problem, we have focused on building continuous post-processing technology capabilities. For example, a certain best-selling tonnage product in its production has achieved continuous reaction and continuous discoloration, extraction, and liquidation and other functions.

The breakthrough has resulted in less waste liquid generation, significantly lowered energy consumption, and eliminated chemical spills to operators, which demonstrates the environmental and social benefits of flow chemistry technology. To recognize PharmaBlock's outstanding efforts and achievement in green chemistry in support of pharmaceutical research, development, and manufacturing, Green Chemistry Institute Pharmaceutical Roundtable (GCI PR) of ACS presented PharmaBlock 2023 CMO Green Chemistry Excellence Award.

The continuous manufacturing GMP workshop at PharmaBlock Pharmaceuticals (Zhejiang) has further enhanced the large-scale continuous manufacturing capacity. We believe that flow chemistry will play a critical role in driving the industry towards more sustainable and environmentally friendly production methods. We are proud to be at the forefront of this movement and will continue to invest in the development and implementation of flow chemistry.

"PharmaBlock has always been committed to providing better products and services to our customers through chemistry and low-carbon technology innovation in R&D and production. We are proud of our work and will continue to actively explore and expand green chemistry applications to benefit our partners and contribute to a sustainable common future."



Dr. Minmin Yang

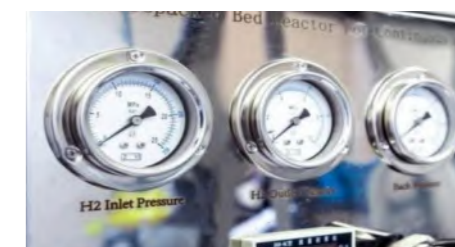
Founder, Chairman of PharmaBlock

Micro-packed bed with hydrogenation technology

Micro-packed bed with hydrogenation technology, as a sub-division of continuous flow technology, is characterized by the realization of a continuous solid-liquid-gas three-phase high-pressure hydrogenation.

In addition to the general features of continuous flow technology, micro-packed bed with hydrogenation also integrates high-efficiency heterogeneous catalyst, thus achieving the advantages of miniaturization of high-pressure reactions and low precious metal usage.

We have covered micro-packed bed with hydrogenation technology from small pilot development to production, achieving more than 10 types of hydrogenation transformation, replacing traditional high-pressure hydrogenation in the vast majority of production projects.



Green catalysis technology

As a highly efficient and clean catalyst, enzymes can achieve high yield and selective chemical transformation under mild aqueous phase conditions, which has great advantages in energy saving, emission reduction and safety. We continue to strengthen the enzyme library reserve and enzyme evolutionary modification to improve enzyme activity and selectivity. By 2022, we have accumulated more than three hundred project applications, including nearly one hundred workshop production projects. For example, in a 100 kg project, we successfully applied imine reductase (IRED) to replace the previous generation of asymmetric hydrogenation route using precious metals, which doubled the yield and avoided the high-pressure reaction and the use of precious metal iridium, and reduced the waste emissions by more than 70% compared with the previous generation of process.

Heterogeneous metal catalysts can enhance reaction selectivity and accelerate reaction rates. These catalysts are also easy to separate and can be recycled, which greatly contributes to our micro-packed bed with hydrogenation technology.

During 2022, we further deepened and optimized the rapid screening and evaluation platform for this type of catalyst, prepared over 200 batches and 500 kg of micro-packed bed with hydrogenation catalyst, and continued to accelerate and broaden the application of micro-packed bed with hydrogenation technology. More importantly, we have built a precious metal catalyst recovery capacity in 2022 to realize the recycling of precious metals, contributing to the lasting conservation and high-value use of non-renewable resources.



Intelligent Buildup for Digital Transformation

2022 is an important year for PharmaBlock to carry out information and digital transformation and upgrade. During the reporting period, we continued to promote our lean operations and digitalization strategy to digitally improve the efficiency of R&D, production and operations, solidify our core competencies and support our long-term development.

Supplier Collaboration Platform



Take ERP system upgrade as a precursor to improve the construction of supply chain Customer Relationship Management (CRM), Supplier Relationship Management (SRM) and Warehouse Management System (WMS).

Laboratory Management Platform



Implement the planning of project management systems for project execution, project development and production, promote the implementation of Laboratory Information Management System (LIMS), and build Environment, Health, and Safety (EHS) and Quality Management Systems (QMS).

BI

BI System Platform

Build Business Intelligence (BI) system to realize the analysis and reporting of various types of business real-time data and visualize management of all phases of projects.



Intelligent Approval Platform

Unify the company portal to realize the construction of intelligent approval platform, integrate several internal application systems, realize single sign-on, significantly improve the efficiency of user collaboration and enhance internal user satisfaction.



Cloud Desktop Management Platform

Take ISO27001 information security certification as an opportunity to create a cloud desktop management platform to eliminate the risk of information leakage.



Document Management System

Promote the construction of document management system to achieve multi-dimensional, business-wide document authority control to meet the needs of customers and the Company's intellectual property protection.



Training Platform Construction

Promote training platform construction to achieve multi-dimensional and comprehensive employee trainings.



Group Human Resources System

Fully launch the personnel system of each subsidiary on line to realize the flow management of talent resources and real-time update of human efficiency data in the group to help the development of business.

Intelligent & Digital Transformation

The Automation Workshop Reaches the Domestic Advanced Level

During the reporting period, PharmaBlock's new 501 and 502 workshops have both continuous and automated production capacity, modularization of process control, automation of parameter control and material transfer, etc. and remote digital control. The digital automation technology has reached the domestic advanced level with the following characteristics:

Fine control: Combined with the cutting-edge design concepts of CDMO industry, the workshop intermittent equipment adds a large number of self-control measures, such as automatic temperature and pressure control, material integration, etc., which greatly improves the operability and flexibility of the equipment;

Safe production: The complete set of devices has the features of low liquid holding capacity, short reaction time and precise process control, which can better realize the essential safety;

Stable quality: A large number of control modules are added to the equipment control to achieve a high degree of automation of process control, making the production efficiency higher and product quality more stable;

Production capacity guarantee: The continuous production area further enhances the production application of flow chemistry technology to meet the application needs for large-scale and sustainable production in various projects.



Automated Digital Smart Warehouse

During the reporting period, we adopted the WMS+WCS solution to intelligently transform the Nanjing bottling agent warehouse, which can introduce a variety of automated equipment applied to the warehouse's inbound, storage, inventory and other aspects, and promote standardized warehouse management and operational processes, to achieve a peak efficiency of 400 bottles/hour, significantly improve equipment utilization and overall warehouse operational efficiency, and continue to optimize the whole process refinement and visualization management system in line with GMP/GSP regulations.



Partner with YONGYOU NC Cloud Digital Platform to Promote Construction of the Group's Digital Information

Corporate Governance

Our Philosophy

PharmaBlock strictly complies with the requirements of laws and regulations, continues to improve its corporate governance system, effectively protects the legal rights and interests of investors, especially the small and medium-sized shareholders, strengthens its risk prevention and control capabilities, abides by business ethics, and works together with all stakeholders to promote sustainable development strategies.

Our Actions

- Governance of "Three Meetings"
- Investor Relations Management
- Risk Management
- Business Ethics



Governance of "Three Meetings"

PharmaBlock strictly complies with the laws and regulations and regulatory requirements of the China Securities Regulatory Commission and Shenzhen Stock Exchange on standardized governance, and establishes a governance structure with the Articles of Association, Rules of the Shareholders' General Meeting, Rules of the Board of Directors, and Rules of the Board of Supervisors. We ensure that the Shareholders' General Meeting, the Board of Directors, the Board of Supervisory and the managerial level function in strict accordance with the Articles of Association and the respective rules of procedure and operate in a standardized manner.

During the reporting period, the Shareholders' General Meeting, the Board of Directors, and the Board of Supervisors operated effectively and independently in accordance with the Articles of Association and the respective rules of procedure.

Shareholders' General Meeting

We holds the Shareholders' General Meetings in accordance with the requirements of *the Company Law of the People's Republic of China*, the Articles of Association, and the Rules of Shareholders' General Meeting. The voting procedures of the Shareholders' General Meetings are carried out in strict accordance with the requirements of relevant regulations, and a combination of on-site and online voting is used to facilitate shareholders' participation in corporate governance. The resolutions of the Shareholders' General Meetings comply with the provisions of laws and regulations. We pay close attention to the opinions and demands of small and medium-sized investors, and implement separate vote counting for small and medium-sized investors on major issues affecting them to fully protect their legitimate rights and interests.

Key performance

Held **3** Shareholders' General Meeting and approved **25** proposals

Board of Supervisors

The Board of Supervisors consists of three supervisors, including two executive supervisors and one employee supervisor. During the reporting period, the supervisors conscientiously performed their corresponding duties in accordance with the Rules of the Board of Supervisors, supervised the Company's financial position, the compliance of directors and senior management in performing their duties, and made scientific and reasonable suggestions on the major matters of the Company.

Key performance

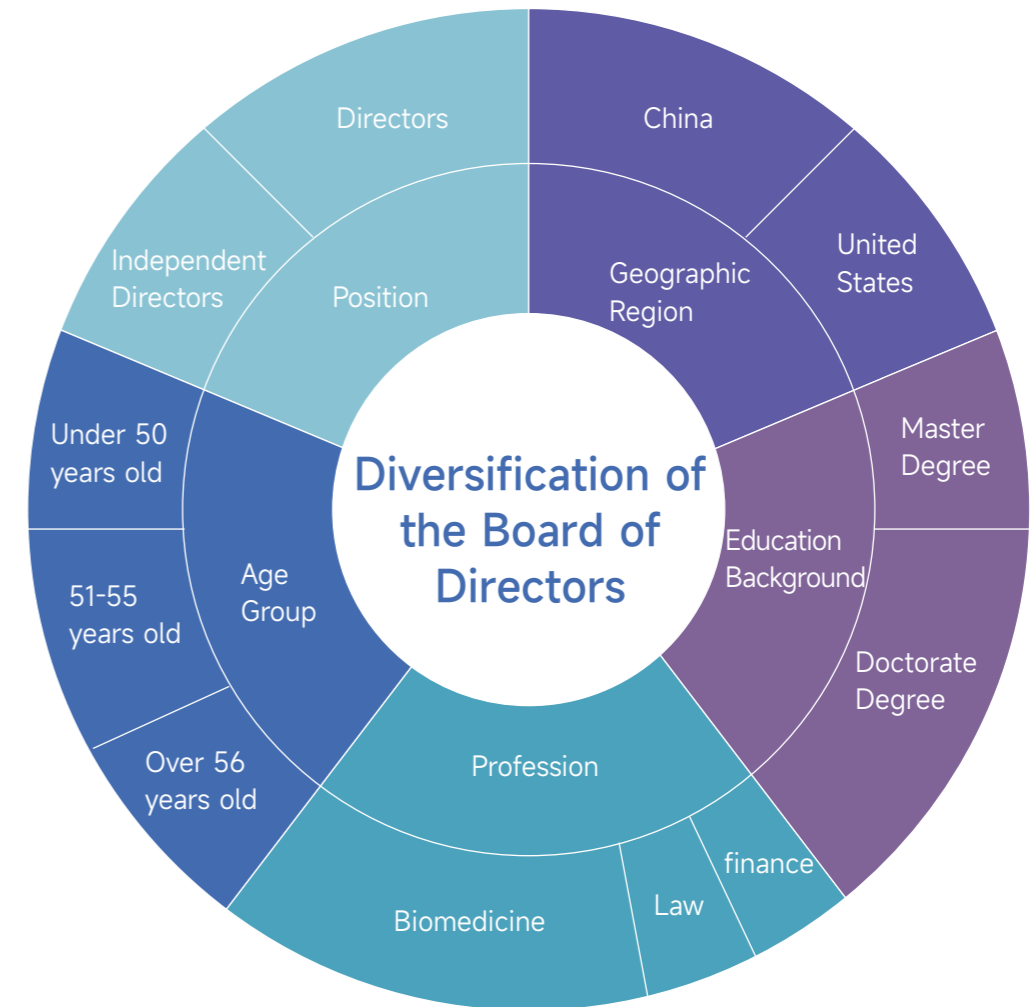
The Board of Supervisory held **9** meetings and approved **36** proposals

Board of Directors

The Company considers factors for diversifying the composition of the Board of Directors based on business model and development trend, including but not limited to gender, cultural and educational background, professional skills and experience, etc., to promote diversity of the composition of the Board and improve the efficiency of Board decision-making.

The Board of Directors consists of seven directors, including three independent directors, one female director, and three foreign directors. The current directors all have solid professional qualifications and good educational backgrounds, covering diverse professional backgrounds such as biomedicine, finance, law, etc. Five of the directors have obtained doctoral degrees. There are four special committees under the Board of Directors, namely the Strategy Committee, the Nomination Committee, the Audit Committee, and the Remuneration and Assessment Committee, of which two-thirds of the directors are independent in the Nomination Committee, the Audit Committee, and the Remuneration and Assessment Committee.

During the reporting period, the independent directors of the Company shall, in accordance with the requirements of the regulations, provided fair and objective independent opinions on the issues of corporate governance, business strategies, risk prevention and control, so as to prevent conflicts between their duties as directors and their personal interests, and promote the continuous standardized development of the Company.



Key performance

The Board of Directors held **11** meetings and approved **57** proposals

The special committees under the Board of Directors held **10** meetings and approved **28** proposals

Investor Relations Management

Disclosure of Information

We strictly follow the provisions of laws and regulations such as the "Guidelines for the Investor Relations Management of Listed Companies" and the "Guidelines for Self-regulation of Listed Companies on Shenzhen Stock Exchange No. 2 - Standardized Operation of Listed Companies on GEM", to effectively protect the legitimate rights and interests of investors, especially the small and medium-sized shareholders, ensure that information disclosure is true, accurate, complete, timely and effective, and continuously improve the transparency of information disclosure.

At the same time, we have taken the initiative to carry out investor relations management activities, strengthen communication with investors through telephone, e-mail and investor relations interactive platform, listen to investors' opinions and suggestions, respond to investors' demands in a timely manner, provide scientific, accurate and transparent reference basis for their decision-making, promote the establishment of long-term, stable and healthy cooperative relationship between the Company and investors, and obtain investors' extensive trust and support.



Investor Exchange Event - Online Roadshow for Convertible Bond Issuance



Training on Information Disclosure of Listed Companies

Key performance

In 2022, we issued 201 reports to the public and were not penalized for non-compliance in information disclosure.

We were awarded **A-level** assessment of information disclosure by Shenzhen Stock Exchange listed companies for three consecutive years (2020, 2021 and 2022.)

We organized investor exchange activities such as investor meetings and on-site investor research for **7** times, with more than **1,000** participants; more than **1,200** telephone exchanges; and **63** times on the interactive platform.

Creditor Protection

In the course of business decision-making, we focus on the protection of shareholders' rights and interests while giving full consideration to the legitimate rights and interests of creditors. We incorporate the concept of safeguarding the legitimate rights and interests of creditors into our Articles of Association, implement a series of internal control systems such as the "Guarantee Management Measures" and the "Internal Audit System" to ensure the financial stability and asset safety of the Company, and perform our obligations in strict accordance with the contracts signed with creditors, promptly notify significant information related to the rights and interests of creditors, and actively cooperate with creditors to understand the Company's relevant financial, operational and management situations, so as to effectively to protect the legitimate rights and interests of creditors.

Shareholder Returns

We have formulated the "2020-2022 Shareholder Return Plan" in accordance with the relevant provisions of the "Notice on Further Implementation of Matters Relating to Cash Dividends for Listed Companies", the "Regulatory Guideline No. 3 on Supervision of Listed Companies - Cash Dividends for Listed Companies" and other relevant regulations to further clarify the reasonable return on investment for shareholders, increase the transparency and operability of profit distribution decisions and facilitate shareholders' oversight of the company's operation and profit distribution.

	2020	2021	2022
Total cash dividends	RMB 15.36 million	RMB 19.97 million	RMB 19.97 million



Risk Control and Management

We have established a sound and standardized and effective risk control system with the "Risk Control and Management System", "Internal Audit Management System" and other system specifications as the core, and have clarified the requirements and contents of risk management objectives. During the reporting period, many departments of PharmaBlock jointly carried out internal audit activities such as project settlement audit, procurement audit and subsidiary audit to promote the upgrading and improvement of internal audit processes. At the same time, we actively have organized internal audit and compliance training for all directors, senior management and employees to explain the Company's internal audit and other compliance operating systems, strengthen risk prevention and control propaganda, and raise employees' awareness on risk management.

