康龙化成
PHARMARON

(a joint stock company incorporated in the People's Republic of China with limited liability)
Stock Code: 3759

# 2021

# Environmental, Social and Governance Report

Pharmaron Beijing Co., Ltd. *

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## ESG Governance



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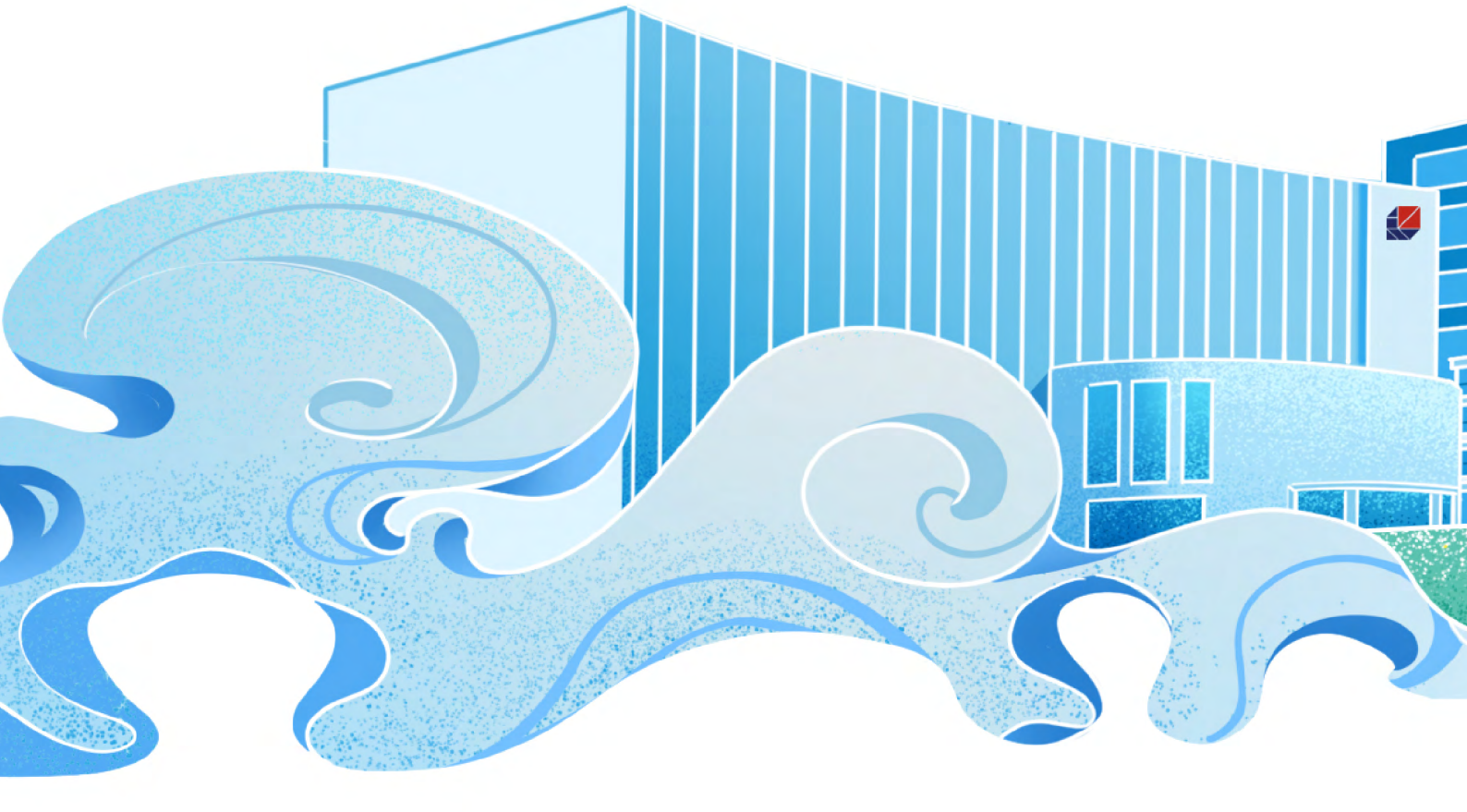
## Environmentally Sustainable and Low-Carbon Operations





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# About This Report

## Reporting Cycle

This report is the third ESG report issued by Pharmaron Beijing Co., Ltd. and covers data from January 1 to December 31, 2021, with certain data from previous years included where relevant.

## Reporting Scope

The contents of this report relate to Pharmaron Beijing Co., Ltd. and its important subsidiaries. The references “Pharmaron”, “the Group”, “the Company”, or “we” are also used in this report for convenience.

## Reporting Guidelines

This report has been prepared in accordance with the *Environmental, Social and Governance Reporting Guide* (the “*ESG Reporting Guide*”) issued by Hong Kong Exchanges and Clearing Limited (“HKEX”), with reference to the *Guidelines for Corporate Social Responsibility of Shenzhen Stock Exchange Listed