Key performance

In 2022, we conducted **24** internal risk control and anti-corruption training activities with **777** participants for approximately **12** hours.

Training Activities on Risk Control and Management

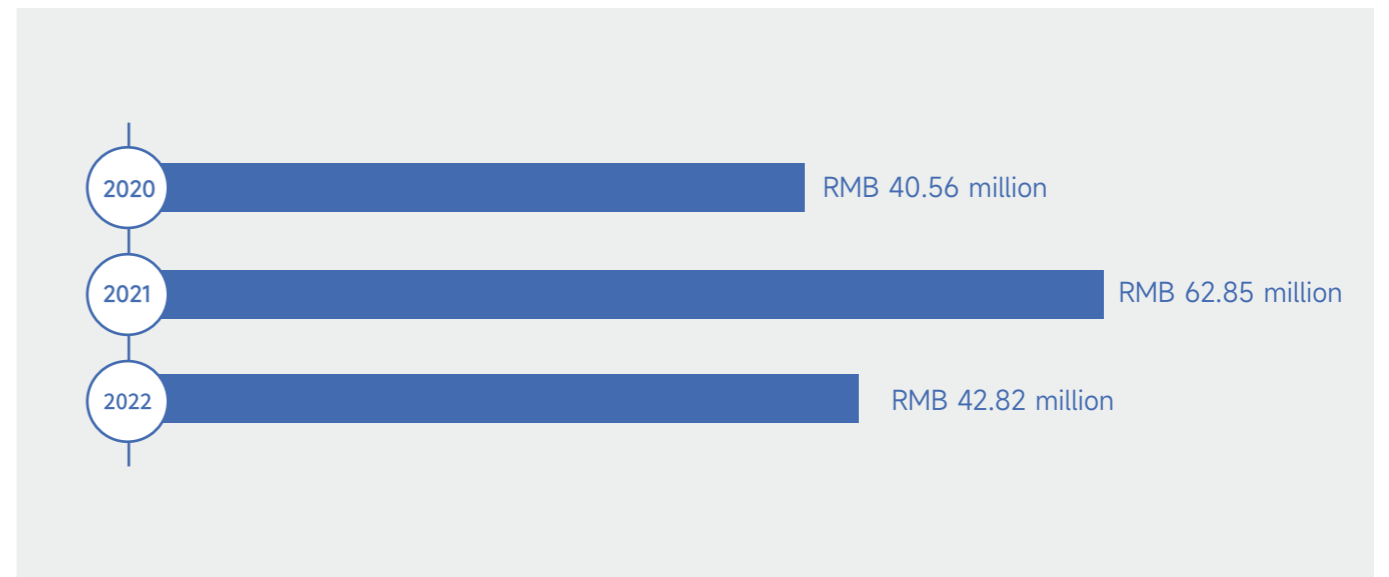


While strengthening risk prevention and control, we strictly comply with the national tax laws and regulations, operate in good faith, pay taxes according to the law, and update the policy changes in various tax laws and policies in a timely manner to ensure that all tax fees are paid.

Key performance

PharmaBlock has been honored as a key tax source and large taxpayer in Nanjing city for **THREE CONSECUTIVE YEARS (2019, 2020 and 2021)**.

> Tax Payment in Accordance with the Law



Business Ethics

We strictly follow the *Anti-Unfair Competition Law of the People's Republic of China*, *Anti-Money Laundering Law of the People's Republic of China*, *Anti-Monopoly Law of the People's Republic of China* and other related business ethics and anti-corruption laws and regulations, to formulate institutional mechanisms such as the *Rules for the Implementation of Anti-Corruption and Reporting Measures*, set up permanent institutions for anti-corruption and anti-corruption work, actively carry out receiving, investigating, reporting and proposing treatment of fraud reports, strengthen the promotion of business ethics and anti-corruption, advocate a corporate culture of integrity and honesty, and create a corporate cultural environment of anti-corruption.

Anti-Corruption Actions

Managers insist on setting an example and driving compliance with the Company's systems and norms through practical actions.

We encourage our employees to comply with the law and engage in ethical behavior that abides by integrity in the daily work of the Company, and organize anti-fraud training and ethical education on integrity for all directors, executives and employees.

We strengthen the promotion of disciplinary compliance with the law and the ethics of integrity to external stakeholders such as suppliers and customers.

Complainants and whistleblowers are protected in their efforts to assist in investigations. We prohibit any illegal discrimination or retaliation, or hostile measures against employees involved in the investigation. Violation of the disclosure of information on whistleblowers or retaliation against whistleblowers, will be dismissed, terminated from the employment contracts. Those who violate the law will be transferred to the judicial authorities for treatment according to the law.

Key performance

During the reporting period, we had no confirmed cases of business ethics and corruption, and no legal proceedings regarding unfair competition practices and antitrust practices.



Anti-Corruption Training

We have established communication channels to report business ethics issues and corruption cases, engaged external experts to participate in investigations as needed, and reported the results of case investigations to the Board of Directors and the Audit Committee in a timely manner.



Whistleblowing Channels

E-mail: PB-IA@PharmaBlock.com

Tel: 025-86918269



Industrial Value

Our Philosophy

Through chemical and low-carbon technology innovation in R&D and production, PharmaBlock has always been committed to providing better products and services to our customers. We are proud of our work and will continue to actively explore and expand green chemical applications to benefit our partners, thereby contributing to a shared future of sustainable development.

Our Actions

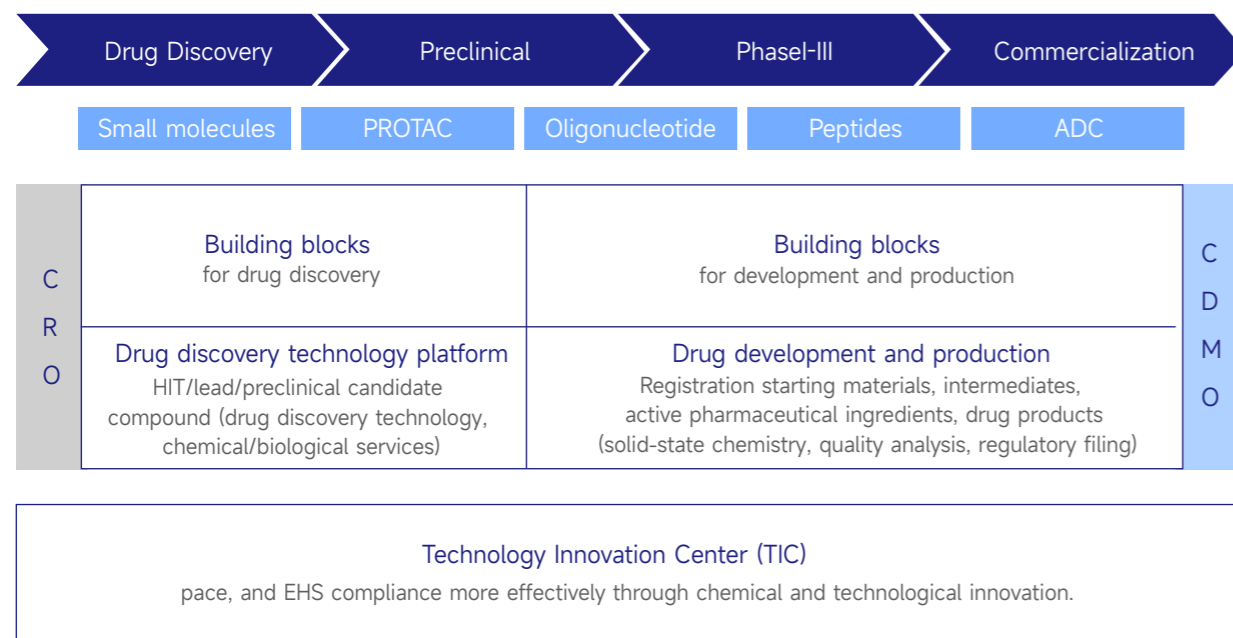
- Innovative Research and Development
- Quality Assurance
- Customer Service
- Sustainable Supply Chain Management



Innovative Research and Development

R&D Mechanism and Achievements

Research and development of new drugs is the source of innovation in the global pharmaceutical industry and is crucial to the health and safety of human beings. As a leading global provider of innovative chemical products and services in the field of drug research and development, PharmaBlock is dedicated to delivering better products and services to the market through chemical and low-carbon technology innovation in the R&D and production process. We assist our partners in enhancing the efficiency of their drug discovery and development and accelerating the process of bringing their products to market.

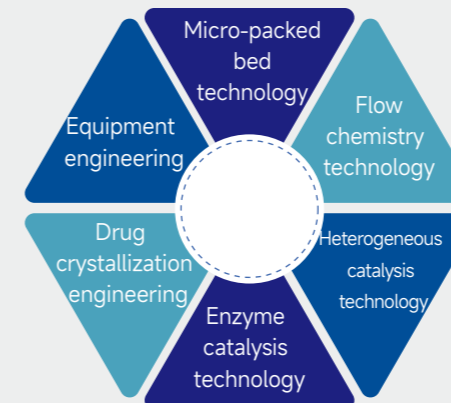


Innovative Building Blocks

Since more than a decade, the core R&D team of PharmaBlock has been consistently and methodically researching drug patents and analyzing professional authoritative journals and databases, and has a profound understanding and prediction of the most recent market and industry demand in the field of drug research and development. With the aim of "inspiring drug design and accelerating new drug discovery", we employ market- and science-driven design strategies to ensure the innovation, diversity, and effectiveness of our products. Our designed and supplied building blocks can assist medicinal chemists in enhancing the physical and chemical properties, activity, and selectivity, as well as the biological safety of drugs in clinical research and development, thereby enhancing the screening and optimization efficiency of primary compounds and HIT.

With our strong technological advantages in medicinal chemistry, molecular simulation and organic synthesis, we have designed and developed a building block library containing **200,000** unique innovations for the development of small molecule drugs.

Innovative chemical technology platform drives pharmaceutical intelligent manufacturing



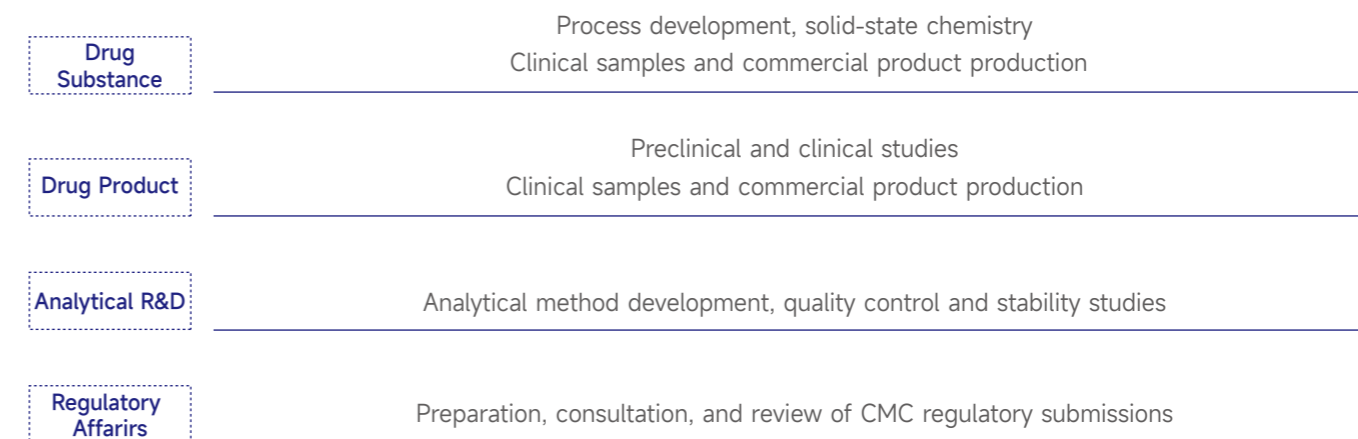
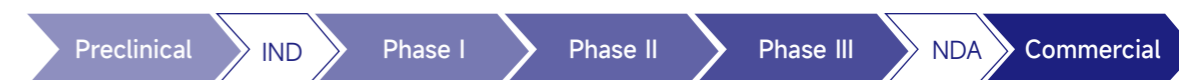
Innovative low-carbon technology achieves greener, safer, and more efficient pharmaceutical manufacturing

In order to achieve sustainable development in the pharmaceutical industry, there must be a high qualitative transformation in production technology, as well as the implementation of solutions that enable safe, efficient, and environmentally friendly process development and production. Our advanced technology capabilities, exemplified by flow chemistry, micro-packed bed hydrogenation, biocatalysis, heterogeneous catalysis, and intelligent manufacturing, have aided numerous projects in resolving issues associated with large-scale production, shortening development and production cycles and reducing costs, thus providing long-term value to our customers and maintaining deeper and more robust business partnerships.

The Integrated Cmc Platform Accelerates Drug Development

During the progression of new drug R&D projects, we focus on the difficulties and challenges encountered by our customers. On the one hand, we employ novel building blocks to aid in the design of new drugs and accelerate the drug discovery. On the other hand, we enhance the efficiency of new drug development, continuously reduce costs, and meet compliance requirements through various CMC modules, thereby assisting the customers in completing CMC development from IND to NDA.

During the reporting period, we made significant progress in building the CMC's core capabilities and expanding the business. Our R&D team finished GMP production of multiple APIs with extremely complex structures and assisted our customers to obtain IND clinical approval without defects and smoothly entering clinical trials. The first PROTAC project molecule was effectively manufactured in accordance with GMP, accelerating the project's entry into the clinical phase. The first APIs-drug products integrated NDA project was successfully completed.



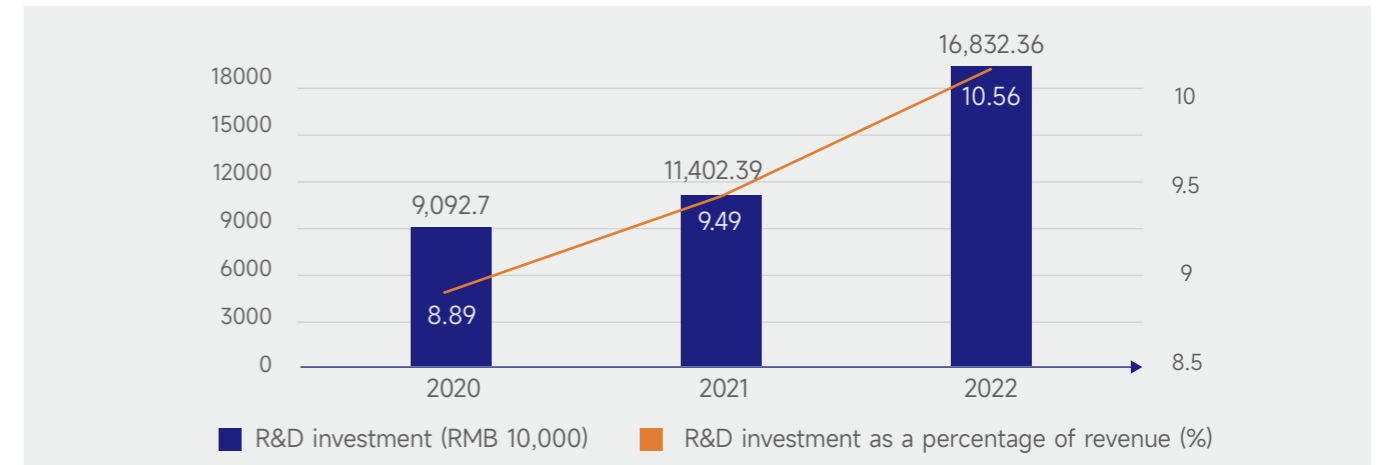
Our new R&D facility in West Chester, Pennsylvania, USA

During the reporting period, the construction project of the new R&D center in West Chester, Pennsylvania, USA, was accelerated and will be officially launched in late March 2023. The new West Chester site covers approximately 16,000 square meters, with around 2,800 square meters of usable lab space. The site has a well-established R&D infrastructure, including process R&D labs, GMP suites, clean rooms, and GMP analytical labs. The new site also enables flow chemistry, micro-packed bed hydrogenation, and solid-state chemistry capabilities. The R&D facility expands the company's footprint in the US and enables more efficient R&D process and fast delivery of clinical-stage GMP projects to global partners.



R&D Investment

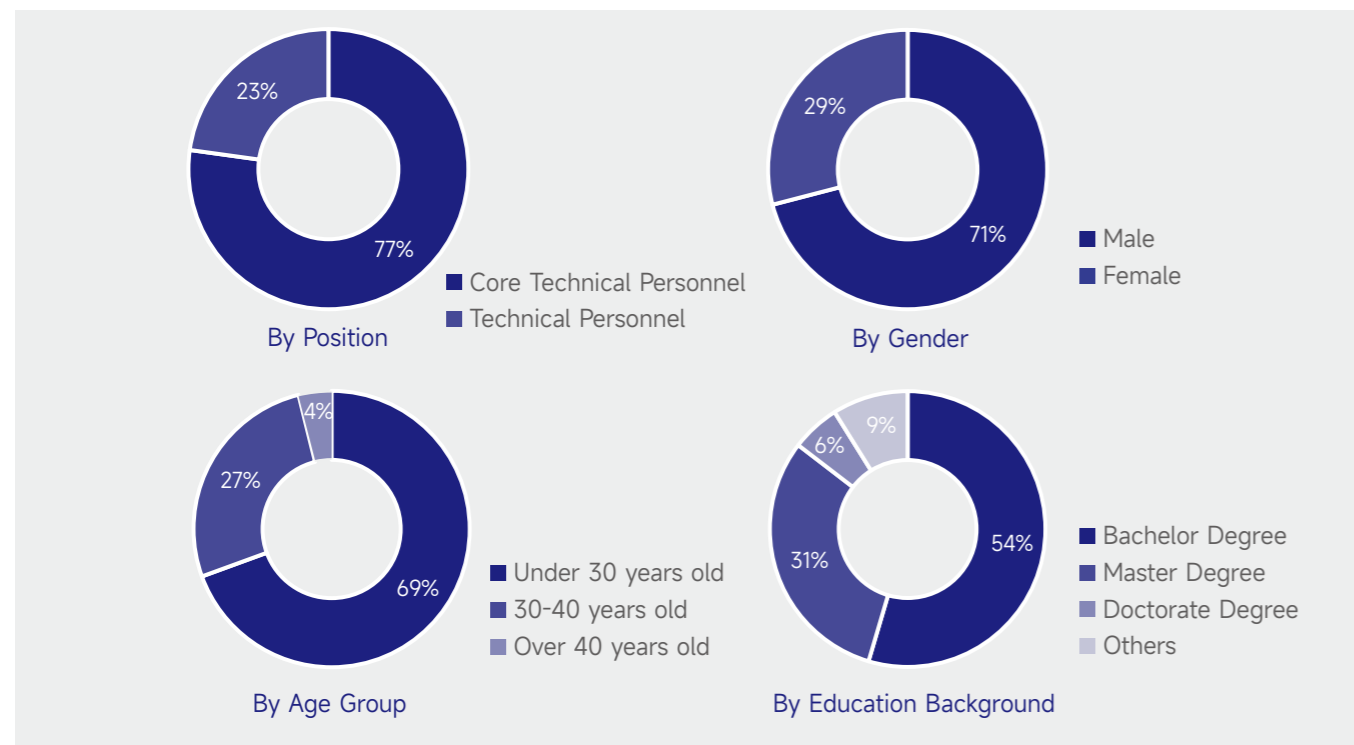
During the reporting period, we increased our investment in research and development for core technologies, including novel molecular building blocks, new chemical processes and technologies, and new drug discovery technologies. The total R&D investment reached RMB168.32 million, with an increase of 47.62% year-over-year, and the R&D expense ratio remained at an industry-high level.



R&D Team

Talent advantage is crucial in global innovative drug research and development and related service disciplines. Throughout the reporting period, the Company continued introducing international professional and technical talents and to enhancing the competitiveness and leadership of our own professional and technical talents in the industry. With talents as the fundamental, PharmaBlock promoted the sustainable development of its R&D.

Key performance
 There were **1,508** R&D personnel, accounting for **60.64%** of the total number of employees.



Intellectual Property Management

PharmaBlock strictly complies with the laws and regulations, such as the Patent Law of the People's Republic of China and the Trademark Law of the People's Republic of China. Based on the requirements of the "Enterprise Intellectual Property Management Specification" (GB/T 29490-2013), we have established a "feasible, effective, systematic, accurate, and concise" intellectual property management system, standardized the intellectual property management process, protected our own intellectual property rights while respecting the intellectual property rights of others, and collaborated with stakeholders to vigorously combat intellectual property infringement crimes, continuously enhancing employees' awareness of intellectual property protection.





PharmaBlock hosted the first Innovative Drug CMC Integration Salon and Low-Carbon Intelligent Manufacturing Forum, which invited industry experts such as academician Ma Dawei and R&D representatives of innovative drug companies to jointly discuss the cutting-edge technical issues of technology and development, and to participate in more than 20 global industry conferences, thereby achieving industry win-win cooperation with professional leadership.



Professional Leadership for Industry Win-win Cooperation

During the reporting period, we launched a number of technical columns on the PharmaBlock's WeChat public account, covering a variety of topics in the CMC field, such as innovative chemical technology, process chemistry, medicinal chemistry, synthetic advancements, pharmaceutical crystalline engineering technology, pharmaceutical regulations and laws, etc. We have published more than 30 articles with a cumulative reading volume exceeds 20,000. Simultaneously, we organized 17 sharing sessions on the "PharmaBlock Live Webinar" around the CDMO capability module, with a total viewing audience of nearly 5,000.

> Industry Events



We have established strong industry-university-research cooperation relationships with the leading domestic and international universities and enterprises, including Nanjing University, the Shanghai Institute of Organic Chemistry, and the Dalian Institute of Chemical Physics.

Information Security

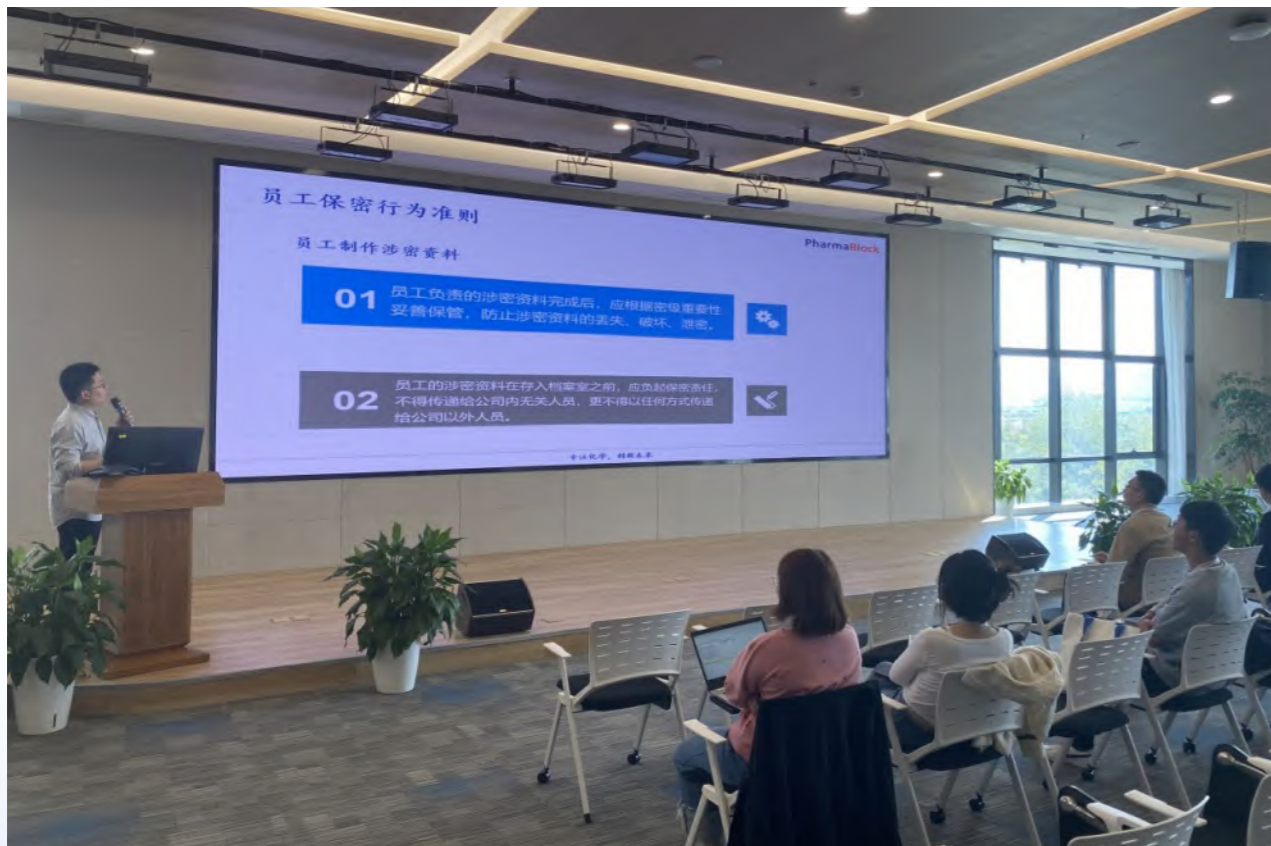
We integrate the concepts of "innovation-driven" and "customer-centric" into the design of our information security system, implement stringent information security management processes, and use information technology to ensure the security of critical technology and business information of our customers and the Company.

During the reporting period, we contracted with professional third-party organizations to carry out commercial secret protection consulting projects, and continuously improved more than 30 information security management systems, covering intellectual property protection, commercial secrets, computer system security, and other fields, to ensure the complete and efficient operation of the information security management system layout. On the basis of the original commercial secret protection system, we optimized the process and refined the rules and procedures for commercial secret confidentiality, as well as the corresponding confidentiality measures for different levels, thus improving the Company's overall capacity to protect commercial confidential information.



PharmaBlock has been granted certification for our information security management system.

Training series on information security



Information Security Management System



Quality Assurance

Product Quality Management System

Quality is the foundation of the Company's success and the outcome of every PharmaBlock employee's participation and contribution. PharmaBlock adheres to stringent quality standards, establishes a sound system of regulations taking "Quality Manual" as the core, which is based on ICH guidelines and GMP regulations, clarifies the responsibilities and authorities of department personnel, and implements a quality management system suitable for each phase of drug development and production in accordance with quality management requirements. We integrate the Quality by Design (QbD) and the concepts, tools, and methods appropriate to the drug development stages into the entire drug life cycle from R&D to production, and promote and implement efficient collaboration across all sites and business modules of the group within the same quality management system framework. Our comprehensive quality management system, in conjunction with our high-standard hardware facilities, provides our customers with a high quality of CMC activities.



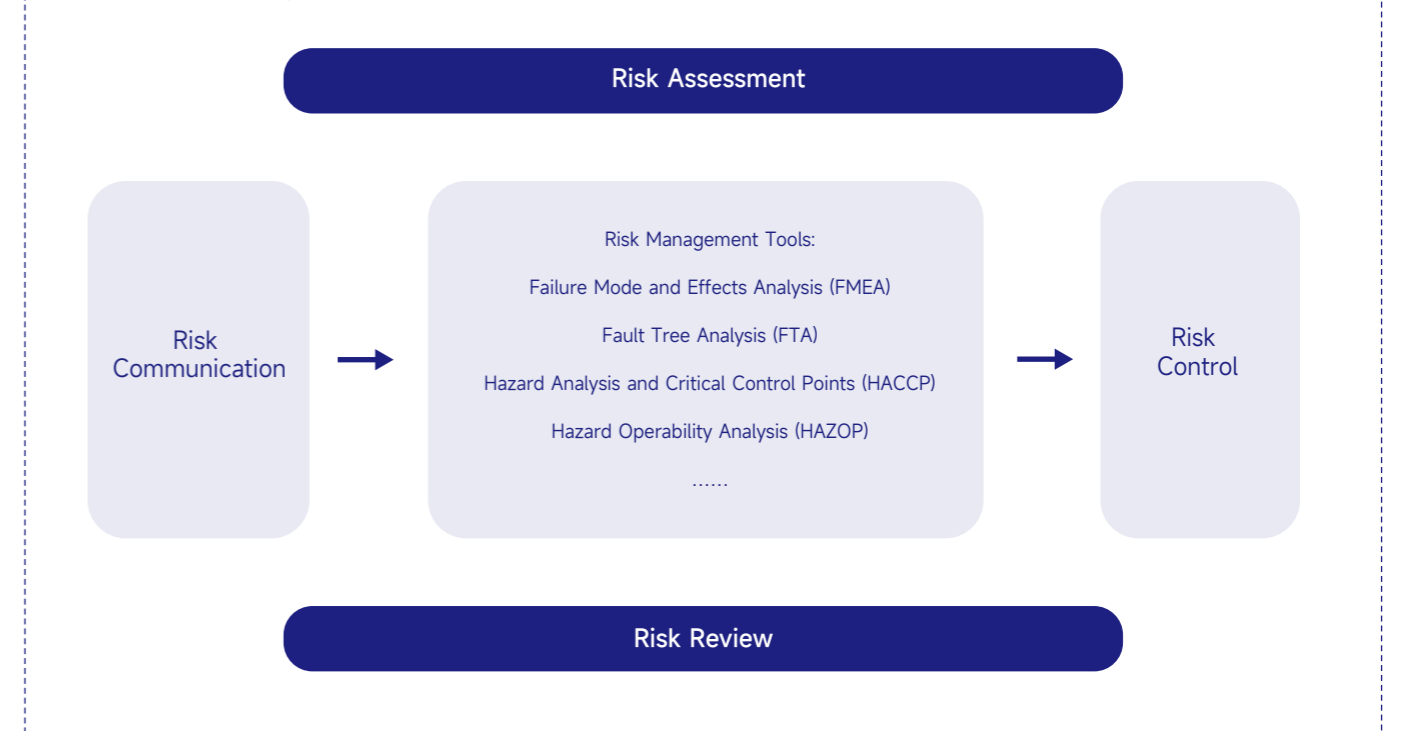
Quality Management System

- Policy** Focus on chemistry, innovation for the future, pursue excellence in quality; people-oriented, harmonious and win-win, promote human health.
- Objectives** Product realization, system control and maintenance, continuous improvement.



Our quality risk management procedures have been standardized based on the "Quality Risk Management Guidelines" and other regulations. Our senior management organizes and executes quality risk management activities and establishes a dedicated quality risk assessment team to identify, evaluate, and control risk factors that may affect the quality of the finished products, thereby ensuring the quality of the finished products, preventing quality incidents or accidents, and safeguarding our customers' vital interests.

Quality Risk Management System



"Rui Xiang" Electronic Document System

During the reporting period, PharmaBlock introduced the "Rui Xiang" electronic document system, which includes document management, record management, and training management functions. The system employs digital technology to enhance the effectiveness of product quality management, ensuring the timeliness, precision, and consistency of document sharing and transfer. This system has assisted us in establishing a high level of group product quality management system.

Quality System Audit

Our quality management system, combined with high-standard hardware facilities, provides guarantee for our customers with a high-quality CMC activity. As of the end of the reporting period, PharmaBlock has passed more than 130 quality audits conducted by drug regulatory agencies and large and medium-sized domestic and foreign pharmaceutical companies.

Continuous Improving GMP Project Service Capabilities

We continue to strengthen our GMP project service capabilities on the basis of PharmaBlock Zhejiang Intermediate and APIs GMP Production Base and PharmaBlock Shandong Drug Products GMP Production Base.

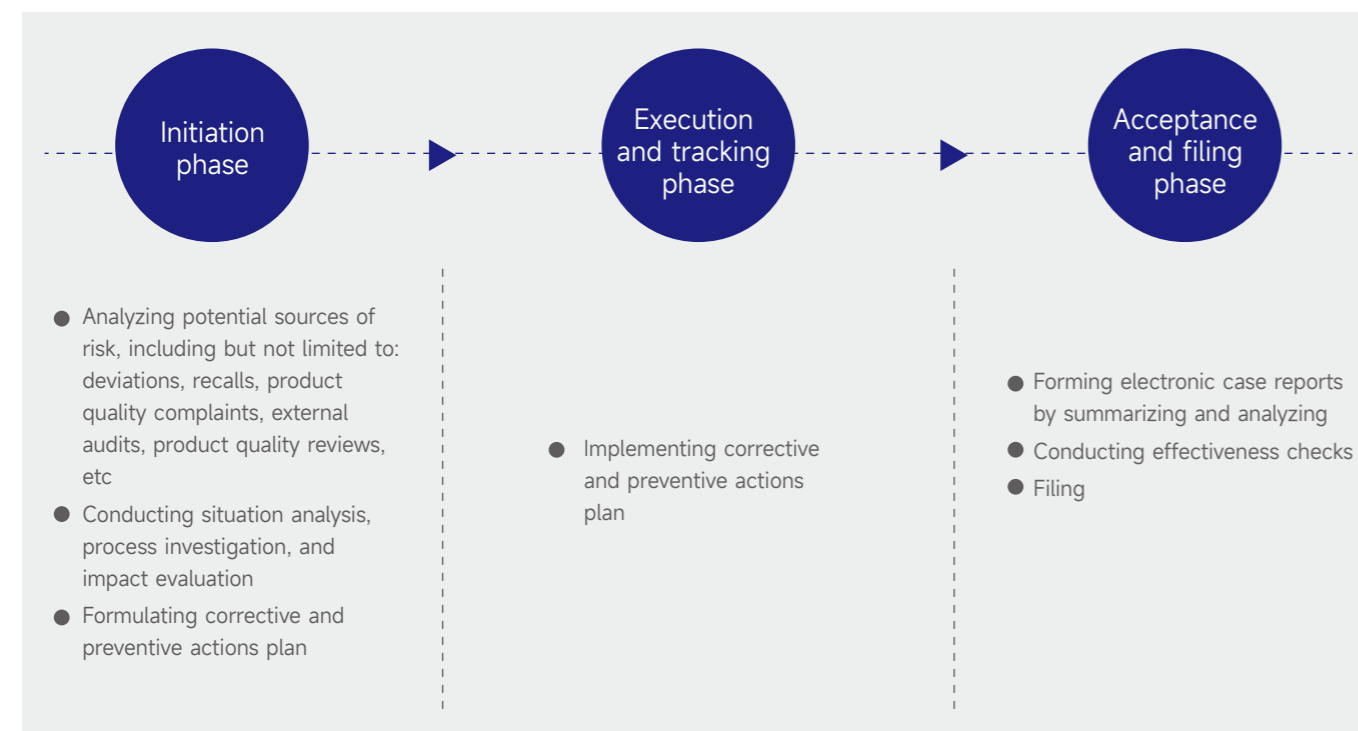
The QC laboratory of the PharmaBlock R&D center has established a quality management system and laboratory management system in accordance with GMP requirements, supporting method validation, reference standard calibration, stability testing, commissioned testing and research with GMP requirements at each production site, and successfully passed GMP audits by overseas customers during the reporting period.

In addition to the completion of the first GMP project in 2022, our subsidiary PharmaBlock USA Hatfield Process R&D Center has delivered multiple API and GMP projects to its US partners during the reporting period, with high recognition from local customers for service quality and efficiency. The new R&D center located in West Chester also has GMP project service capabilities.

Corrective and Preventive Actions

We have implemented management systems including "CAPA Management Regulations", "Deviation Investigation and Handling Procedures", and "Product Quality Complaint Handling Procedures". We promptly implement corrective and preventive measures to correct existing defects or potential risks, prevent the recurrence of similar events, evaluate the effectiveness of preventive measures, and continually improve product quality management.

> Process of the corrective and preventive actions



Expansion of Production Capacity

During the reporting period, our subsidiary PharmaBlock Zhejiang's 501 multifunctional GMP automated workshop and 502 continuous GMP production workshop were put into operation successively, adding a total of 260 cubic meters of reactor volume. The 502 workshop has both continuous and automated production capacity, further improving the Company's scale-up application of continuous flow chemistry technology. The workshop's automation capacity has added a large number of self-control measures on the basis of the industry, achieving highly automated process control and significantly enhancing quality control and safety management capabilities.

The Oral Solid Dosage Workshop at our subsidiary PharmaBlock Shandong has obtained a "Pharmaceutical Production License" because of passing an audit by the Shandong Provincial Administration of Drug Regulation. The workshop has the industry-leading equipment to accommodate a variety of process requirements, including micronization and hot-melt extrusion.

In addition to augmenting production capacity to meet the rising demand for projects, we have optimized the entire production management process by using lean management principles. We have increased equipment utilization by approximately 25% through implementing measures such as increasing cleaning efficiency, reducing error rates, simplifying processes, standardizing operations, and standardizing working hours.



"Pharmaceutical Production License" obtained by PharmaBlock Zhejiang and Shandong

Building Quality Culture

During the reporting period, we continued expanding our comprehensive quality management efforts and established a quality management committee comprised of middle and senior management personnel from a variety of business units and centers. We regularly hold quality review meetings and promote activities such as quality knowledge competitions, GMP knowledge quiz competitions, and analysis skills competitions in order to raise employee awareness and competence in quality management.



Customer Services

Customer Services System

PharmaBlock insists on technology-driven and customer-centric service principles, and promotes a new business development pattern of mutual diversion of building blocks, drug discovery services and CDMOs through the business model of full-service drug discovery, development and commercialization.

Active Customer Revenue

RMB **1.46** billion Increased by **33.22%** year-on-year

Revenue of large multinational pharmaceutical companies

RMB **0.46** billion Increased by **21.66%** year-on-year

We have fully implemented group management, continuously optimized business processes and organizational structure with a customer-centric focus, significantly improved resource coordination and empowerment at the group level, enhanced project operational efficiency, boosted delivery capability, and increased customer value.

During the reporting period, PharmaBlock completed the first phase of the group management objective consisting of seven support service modules and implemented the group management structure and process via the HR management system to realize the digital management of HR management across the group. Simultaneously, we invited a renowned consulting team to provide training and professional guidance for the top-level design and management upgrade, with the objective of comprehensively improving the management capability and operational efficiency at the group level, continuously optimizing the internal operation process of CDMO business, and committing to CDMO customer service in an agile, efficient, and professional manner in order to truly create value for our customers.



Improve the BAT Business Model

Business development + customer service manager + technical personnel in charge coordinate with one another, track customer needs, plan and arrange in advance, solve problems during project execution in a timely manner, enhance the quality and efficiency of CDMO services, and improve the customer service experience.



Scale up Business Development (BD) and Project Management (PM) in Europe and the United States

Enhance the size of the BD and PM teams to ensure coverage of each market and construct solid service teams around key customers in order to respond swiftly to customer needs and increase customer satisfaction and trust.

Training on "How to focus on customer and improve customer service"



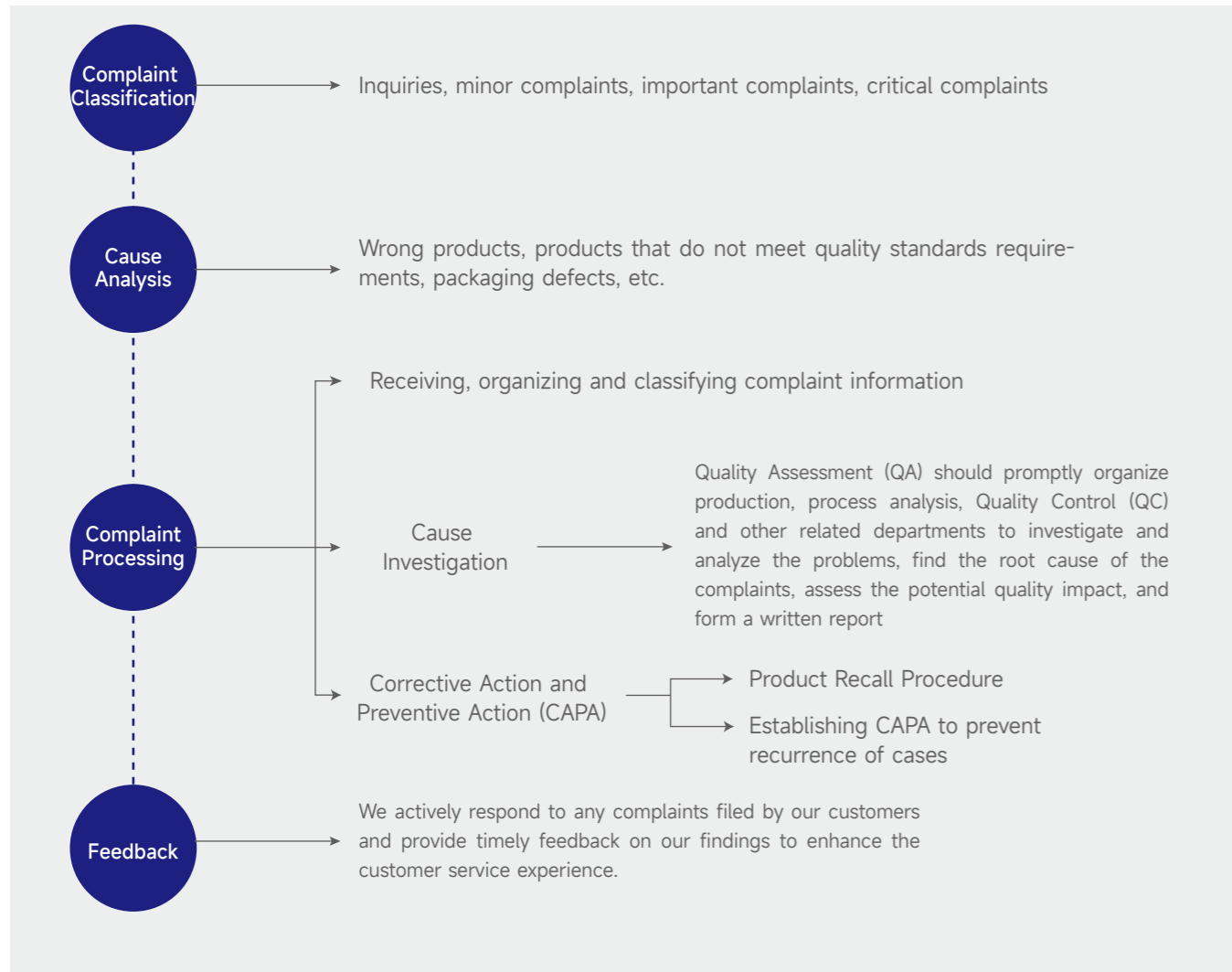
Responsible Marketing

We strictly comply with the provisions of the *Advertising Law of the People's Republic of China* and other laws and regulations, implement a responsible marketing system, standardize product releases and sales, strictly control the review process of publicity, external communication, and other materials. We also ensure the accuracy of the description of publicity content, strictly prohibit the dissemination of misleading and ambiguous product information, and take the initiative to carry out knowledge dissemination behavior to protect the customer's right to know.

Customer Complaints Management

Serving every customer well is the key to our sustainable development. On the basis of focusing on customers, we always uphold the concept of "customer-centric", deeply understand the demands of customers, and create more value for customers with professional services and efficient standardized process. During the reporting period, we further refined our customer complaint management system, including the "Product Quality Complaint Handling Procedures" to improve our after-sales service system and enhance our customer service experience.

> Complaints Management Process



Customer Satisfaction Survey

We place a high priority on customer satisfaction. In addition to daily communication with customers, we conduct annual customer satisfaction surveys covering staff professionalism, timeliness, product quality, packaging and transportation, delivery capability, and customer suggestions for the purpose to further optimize our customer service system and enhance the customer service experience.



In 2022, we received **6** customer complaints, decreased by **50%** compared with last year.



Sustainable Supply Chain Management

Supplier Management System

PharmaBlock always follows the principle of "mutual benefit and win-win cooperation" to build an efficient, stable and sustainable supply chain system, gradually improve the "Supplier Management System", "Contractor Safety Management System", "Procurement Integrity and Self-discipline Agreement" and other system specifications, and also implement strict management mechanism for the whole life cycle management of suppliers. We also examine the sustainability of suppliers through our self-developed Supplier Relationship Management (SRM) system and e-procurement platform, to realize procurement informationization and standardization, further control procurement risks, and improve procurement efficiency. At the same time, we use Warehouse Management System (WMS) and Warehouse Control System (WCS) to improve the digital level of warehouse management, timely adjust inventory strategy to improve material turnover rate, and enhance supply chain management flexibility to ensure stable and timely supply of core materials.

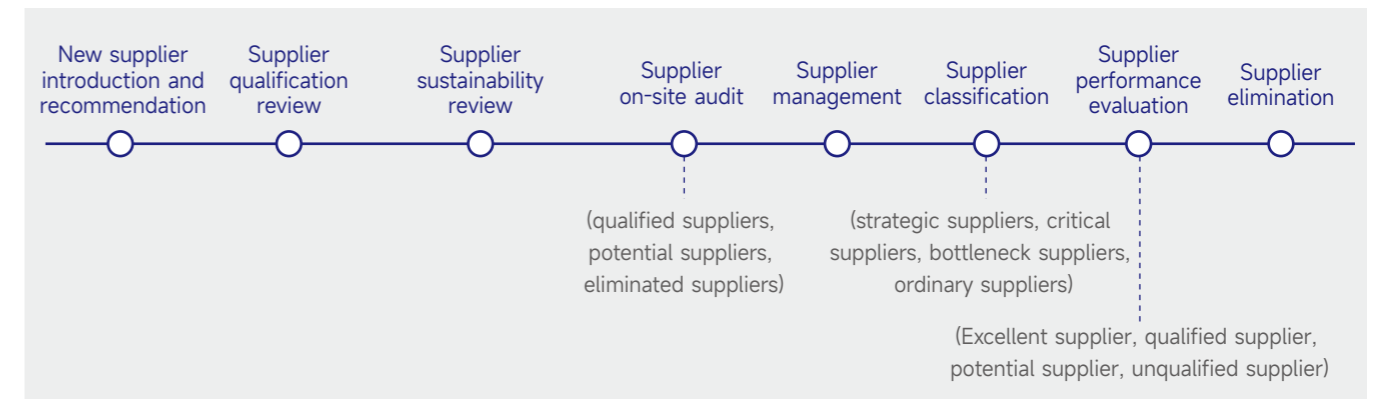
We specify the "anti-bribery" clause in the procurement contract, requiring suppliers to comply with PharmaBlock's integrity policy, prohibiting suppliers from offering bribes to obtain any improper business benefits, simultaneously requiring our employees not to solicit or accept money, goods or other forms of gifts from suppliers, and actively encouraging suppliers to report solicitation of bribes and other unfair behavior by procurement staff.

To strengthen sustainable supplier management, we revised our "Supplier Code of Conduct" during the reporting period, requiring all suppliers to comply with laws and regulations in the applicable legal system, adhere to business ethics, and refine the "Supplier Code of Conduct" in areas such as human rights protection, employee compensation and benefits, health and safety, environmental protection, and anti-corruption and bribery.



Responsible Supplier Management System

Supplier Management Process

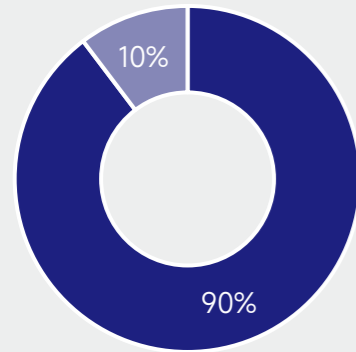


Supplier Distribution

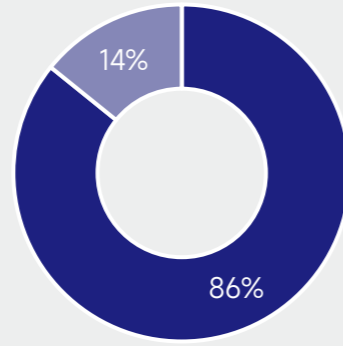
During the reporting period, the total number of our suppliers and their subsidiaries was 5,909, there were 839 suppliers with a cooperation amount greater than RMB100,000, of which have quality management system certification, environmental management system certification as well as occupational health and safety management system certification with the proportion of 30.27%, 16.81% and 13.83%, respectively.

Key performance

The proportion of procurement expenditures from local suppliers was **28.60%**.
 We conducted supplier audits for **75** times.



By Region



By Cooperation Amount



Green and Sustainable Development

Our Philosophy

In order to pursue sustainable development, the pharmaceutical sector must undergo a qualitative change in manufacturing technology to produce safe, effective, and environmentally friendly process development and production solutions. PharmaBlock has set sustainable development goals, taken the initiative to fulfill its environmental responsibilities, actively adopted energy-saving and emission-reduction technologies, and deeply promoted green workplaces and low-carbon lifestyles under the chairman's direction.

Our Actions

- Environmental Protection
- Energy Management
- Resource Utilization
- Pollution Prevention and Control



Environmental Protection

EHS Management Guiding Principle

Scientific Management, Risk Control, and Accident Prevention
 People-oriented, Health Maintenance, and Caring for Life
 Environmental Protection, Energy Conservation, Emission Reduction, and Sustainable Development

Environmental Protection Concept

Source Control Design, Process Control, and End-Treatment

Environmental Protection System

PharmaBlock has set up environmental management systems at each of the Company's sites in addition to establishing environmental management policy like the "Environmental Management Manual". Three primary sites had all attained ISO 14001 environmental management system certification as of December 31, 2022. The group has taken the initiative and supported the gradual improvement of the management system through the participation of different sites and cross-auditing in order to further establish a unified environmental management system at the group level. To support EHS at each site, the group has set up modules including "process safety, green sustainability, and integrated management system" and has developed an EHS center at the group level.

Key performance

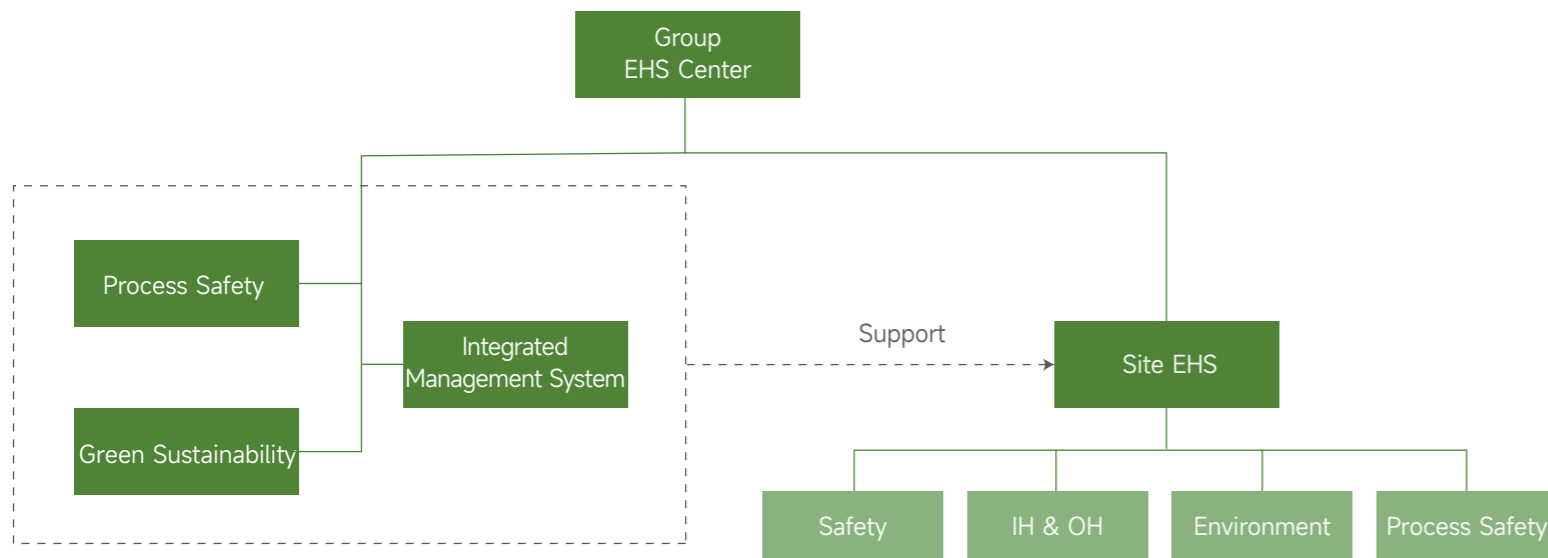
Environmental protection input: RMB **59.03** million;
 Including investment in environmental protection capacity improvement: RMB **29.46** million;
 Passed EHS audits in high quality by foreign customers **6** times.

For all new construction, reconstruction, and expansion projects, PharmaBlock strictly complies with the requirements of environmental impact assessment and environmental protection "three simultaneities" (the environmental protection facilities shall be designed, constructed, and put to use in production and other operations simultaneously with the body of the project). The environmental protection facilities had been constructed according to the relevant provisions. Carry out routine maintenance of environmental protection facilities, regularly monitor and keep records to ensure emissions meet standards.

The Company has established an effective system for environmental emergency response, created the "Emergency Response Plan for Sudden Environmental Incidents," and filed it for official record. Every year, the Company develops and implements an emergency drill plan to strengthen its ability to respond for environmental emergencies and lower the risk that unexpected incidents may have an adverse impact on the environment.

The Company has created an environmental inspection checklist based on the demands of the environmental management system, and each relevant department performs regular inspections or special inspections as required. Additionally, the Company assures the efficient functioning of the management system, continuously enhances pollution management, and lowers the environmental impact of industrial activities through internal audits, management reviews, and external supervision.

During the reporting period, the Company treated wastewater, exhaust gas, solid waste, and noise in a legal and compliant manner. There were no illegal or non-compliant environmental behaviors or environmental disputes, and no relevant administrative penalties were imposed.



Environmental Management System Certification

Pollution Discharge Permits

Sustainable Development Goals

The Group adheres to the concept of sustainable development, advocates the harmonious development of enterprises and society, ecological environment, actively facilitates the development and application of green and low-carbon technologies, actively promotes energy conservation and emission reduction, protects ecological diversity, creates an environmentally friendly community, and fulfills corporate social responsibility.

Short-term targets

Develop the "2023 Safety, Environmental Protection, Occupational Health, and Fire Management Target Indicators" (also known as the "2023 Targets"), which encompasses environmental protection, emission control, employee health and safety, and other areas. The Group will effectively supervise each business unit, functional center, and site in order to enhance EHS management levels and environmental protection efforts.

Mid-term goals

We commit to achieving the following sustainable development goals by 2030, with 2022 as the base year.

Indicator	Unit	2022	2030
Energy consumption intensity	Ton of standard coal/RMB 10,000	0.07	Decrease by 20%
GHG emission intensity	Ton of CO ₂ equivalent/RMB 10,000	0.31	Decrease by 20%
Water consumption intensity	Ton/RMB 10,000	2.65	Decrease by 20%
Total amount of solid waste per unit of revenue	Kg/RMB 10,000	65.03	Decrease by 25%

Environmental Awareness Campaign

During the reporting period, we actively promoted environmental protection concepts, regularly organized training for all employees, and held EHS knowledge competitions to disseminate environmental protection knowledge to all employees, enhance their awareness of "efficient production, energy conservation, and consumption reduction", and further promote sustainable development.

The 5th PharmaBlock Cup EHS Knowledge Competition



Energy Management

Energy Management System

In response to the national "dual-carbon" policy and the call for energy conservation and emission reduction, and in an effort to achieve long-term sustainable development, PharmaBlock has taken steps such as developing green and low-carbon new technologies, promoting the application of new processes and equipment, optimizing energy-consuming equipment, improving energy consumption methods, and enhancing employee environmental awareness. We have continued to reduce the intensity of greenhouse gas emissions from production activities, accelerate the transition to a low-carbon economy, and attain medium- and long-term sustainable development goals.

PharmaBlock has established an energy management team and developed a lean production plan in order to reduce energy consumption, strengthen the Company's ability to respond to climate change, and contribute to mitigating global climate change.

PharmaBlock has announced the "2023 Target" and incorporated energy consumption intensity indicators into the assessment indicators for each site. We will continue to promote energy management system certification, expand the intelligence of energy monitoring, present guidelines for energy management control, and substantially increase the level of energy management.

Promoting Technological Upgrades to Facilitate the Development of Energy Conservation



To facilitate energy conservation and emission reduction, we have adopted multiple energy-saving technologies, including low-frequency mode for air conditioning units, energy-saving renovations for new and comfortable air conditioning, and energy-saving devices for air conditioning units. Taking the MUH502-101 air conditioner as an example, the total energy-saving cost of hot and cold water energy is RMB 21.17 per hour when the outdoor temperature is 30 degrees.

> Energy Consumption

Type	Unit	2022
Natural gas	10,000m ³	18.28
Steam	GJ	105,802.50
Electricity	10,000 kWh	5,374.28
Total energy consumption	Ton of standard coal	10,458.09
Energy consumption intensity	Ton of standard coal/RMB 10,000	0.07

> Greenhouse Gases Emissions

Type	Unit	2022
GHG Scope 1 emissions	tCO ₂ e	395.25
GHG Scope 2 emissions	tCO ₂ e	49,446.33
Total GHG emissions	tCO ₂ e	49,841.58
GHG emission intensity	tCO ₂ e/RMB 10,000	0.31

The Green Workplaces Initiative

The Green Workplaces Initiative is an essential component of energy conservation and emission reduction, as well as a crucial step in putting the concept of green development into practice. We have always adhered to the principle of moderate simplicity in our work, promoted a low-carbon lifestyle, conserved energy and resources, reduced office costs, and established green workplaces as the new norm.

Energy-saving projects	Measures
Digital management	<p>Establish a system for managing energy consumption and implement intelligent devices, such as smart water and electricity meters.</p> <p>Set up automatic control to turn off a set of exhaust fans from 9 p.m. to 8 a.m.</p> <p>The central air conditioning in the office building uses an IAS controller for centralized management, which monitors and manages the temperature, mode, and other functions of the central air conditioning. It reduces the energy consumption of the air conditioning system while maintaining a comfortable indoor environment.</p> <p>The ventilation hood utilizes a displacement sensor + variable air volume valve + frequency converter control system that automatically adjusts the opening of the air volume valve based on the exposing extent of the ventilation hood, thereby controlling the frequency of the exhaust fan and achieving energy savings of up to 40%.</p>
Equipment inspection	Arrange regular equipment inspections and maintenance.
Equipment training	Regularly schedule training for equipment use and maintenance.
Laboratory behavior inspection	Promptly close the ventilation shroud, low-temperature cooling circulating water, and vacuum system in the laboratory.
Energy-saving promotion	Conduct energy-saving promotion through paperless methods such as elevator posters, large screens, email pushes, and energy-saving theme activities to enhance employees' awareness of energy-saving and cultivate energy-saving habits.



Promoting the Green Workplaces Initiative



Resource Utilization

Water Resource Management

We are committed to protecting local surface water and groundwater systems by rigorously adhering to the laws such as the *Water Law of the People's Republic of China and the Water Pollution Prevention and Control Law of the People's Republic of China*. We strengthen water resource management through standard norms such as the "Environmental Management Manual", constantly innovate equipment and processes to increase the efficiency of water resource utilization, and strictly regulate wastewater discharge. We encourage the application of wastewater recycling technology to reduce the consumption of water resources. During the reporting period, we installed water storage devices on each floor of the R&D facility to recycle cooling water for refrigeration and circulation, thereby reducing consumption of fresh tap water and the volume of treated wastewater.

In addition, we cultivate employees' awareness and practices of water conservation through publicity, the posting of posters, and other means.

Indicator	Unit	2022
Water consumption	Ton	422,900
Water consumption intensity	Ton/RMB 10,000	2.65



Material Management

PharmaBlock has established "Procedure for storage and distribution of raw materials, and packaging materials", "Procedure for storage and distribution of chemical materials" and so on. In each material warehouse, an ERP system is deployed to monitor the storage status of materials in real time and improve the management of materials and packaging.

> Consumption of Packaging Materials

Indicator	Unit	2022
Total amount of packaging materials required for finished products	Kg	111,722.00
Amount of packaging materials required for finished products per unit revenue	Kg/RMB 1,000	0.07

Liquid Nitrogen Cost Reduction Management and Control

The 507 workshop of PharmaBlock Zhejiang has automated the manual control program of the cryogenic reactor and decreased the minimal control process volume by replacing the coil condenser of the cryogenic reactor, thereby optimizing the use of refrigeration capacity. Concurrently, the glycol heat exchanger of conduction oil system has been replaced to improve heat exchange efficiency and reduce the frequency of using liquid nitrogen for cooling. As a result, the average nitrogen consumption has been reduced by 22.12%, the liquid nitrogen usage for each batch of cryogenic reactor has been reduced by 39.44%, and the overall liquid nitrogen cost has been reduced by approximately RMB 1.22 million.



Pollution Prevention and Control

Exhaust Gas Management

In accordance with laws and regulations such as the *Air Pollution Prevention and Control Law of the People's Republic of China*, we conduct exhaust gas management work, standardize the process of exhaust gas treatment, strengthen the optimization of exhaust gas treatment facilities, develop online schemes for exhaust gas treatment conditions, and regularly commission third parties to conduct exhaust gas detection in order to strictly control the emission of exhaust gas pollutants.

Management System	"Management Procedure for the Prevention and Control of Exhaust Gas Pollution" and so on
Management Principles	Pipelining, sealing, high-low concentration separation, halogenated separation
Types of Emissions	Exhaust gas emitted during processes such as feeding, reaction, separation, drying, etc.
Detection Indicators	VOCs, NMTHC, NOx, SOx, etc.
Number of Emission Outlets	23
Emission Standards	"Comprehensive Emission Standards for Air Pollutants" (GB16297-1996), "Emission Standards for Air Pollutants in the Pharmaceutical Industry" (GB37823-2019), etc.
Prevention and Control Facilities	Membrane separator, resin adsorption device, regenerative thermal oxidizer, activated carbon adsorption device, spraying-tower
Treatment Methods	Water spray absorptio, Alkali spray absorption, cryocondensation, membrane separation, Resin adsorption, Activated carbon adsorption, incineration by RTO, Activated carbon adsorption, ect.
Reduction Measures	Process optimization, low-temperature condensation, etc.
Emission Results	Attainment of the emission standards

Indicator	Unit	2022
VOCs	Ton	9.47
Total exhaust gas emissions	10,000 m ³	333,903.56
Exhaust gas emission intensity	10,000 m ³ /RMB 10,000	2.09

Production Workshop Exhaust Retrofit Project



During the reporting period, one of our subsidiary companies, PharmaBlock Shandong, invested a total of RMB 4 million in the production workshop exhaust retrofit project. The project added a resin adsorption device for exhaust gas treatment and employed the "cryocondensation + alkali spray absorption + water spray absorption + resin adsorption and desorption" method to treat collected unorganized and organized waste gas. This can achieve a VOCs emission reduction of 3.296t/a and a waste gas treatment capacity of 2000 m³/h.



Before retrofitting: Activated carbon adsorption device + Alkali spray absorption



After retrofitting: Alkali spray absorption + Water spray absorption + Resin adsorption

Fine Management of Exhaust Gas



The Group implements the design concept of "pipelining, sealing, and automation", prioritizes the use of advanced production equipment, and attempts to change the way of exhaust gas emissions from unorganized to organized, avoiding open operations as much as possible and reducing unorganized exhaust gas emissions. In addition, the exhaust gases from the process are treated using the "classification by quality and classified treatment" strategy. For example, a separate pipeline is set up to collect halogen-containing exhaust gas generated during the production process; after being treated by a membrane separator, it is discharged into the factory's total exhaust gas pipeline. After incineration by RTO device, the exhaust gas is pretreated to attain the discharge standard. By utilizing sophisticated membrane separator, the emission concentration of halogen-containing exhaust gas can be drastically reduced, thereby reducing the corrosion of the RTO furnace during incineration and ensuring the RTO equipment's long-term stability.



Membrane separator



Resin adsorption device



Regenerative Thermal Oxidizer

Wastewater Management

In accordance with the *Water Pollution Prevention and Control Law of the People's Republic of China* and other laws and regulations, we regulate the wastewater treatment process, implement targeted wastewater treatment technology, and inspect and maintain the sewage treatment facility on a regular basis. We have established an online monitoring system for wastewater and engage third-party firms regularly to conduct hazard screening and monitoring of the soil and groundwater in the factory area.

Management System	"Procedure for Pollution Control of Wastewater", "Rainwater and Wastewater Discharge Management Procedure", etc.
Types of Discharge	Experimental wastewater, production process wastewater, and domestic sewage
Testing Indicators	COD, ammonia nitrogen, total nitrogen, total phosphorus, pH, suspended solids, discharge volume, etc.
Number of Discharge Outlets	4
Discharge Standards	"Integrated Wastewater Discharge Standard" (GB 8978-1996), "Water Quality Standard for Discharge into Urban Sewers" (GB/T 31962-2015), and other standards
Prevention and Control Facilities	Column distillation, triple-effect evaporator, WWTP etc.
Treatment Methods	Hydrolytic acidification, contact oxidation process, Upflow Anaerobic Sludge Bed, etc.
Reduction Measures	Desolution by column distillation, desalination by triple-effect Evaporator, etc.
Outcome	Attainment of the discharge standards

Indicator	Unit	2022
COD	Ton	14.14
NH3-N	Ton	0.83
Total Wastewater Discharge	Ton	234,734.00
Wastewater Discharge Intensity	Ton/RMB 10,000	1.47

Upgrading of Pre-treatment Process of High-concentration Wastewater

During the reporting period, PharmaBlock Zhejiang upgraded the 501 workshop, which is mainly responsible for pre-treating process of high-concentration wastewater generated in daily production, to meet the standards of the WWTP. The upgrading project adopted a combination of column distillation and triple-effect evaporator for dehydration and desalination with functional optimization, significantly improving the pre-treatment capacity of high-concentration wastewater.

The triple-effect evaporator's processing capacity has been increased from 25t/d to 35t/d, effectively reducing the pre-treatment cost by 9%.

The column distillation, with a total investment of approximately RMB 1 million, maintains the existing processing capacity while saving the production capacity of five reactors, saving approximately 2,000 tons of steam per year and reducing waste liquid by 420 tons per year.



Pre-treatment of high-concentration wastewater



Pre-treatment of high-salinity wastewater



Solid Waste Management

PharmaBlock actively discovers new eco-friendly technologies, and promotes their industrial applications. By applying continuous production, photocatalysis, enzyme catalysis, and other green chemical technologies, the Company effectively reduces the emission of hazardous waste from the source. In addition, process improvement and lean production are encouraged, and whenever practicable, non-toxic or low-toxic raw materials are chosen to further reduce waste production.

- In order to effectively implement the responsibility of pollution prevention and control and to minimize the risks of hazardous waste to the environment, the Company implements full life cycle management of hazardous waste, seriously controlling it from generation, storage, transfer to disposal.
- We have constructed a high-standard temporary storage facility for hazardous waste that meets the safety and environmental protection requirements issued by national and local governments.
- The Company has established a hazardous waste management system, enforcing the submission of hazardous waste management plans, the registration of account books, and the use of electronic transfer manifests. Simultaneously, hazardous waste is collected and classified at the point of generation, and promptly labeled and recorded.
- PharmaBlock entrusts qualified entities with the disposal of hazardous waste and conducts routine EHS audits to mitigate the associated risks.

Management System	"Management Procedure for Solid Waste Pollution Prevention and Control," "Hazardous Waste Management Plan," etc.
Types of Disposal	Hazardous waste and general waste
Testing Indicators	Hazardous wastes includes production of high-concentration waste liquid, distillation residue, experimental waste liquid, waste residue, waste material packaging barrels, sludge, etc. General waste includes household garbage, kitchen waste, etc.
Prevention and Control Facilities	Hazardous waste temporary storage facilities, etc.
Disposal Methods	Hazardous waste: entrusted to qualified institutions for disposal, storage, transportation, and treatment which all meet national standards; General waste: collected and processed by the sanitation department
Reduction Measures	Classification and comprehensive treatment, resource utilization, etc.
Outcome	To entrust qualified entities for compliant disposal

Indicator	Unit	2022
Total amount of general waste	kg	350,000
Total amount of hazardous waste	kg	10,020,000
Total amount of solid waste	kg	10,370,000
Hazardous waste generation per unit of revenue	kg/RMB10,000	62.83
Solid waste generation per unit of revenue	kg/RMB10,000	65.03



Resource Utilization of Waste Solvents

To accomplish the goal of resource utilization of waste solvents, the subsidiary PharmaBlock Zhejiang collects and categorizes waste liquid from the production process and purifies it using techniques such as column distillation and membrane separation. This not only reduces hazardous waste emissions, but also drastically reduces production costs. In 2022, 213 batches of solvents and 943 tons of solvents were recycled, reducing waste liquid disposal costs by RMB 2.8 million and raw material procurement costs by approximately RMB 5 million.

Upgrading of Hazardous Waste Temporary Storage Facility

During the reporting period, PharmaBlock has built three Class A hazardous waste temporary storage facilities. The warehouses are equipped with anti-leakage collection ditches, and the ground is treated with anti-corrosion and anti-seepage methods. The unorganized waste gas in warehouses is collected by a closed collection system and discharged after secondary spray pre-treatment by a waste gas single tower. The warehouses are equipped with fire protection facilities such as combustible gas, smoke detection, and fire hydrant systems. At the same time, in order to ensure the safety of hazardous waste storage, PharmaBlock has established the management of stock limit to ensure the timely commissioning of hazardous waste disposal, and has installed infrared monitoring equipment to monitor the decomposition heat release during temporary storage of hazardous waste in real-time.



Hazardous solid waste warehouse



Hazardous solid waste shelves

Noise Management

PharmaBlock strictly adheres to the provisions of laws and regulations such as the *Environmental Noise Pollution Prevention and Control Law of the People's Republic of China*, strengthens noise management, conducts regular noise monitoring, and takes targeted noise reduction measures to ensure that the noise emissions day and night meet the standards. This creates a pleasant and harmonious atmosphere for employees and the adjacent community.

Compliance Standard	Class 3 standard in Table 1 of "Emission Standard of Noise for Industrial Enterprises" (GB12348-2008)
Sources of Noise	Inherent sounds generated during the operation of mechanical equipment, etc.
Noise Reduction Measures	Select low-noise equipment, use vibration reduction foundations during equipment installation, adopt sound insulation and absorption design in building construction, and install buffer devices and rubber shock pads for equipment pipelines
Outcome	100% effective control

Social Responsibility

Our Philosophy

In global innovative drug research and its related service fields, the advantage of talent is of critical importance. As a global innovative drug research and development partner, PharmaBlock's talent strategy has been a key development focus since the Company's inception, and the Company is committed to creating an inclusive work environment in which every employee is treated equally so that our employees are valued, respected, and supported.

Our Actions

- Employees' Rights
- Health and Safety
- Social Welfare



Employees' Rights

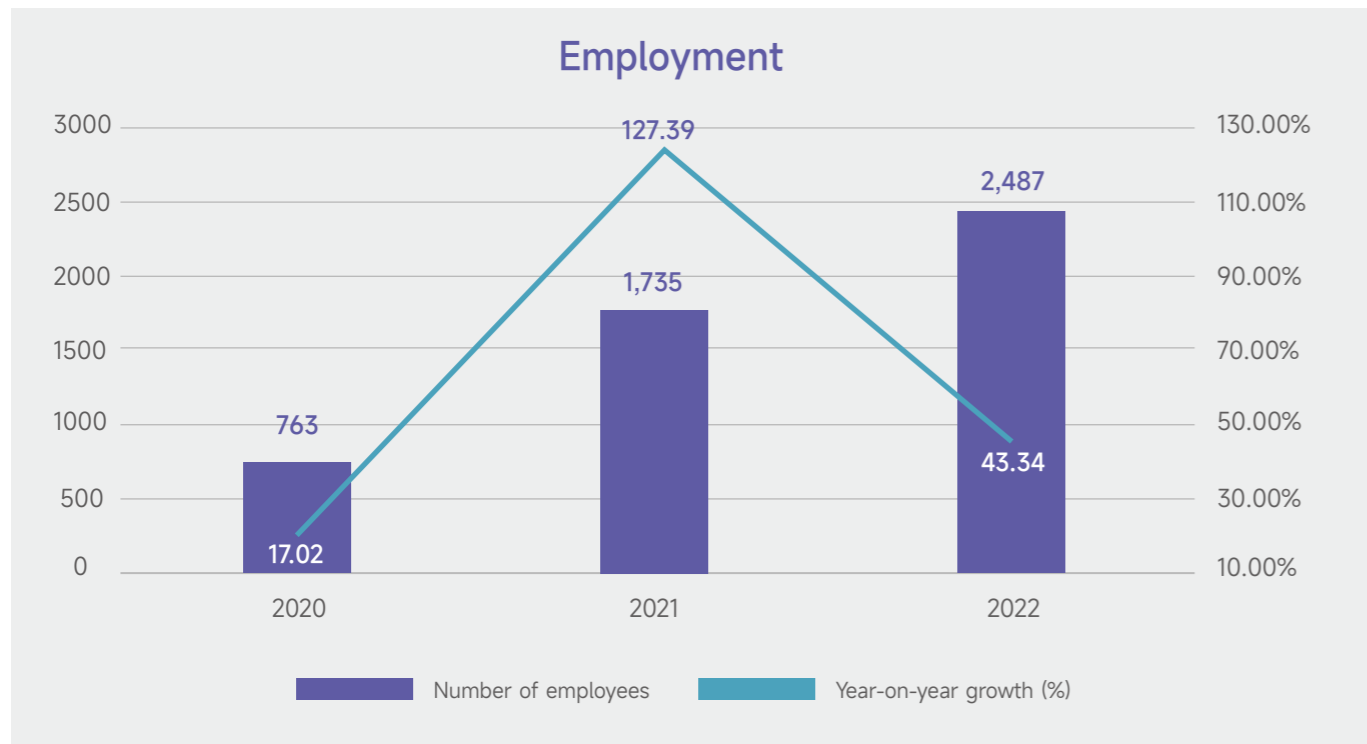
Diversity and Equality

PharmaBlock adheres stringently to the *Labor Law of the People's Republic of China*, the *Labor Contract Law of the People's Republic of China*, and all other applicable labor laws and regulations. We have established and implemented a number of recruitment and new entrance management systems, including the "Employee Handbook" and the "Labor Contract Management System", to ensure compliance with legal requirements when signing labor contracts with our employees. We implement a comprehensive contract management system to ensure efficient processes and suitable personnel, as well as fair, just, and open recruitment, compliance with regulations, and humanization and standardization.

Key performance

The total number of employees was **2,487** with a year-on-year increase of **43.34%** ↑

The labor contract signing rate was **100%**



In addition, based on policies and regulations such as the *Universal Declaration of Human Rights* and the *United Nations Global Compact Principles*, we have formulated an "Inclusion and Diversity" policy in the "Employee Handbook" and are committed to creating an inclusive work environment, treating every employee equally, and making our employees feel valued, respected, and supported. The Company considers candidates of different backgrounds fairly and impartially based on individual abilities, job requirements, and business needs. We firmly oppose employment discrimination, eliminate possible discrimination or bias, and implement equal pay for equal work. We strictly implement an age verification system and prohibit the employment of child labor. We do not discriminate against employees on the basis of their ethnicity, race, nationality, gender, religion, age, sexual orientation, political affiliation, marital status, etc.

By Gender

- Male: 72%
- Female: 28%

By Position

- General Employees: 90%
- Mid-level Management: 9%
- Senior Management: 1%

By Age

- Under 30 years old: 51%
- 30-40 years old: 37%
- 40-50 years old: 9%
- Over 50 years old: 3%

By Specialty

- Production personnel: 61%
- Sales personnel: 23%
- Technical personnel: 2%
- Finance personnel: 7%
- Administrative personnel: 6%
- Others: 1%

By Education Level

- Doctorate Degree: 4%
- Master Degree: 22%
- Bachelor Degree: 44%
- Other: 30%

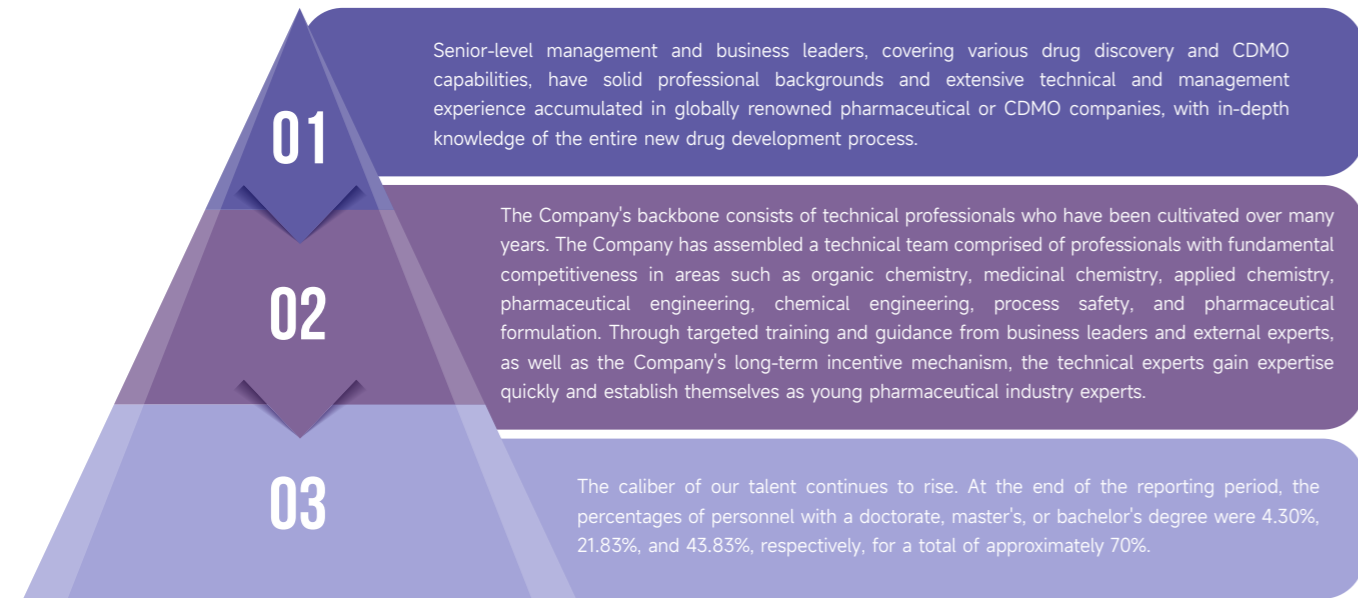
5 employees with disabilities

69 ethnic minority employees, with a year-on-year increase of **50%** ↑

49 foreign employees

Recruitment and Retention

In global innovative drug research and its related service fields, the advantage of talent is of critical importance. As a global innovator in drug research and development, PharmaBlock's talent strategy has been a key development focus since the Company's inception. The strategic deployment of the Company's mid- to long-term business development and various talent cultivation and motivational measures attract a large number of high-quality talents to join and form a sustainable talent pool.



During the reporting period, we utilized a variety of techniques to conduct campus recruitment, thereby enticing outstanding domestic and international candidates. PharmaBlock continued strengthening our cooperation with domestic and international leading universities. We also used online recruitment fairs to broadcast live employment opportunities, with the highest number of viewers exceeding 3,000. In addition, we produced a series of videos, such as "A Day in the Life of PharmaBlock Employees", "A Day of PharmaBlock R&D Staff", and "Overseas Students Talk about PharmaBlock", which showed the Company's working environment and conditions. These videos have had an impact on society and schools, as they have been viewed more than 20,000 times.



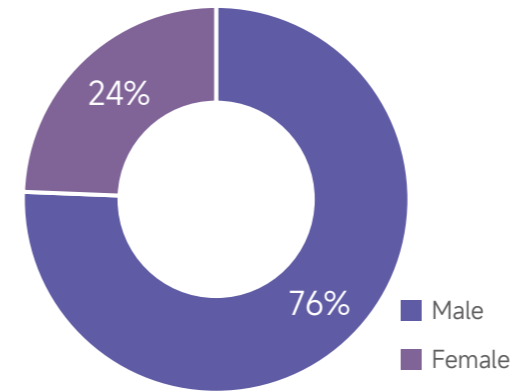
Introduction and Cultivation of High-end Talents

<p>Talent Reserve</p> <p>Campus recruitment has attracted over 400 graduates with bachelor's, master's, and doctoral degrees.</p>	<p>Backbone Experts</p> <p>We have recruited 26 PhD, mid-to-senior-level technical, and management personnel.</p>	<p>Senior Appointments</p> <p>Appointment of Zhengtian Gu, PhD, Jack Chen, PhD, and other senior executives.</p>
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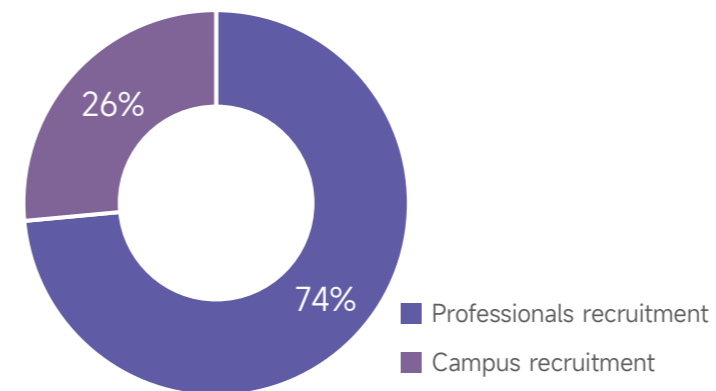
To ensure that employee recruitment is open, equitable, and transparent, we utilize a number of recruitment management platforms, including Zhaopin, 51job, Boss Zhipin, university job websites, the official website of PharmaBlock, and WeChat Official Account.

Key performance

The number of newly hired employees was **1,288**, an increase of **38.79%** compared to the previous year.



By Gender



By Recruitment Channels



Highlights of Campus Recruitment



China's Best Employer and Most Promising Employer of the Year 2022

We hope that the employees' work experience at PharmaBlock is the most meaningful experience for their career paths. We have implemented a "Welcome Back Plan" to encourage former employees to return to the Company. Meanwhile, we have strengthened talent retention efforts through the "Management System for Departing Employees", which helps us to understand the reasons for employees' departure, regularly analyze and summarize the situation of employee turnover, and listen to their opinions and suggestions to help departments and the Company continuously improve their management level.

Indicator		Unit	2021	2022
Overall Turnover rate		%	22.29	16.97
Gender	Male	%	24.86	18.64
	Female	%	15.35	12.42
Age	Under 30 years old	%	23.15	19.86
	30-50 years old	%	22.60	13.23
	Over 50 years old	%	5.77	17.65

Democratic Management

We actively create an open and warm working atmosphere, advocate for sincere and efficient communication between employees and the Company, as well as communication among employees, and provide channels for democratic participation, such as timely communication, work interviews, work meetings, suggestion boxes, and communication and exchange meetings, to attentively hear employees' thoughts and opinions.

In addition, we respect the right of employees to exercise their freedom of association and collective bargaining. In accordance with the *Trade Union Law of the People's Republic of China* and other laws and regulations, we have established the PharmaBlock Labor Union to ensure that the labor union is able to represent employees in collective bargaining with the Company and play its positive role in democratic management and supervision.

Whistleblowing

If an employee considers that his or her personal rights have been violated, or if he or she discovers that the Company has violated national laws and regulations or company policies and rules, he or she can file a complaint or appeal through the following channels:

✉ E-mail: PB-IA@PharmaBlock.com; hr@PharmaBlock.com

☎ Tel: 025-86918269; 025-85930027

Key performance

The annual employee satisfaction rate was **96.65%**, with an increase of **1.45%** compared to the previous year.



Nanjing Harmonious Labor Relations Model Enterprise

Highlights of PharmaBlock Labor Union Activities



Employee Welfare and Benefits

In accordance with the *Labor Law of the People's Republic of China* and other laws and regulations, we have developed a "Compensation Framework System" and a "Employee Attendance and Leave Management System" to standardize employee performance and welfare management. The national statutory holiday and paid leave regime is strictly enforced.



Rewards and Incentives

- Superior compensation package in the market
- A remuneration system based on performance and capability
- Two opportunities for promotion and salary increase each year
- Medium to long-term equity incentives



Insurances

- Five social insurances and one housing fund
- Commercial insurance coverage for employees and children



Special Allowances

- Transportation allowance
- High-temperature and cold drink allowance
- Birthday, marriage, and childbirth allowance
- Hospitalization and condolence allowance



Laboratory

- Laboratory that meets international standards
- Equipped with independent hoods and laboratory benches



Life

- Three meals a day and afternoon tea
- Transitional accommodation for new employees
- Shuttle bus within sites
- Clubhouse and gym
- National Service Day



Holidays

- Flexible and lenient attendance system
- National statutory holidays
- Paid annual leave
- Marriage leave, maternity leave, and nursing leave, etc

Indicator	Unit	2021	2022
Basic welfare expenditures	RMB 10,000	6,318.39	9,642.40
Coverage of social insurance	%	100	100
Annual paid leave days per capita	Days	4.8	5.1
Maternity leave return-to-work rate	%	100	100

During the reporting period, the Company implemented a restricted stock incentive plan for 2022, granting 981,100 restricted shares to 206 middle and senior management personnel as well as technical backbone employees. This action is intended to expand the coverage of equity incentives for employees, particularly those who have joined the Company in recent years. The Company will continue to optimize its incentive model in accordance with its medium- and long-term goals, achieving long-term and normalized equity incentives, thereby motivating existing employees to work more efficiently and produce better results. In addition, it will attract even more outstanding key talents to join the Company, which will contribute to the Company's prolonged and accelerated business growth.

Caring Our Employees

The Company consistently upholds the core value of a people-centric approach, respects employees' personalities, cares about their health, safety and job satisfaction, safeguards employees' legal rights and interests, and is committed to cultivating employees' sense of belonging and identity, thereby achieving mutual growth between the Company and our employees.

Caring For Women

We have set up a nursing room within the office for the convenience of our female employees. We also host a variety of activities every year on International Women's Day.





Mental Care

We conduct active employee mental health counseling, have established a hotline and counseling room for mental health assistance, and routinely host self-evaluations and mental health seminars for employees.



Supporting Our Employees

While focusing on caring for all employees, we also pay special attention to those who are facing difficulties in their lives. The Company has formulated standardized documents such as the "Employee Assistance Program" to support employees who are facing difficulties. The labor union of the Company regularly pays attention to the living conditions of employees, listens to their needs and concerns, and provides assistance accordingly. For employees who are hospitalized due to illness or injury, the Company also initiates home visits to provide support and offers financial assistance in the form of aid funds.



We continued promoting corporate culture and strengthening team cohesion throughout the reporting period. In May 2022, the "PharmaBlock Cup" basketball league was played. Participants exemplified PharmaBlock's entrepreneurial ethos of tenacity. In June 2022, as part of the Parent-Child Activity Day, the "Science Experiment Show" was held, inspiring future scientists to investigate the sciences and encouraging their exploration of the unknown.

Furthermore, we organized a number of activities and events, such as a handcrafted fan activity for International Women's Day and the Spring Photography Contest, which fostered employees' sense of belonging within the Company's culture.

Moreover, we have sports clubs such as badminton, table tennis, billiards, basketball, and yoga. Regular events and competitions take place in these clubs to enrich employees' leisure time and enhance their physical fitness.

Cultural Development Activities



Children's Day Activities



Children's Day Activities



The "PharmaBlock Cup" basketball league



Running Activities



Mid-Autumn Festival Activities



Women's Day Celebrations



Spring Festival Fair



Spring Photography Contest



Team Building Activities

Employee Training

We have established management systems such as the "Training Management System" and the "Management Measures for R&D Personnel to Pursue Graduate Studies While Working". Every year we also develop a detailed "Annual Training Plan" to further improve our training and management system. We combine offline training and online learning platforms to conduct training covering professional disciplines including product quality, R&D innovation, EHS, and information security. These activities help employees improve their professional skills and overall qualities, provide opportunities for sustainable growth, and advance their careers.



Types of Training	Summary
Management Training	Combining online and offline learning, self-study and centralized learning, as well as theory and practice, we conduct training activities such as "Management Growth Camp" and "Monthly Management Talk" to strengthen the foundation of management theory, expand the horizons and scope of management personnel, and improve their overall quality and competency.
Knowledge and Skills Training	Based on job requirements, each department develops an employee professional competency enhancement plan to help employees improve their theoretical knowledge and work skills.
General Training	General training includes company culture, rules and regulations, career planning, team development, employee care, etc.
New Talent Training Camp	During the reporting period, the Company established a new talent training camp to help employees understand the Company's development process, enterprise culture, rules and regulations, and work procedures, among other fundamental topics, so that they can more quickly integrate into the company culture.



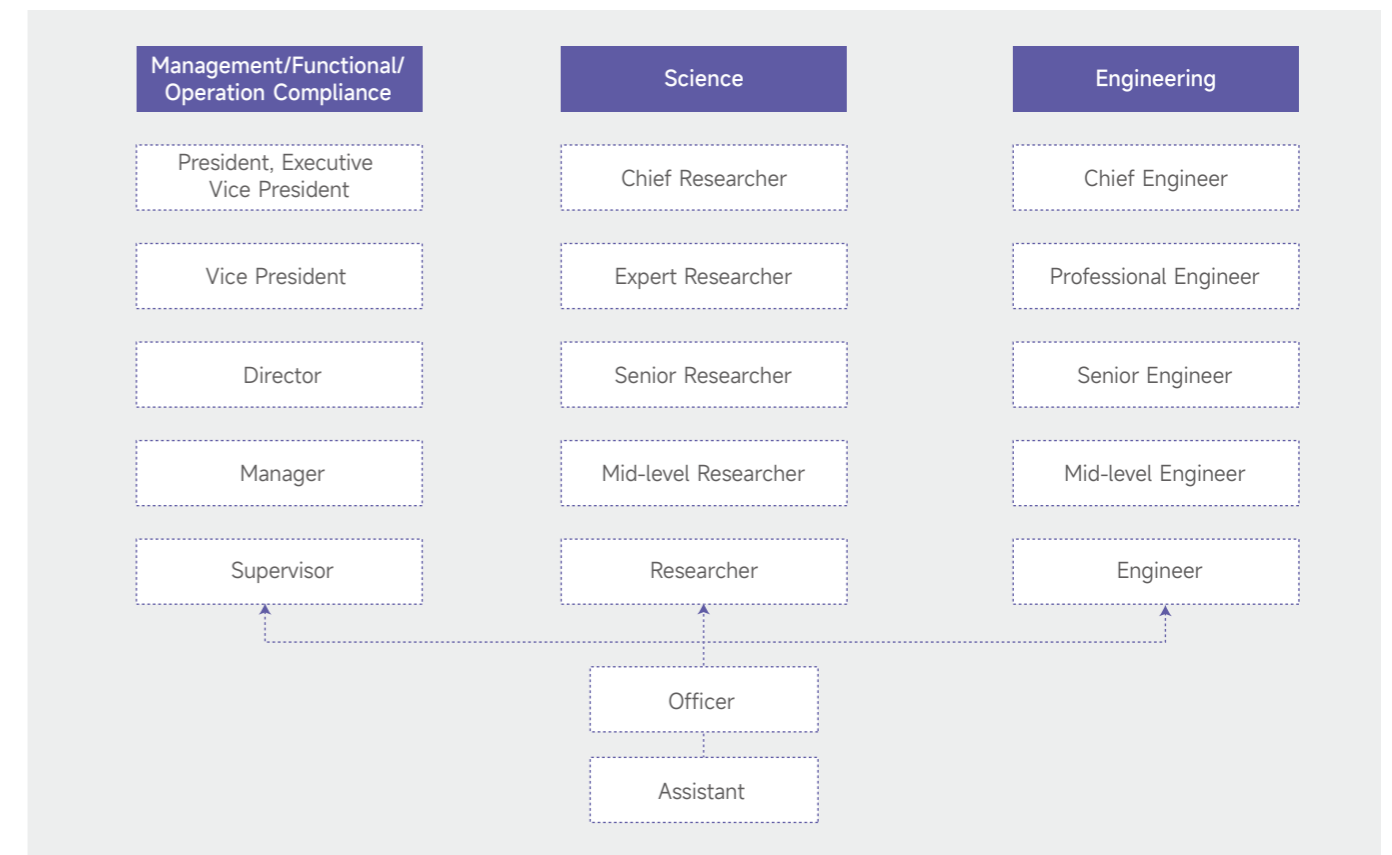
> Employee training



Employee Development

We adhere to the employment philosophy of "employing people to their fullest potential with both virtue and talent" and have developed "Employee Promotion Management Measures" to determine the value of employees based on their abilities and contributions. We incessantly explore the potential of our employees, provide them with a platform to showcase their talents to their fullest extent, and outline their career development paths. In addition, we standardize employee promotion management and implement a rational and scientific talent selection mechanism.

> Promotion Pathway



Health and Safety

We comply stringently with the "three simultaneities" regulatory requirements for occupational disease prevention facilities in construction projects, and prioritize the automation level of equipment in the design of the project to reduce manual operations, and adopt engineering techniques to mitigate occupational exposure risks for employees.

We ensure the occupational health of employees by strictly implementing occupational hazard notification, monitoring of occupational hazard factors at the workplace, individual protection, training and education, occupational health examinations, and other measures in occupational health management.

To reduce occupational hazards at the source, we prioritize the selection of non- or low-toxic raw materials when deciding on a process route. Before launching a project, we undertake hazard identification, evaluate employee occupational exposure risks based on the chemicals and production processes involved, and implement effective occupational disease prevention and control measures until the risks are reduced to an acceptable level.

There was
zero
new cases of
occupational disease
occurred.

> EHS management goals for the Year of 2023

Indicator	Goal
Occupational disease cases	0
Monitoring occupational hazards in the workplace	≥once per year
Coverage rate of occupational health examinations for employees in hazardous positions	100%

> Occupational Health Analysis

Occupational
risk analysis

According to the research and development project, the researchers dripped experimental reagents into a glass reactor for reaction. Some of the reactions required cooling and were cooled with liquid nitrogen. Common reagents included dichloromethane, ethyl acetate, n-heptane, and tetrahydrofuran. After evaluation, it was found that the researchers may be exposed to chemical occupational hazards.

Occupational Health Management

Employees are a valuable asset to our company, and protecting their occupational health is one of our primary responsibilities. PharmaBlock actively carries out the responsibility of enterprise occupational health management and establishes an occupational health management system in accordance with law and regulatory requirements. All three of our sites have obtained third-party certification for their occupational health and safety management systems.



Occupational Health and Safety
Management System Certification

Occupational
preventive
measures

- All experiments are conducted in ventilated conditions
- The hazardous chemical laboratory, which needs to store a small amount of hazardous chemicals used in daily experiments, is equipped with a 24-hour ventilated storage cabinet
- Each exhaust device is equipped with a separate exhaust system
- The appropriate PPE will be issued to employees regularly based on their respective job positions
- To monitor occupational hazards on a regular basis
- To organize employees for occupational disease examinations on a regular basis
- Development of occupational health-related procedures and the creation of occupational health records for employees
- Casual workers receive the same occupational health and safety protections as permanent employees



Safety Standardization Certificate



2021 Excellent Unit for Safety Production in Jiangbei New District



2022 Advanced Collective for Internal Safety and Security Work

Safety Production Management

PharmaBlock implements the principle of "safety first, focusing on prevention, and integrate control", enhances and implements the main responsibility of the Company, and implements the management principles of "dual responsibility of one position", "business overseers must oversee safety", and "management localization". Annually, the Company organizes and signs the work safety target statement of responsibility. From the Company's leaders to frontline employees, target indicators are broken down systematically, and work safety responsibilities are implemented effectively at all levels.

During the reporting period, PharmaBlock established a group EHS management committee, presided over by the chairman of the board, which promoted and oversaw the implementation of EHS work in a comprehensive manner. Additionally, each site established an EHS management committee presided over by the general manager.

The three sites of the Group have established a sound safety management system and obtained corresponding certificates through work safety standardization reviews.

Concept of Safety Production Management

SOURCE CONTROL AND PROCESS MANAGEMENT

The certified rate of special operation worker was **100%**.

More than **50** comprehensive or special work safety inspections was conducted, and the rectification rate was **100%**.

Process Safety Lab

The members of the process safety laboratory team have plenty of evaluation experience and professional expertise acquired over many years. The lab is equipped with industry-leading assessment instruments such as RC1, ARC, and C80. Utilizing methods such as calorimetric analysis and process risk assessment, the team promotes safety at work. Meanwhile, we have developed an independent process safety information database to achieve intelligent management of testing processes and safety data, and to control safety hazards at their source.



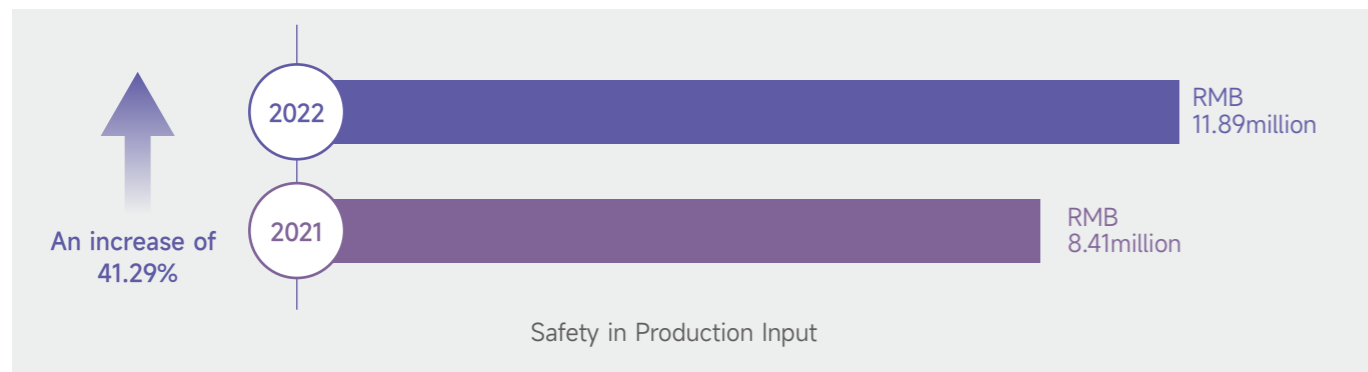
Process safety laboratory certified by CNAS

We pay attention to the daily risk management of hazardous chemicals. Solvents are distributed daily, and storage is minimized and optimized. The minimal storage volume is set to be the 24-hour storage volume to reduce storage risks. For precursor chemicals, explosives and highly toxic chemicals, they are managed directly by the EHS department to ensure clear daily usage and accurate records, and to strictly implement the "five double" management. For individual reagents with inherent hazards, unique systems such as the "Active Reagent Safety Management Procedure" and the "High-Energy Material List" have been compiled and developed from daily management, gradually optimizing the chemical management system and enhancing risk management capabilities.

> Year of 2023 EHS Goals

Indicator	Goal
Coverage rate of safety training for contractors entering the factory	100%
Certified rate of special operation worker	
Completion rate of annual hidden danger investigation plan	
Percentage of implementation of the safety control measures before rectification	≥98%
Annual hidden hazard rectification rate	
Emergency drills at each site	≥twice per year
Number of work-related fatalities	0

PharmaBlock developed the input in *work safety investment plan* for the year of 2022 in accordance with the "Management Procedure for the Set-aside and Use of work safety expenses" during the reporting period. The plan includes specifically safety-related warning signs, maintenance of safety facilities, emergency rescue equipment, etc., to ensure the effective investment of safety production funds and the timely use of funds for safety education, labor protection equipment, and safety production technology measures, as well as related expenses.



> Safety Accident

Indicator	Unit	2021	2022
Number of work-related fatalities	Person	0	0
Work-related fatality rate	%	0	0
Working days lost due to work-related injuries	Days	90	110

PharmaBlock focuses on fostering a culture of safety in the workplace. Every month, the Company organizes activities such as EHS evaluation, EHS knowledge competitions, and EHS training. Additionally, the Company publishes an internal newsletter on process safety and employs safety administrators to manage shared materials on each floor, thereby mitigating laboratory safety risks.

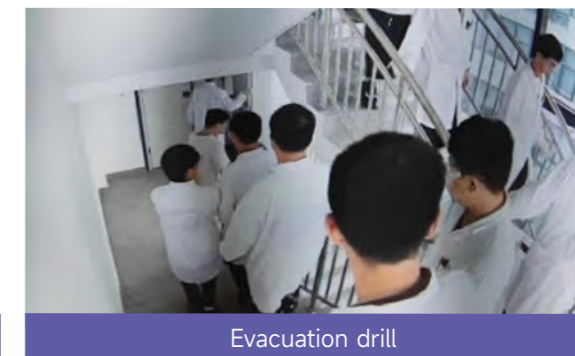
Indicator	Unit	2021	2022
Total hours of safety training	Hours	17,010.50	39,907.50
Safety training hours per capita	Hours/person	9.80	16.05

Fire Safety Drills



During the reporting period, we established a fire emergency response team and implemented the "2022 Fire Emergency Response Team Drill Plan" by defining the roles and responsibilities of team members, thereby improving the Company's ability to respond to fires and other emergencies.

Subsidiary PharmaBlock Zhejiang, in collaboration with multiple departments, conducted 66 fire safety trainings and emergency drills with a total of 721 participants. 100% of employees completed three-level safety training, and 194 individuals received external operations-specific training.



Social and Community

Since the day we were founded, we have been actively involved in public welfare initiatives, including cultural education, rural revitalization, public health, and community welfare. To fulfill our social responsibilities and co-create a harmonious society, we have united forces with a variety of stakeholders.

Key performance

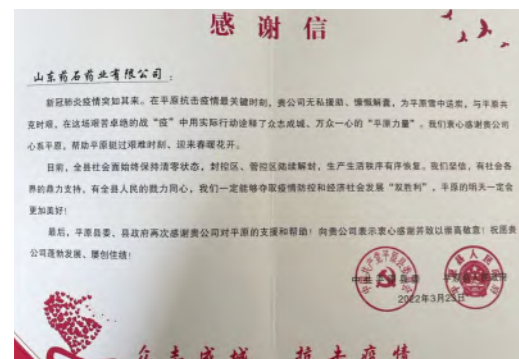
Social welfare investment
RMB 144,000

Education

Chairman of PharmaBlock, Dr.Minmin Yang, is one of the founders and participants of the Nanjing University Gaojiu-Dai Anbang Talent Development Fund. The fund has a scope of RMB 50 million and is committed to promoting the continuous introduction of outstanding domestic and international chemistry and chemical engineering talent to Nanjing University's School of Chemistry and Chemical Engineering. It also seeks to build a world-class discipline at the School of Chemistry and Chemical Engineering of Nanjing University and cultivate the school's own faculty.



Furthermore, we donated RMB 15,000 to Gaibei Elementary School near PharmaBlock Zhejiang to improve the school's hardware facilities and support the development of local education in Shangyu as an act of social responsibility.



Public Health

We mobilized all employees to participate in community public health volunteer activities and donated medical supplies to improve the public health environment as well as safeguard the health and safety of the community.

Rural Revitalization

Under the leadership of Minmin Yang, the Chairman, we actively participated in purchasing agricultural by-products from surrounding impoverished households, providing a total of approximately RMB 50,000 in targeted aid for poverty alleviation throughout the year.



Community Service

PharmaBlock USA, one of our subsidiary companies, actively engages in community service by donating supplies and providing basic necessities to those in need.



Future Outlook

The year of 2023 will be a pivotal year for our company in terms of focusing on business, activating the organization, and significantly enhancing quality and operational efficiency. To stand out in the global pharmaceutical research and manufacturing industry, we must focus on creating value for customers, concentrate our efforts on customer needs, market demands, and industry difficulties and challenges, and make an effort on marketing, production support, system construction, corporate culture, team building, and operational management. Our management team will direct various business units and subsidiaries to concentrate on the following responsibilities.

- ▶ Focusing on customers, expanding and intensifying all-encompassing cooperation with them. We will try to have a deeper understanding of the customer's requirements, ensuring high-quality and efficient delivery and service, and further boosting customer satisfaction.
- ▶ Concentrating on system construction and customer project management. Quality, EHS, and intellectual property protection are the lifeblood of the Company and its partners, adhering to the highest international standards, enhancing all systems comprehensively, and establishing a secure foundation for the Company to continue exploring new business opportunities.
- ▶ Utilizing lean management to enhance operational effectiveness. By increasing business certainty and optimizing management processes from a variety of perspectives, including technology, supply chain, production management, resource utilization, and digital upgrading, we will effectively improve efficiency while controlling costs.
- ▶ Activating organizational construction to provide a stage for more outstanding talents to shine. We will continue to improve talent introduction and training with higher standards, greater efforts, and more practical measures, laying the groundwork for high-quality development through talent.
- ▶ Promoting environmentally friendly pharmaceutical manufacturing and maximizing the Company's innovative low-carbon technology capabilities, the Company will continue actively investigating safer, more eco-friendly, and more efficient process development and production models, as well as engaging in corporate social responsibility.

Appendix I: Performance Tables

Corporate Governance				
	Index	Unit	2021	2022
	Total cash dividends	RMB 10,000	1,997	1,997
	Tax expenses	RMB 10,000	6,285.29	4,281.61
	Number of training on risk management and anti-corruption	Times	—	24
	Number of participants in training on risk management and anti-corruption	People	—	777
	Number of hours of training on Risk Management and Anti-Corruption	Hours	—	12

Industry Value				
	Index	Unit	2021	2022
Innovative R&D	R&D investment	RMB 10,000	11,402.39	16,832.36
	R&D investment as a percentage of operating revenue	%	9.49	10.56
	Patents	Item	103	122
	Number of core technical staff	People	—	1,164
	Number of R&D staff	People	—	1,508
	Number of R&D personnel as a percentage	%	—	60.64
By Gender	Male	Number	—	1,070
	Female	Number	—	438
By Age	Under 30 years old	Number	—	1,047
	30-40 years old	Number	—	403
	Over 40 years old	Number	—	58
By Education Level	Undergraduate	Number	—	823
	Master	Number	—	465
	Doctor	Number	—	86
	Other	Number	—	134
Quality Assurance				
Customer Service	Customer complaint cases	Pieces	12	6
Sustainable Supply Chain Management	Number of suppliers	Suppliers	—	5,909
	Domestic suppliers	Number	—	5,299
By Region	Overseas suppliers	Number	—	610
	Percentage of spending on purchases from local suppliers	%	—	28.60
	Supplier Audit	Number	—	75

By Region	Number of ESG training for suppliers	Times	—	132
	Supplier ESG training hours	Hours	—	180

Green Development				
	Index	Unit	2021	2022
Environmental Protection	Environmental protection costs	RMB 10,000	—	5,902.73
	Environmental protection input for capacity enhancement	RMB 10,000	—	2,946.33
Energy Management				
Energy Type	Natural Gas	10,000 m ³	—	18.28
	Steam	GJ	—	105,802.50
	Electricity	10,000 KW·h	—	5,374.28
Energy Consumption	Total energy consumption	Ton of standard coal	—	10,458.09
	Energy consumption intensity	Ton of standard coal/RMB 10,000	—	0.07
Greenhouse Gas Emissions	GHG Scope 1 emissions	tCO ₂ e	—	395.25
	GHG Scope 2 emissions	tCO ₂ e	—	49,446.33
	Total GHG emissions	tCO ₂ e	—	49,841.58
	GHG emission intensity	tCO ₂ e/RMB 10,000	—	0.31
Resource Utilization	Water consumption	Ton	—	422,900
	Water consumption intensity	Ton/RMB 10,000	—	2.65
	Total amount of packaging materials required for finished products	kg	—	111,722
	Amount of packaging materials required for finished products per unit of revenue	kg/RMB 1,000	—	0.07
Pollution Prevention				
Exhaust Gas	VOCs	Ton	—	9.47
	Total exhaust emissions	10,000 m ³	—	333,903.56
	Exhaust emission intensity	10,000 m ³ /RMB 10,000	—	2.09
Wastewater	COD	Ton	—	14.14
	Ammonia nitrogen	Ton	—	0.83
	Total wastewater discharge	Ton	—	234,734
	Wastewater discharge intensity	Ton/RMB 10,000	—	1.47

Solid Waste	Total general waste	kg	—	350,000
	Total hazardous waste	kg	—	10,020,000
	Total solid waste	kg	—	10,370,000
	Hazardous waste generation per unit of revenue	kg/RMB 10,000	—	62.83
	Solid waste generation per unit of revenue	kg/RMB 10,000	—	65.03

Social Responsibility

	Index	Unit	2021	2022
Employee Rights	Total number of employees	People	1,735	2,487
	Number of employees with disabilities	People	5	5
	Number of ethnic minority employees	People	46	69
	Number of foreign employees	People	14	49
By Gender	Male employees	Number	1,236	1,781
	Female employees	Number	499	706
By Rank	Senior management employees	Number	16	18
	Mid-level management employees	Number	110	229
	General employees	Number	1,609	2,240
By Specialty	Production personnel	Number	446	561
	Sales personnel	Number	36	53
	Technical personnel	Number	959	1,508
	Finance personnel	Number	21	25
	Administrative personnel	Number	145	162
	Others	Number	128	178
By Age	Under 30 years old (not including 30 years old)	Number	704	1,258
	30-40 years old (including 30 years old,excluding 40 years old)	Number	768	923
	40-50 years old (including 40 years old,excluding 50 years old)	Number	208	226
	50-60 years old (including 50 years old,excluding 60 years old)	Number	52	77
	60 years old and above	Number	3	3
By Education Level	PhD	Number	93	107
	Master	Number	405	543
	Undergraduate	Number	644	1,090
	College	Number	593	747
Employee Recruitment	Total number of new entrants	Number	928	1,288
By Gender	Entry-level male employees	Number	686	974
	Entry-level female employees	Number	242	314

Employee Retention	Total number of resigned employees	People	377	513
By Gender	Male resigned employees	Number	307	412
	Female resigned employees	Number	70	101
Employee Turnover Rate	Total employee turnover rate	%	22.29	16.97
By Gender	Male employees	%	24.86	18.64
	Female employees	%	15.35	12.42
By Age	Under 30 years old (excluding 30 years old)	%	23.15	19.86
	30-50 years old (including 30 years old, not including 50 years old)	%	22.60	13.23
	50 years old and above	%	5.77	17.65
Compensation and Benefits	Employee satisfaction rate	%	95.2	96.65
	Number of paid annual leave days per capita	Days	4.80	5.10
	Basic welfare expenses	RMB 10,000	6,318.39	9,642.4
Training and Development	Employee training inputs	RMB 10,000	—	79.52
	Number of training sessions	Time	—	2,056
	Total training attendance	Number	—	89,532
	Total training hours	Hours	—	174,090
	Training hours per capita	Hours/person	—	70
Safety in Production	Safety in production input	RMB 10,000	841.3	1,188.69
	Work-related fatalities	Number	0	0
	Work-related death rate	%	0	0
	Number of working days lost due to work-related injuries	Days	90	110
	Total hours of safety training	Hours	17,010.50	39,907.50
	Safety training hours per capita	Hours/Number	9.80	16.05
Social and Community	Social welfare investment	RMB 10,000	—	14.4

Appendix II: Index

Report Sections	GRI Standards	CASS-ESG 5.0	
About the Report	2-2, 2-3	P1.2-P1.3	
2022 Key Performance	—	A2	
About PharmaBlock	2-1, 2-6	P4.1-4.3	
ESG Management	2-12, 2-14, 2-29, 3-1, 3-2, 3-3	G3.5-3.6	
Topic Spotlight: Technological Innovation for Green Chemistry	201-1	E1.8, V2.1, V2.4	
Topic Spotlight: Intelligent Construction for Digital Transformation	203-2	S4.1, S5.1, V2.4	
1. Corporate Governance	Governance of "Three Meetings"	2-9, 2-27, 405-1	G1.1-1.2
	Investor Relations Management	2-27, 203-2	G3.6
	Risk Control and Management	2-27, 207-2	G1.3-1.4
	Business Ethics	2-27, 205-2, 206-1	G1.5-1.8
2. Industrial Value	Innovative Research and Development	201-1	V2.1-2.5, V2.8, S4.6
	Quality Assurance	2-27, 414-1	S4.1
	Customer Services	201-1	S4.3-4.5, S4.7-4.8
	Sustainable Supply Chain Management	204-1, 308-1, 401-1	S5.1-5.3, S5.6-5.7
3. Green and Sustainable Development	Environmental Protection	2-27	E1.1-1.7
	Energy Management	302-1, 302-3, 302-4, 305-1, 305-2, 305-4	E2.1-2.3, E2.14, E5.4-5.6
	Resource Utilization	301-1, 303-3	E2.6-2.7, E2.9-2.11
	Pollution Prevention and Control	2-27, 303-2, 303-4, 305-7, 306-2, 306-3	E3.1-3.9
4. Social Responsibility	Employees' Rights	2-7, 2-27, 401-1, 401-2, 401-3, 404-1, 404-2, 405-1	S1.1-1.11, S2.1-2.4
	Health and Safety	403-1, 403-2, 403-5, 403-6, 403-7, 403-8, 403-9	S3.1-3.12
	Social and Community	413-1	V3.4, V3.6-3.7
Future Outlook	—	A1	
Appendix I: Performance Tables	—	A2	
Appendix II: Index	—	A4	
Appendix III: Feedback Form	—	A5	

Appendix III: Feedback Form

Dear Readers:

Thank you very much for taking time to read this report. In order to provide more valuable ESG information to you and other stakeholders, please assist us in completing the feedback form and giving us feedback through the following channels to help us further improve our ESG management capabilities.

E-mail: PB-Securities@PharmaBlock.com

Address: No.81, Huasheng Road, Jiangbei New District, Nanjing

1. Which of the following stakeholder categories do you belong to

- Shareholders & Investors Government & Regulators Employees
 Customers & Partners Suppliers Community & Public Others _____

2. Your overall assessment of this year's ESG report

- Excellent Good Average Below average Poor

3. What do you think of this report

- Information Disclosure: Excellent Good Average Below average Poor
- Layout design: Excellent Good Average Below average Poor
- Readability: Excellent Good Average Below average Poor

4. Which issues are of most concern to you? (Choose 3)

- Governance Issues:
 - ESG Governance Governance Structure Investor Relationship Management
 - Business Ethics and Anti-Corruption Compliant operation
- Social Issues :
 - Digital Construction R&D and Innovation Industry Development and Win-Win Cooperation
 - Privacy & Data Security Product & Service Quality Customer Service Supply Chain Management
 - Diversity & Equality Talent Acquisition & Retention Employee Rights & Benefits Employee Training & Development
 - Occupational Health & Safety Intellectual Property Protection Social Welfare
- Environmental Issues:
 - Green Chemistry Addressing Climate Change Environmental Management Energy saving technology
 - Resource Utilization Emissions Management

5. Is all the information you are concerned about reflected in this year's ESG report?

- Yes No (What other information would you like to see _____)

6. Do you have any other comments or suggestions regarding our ESG report or ESG work and sustainability management?

PharmaBlock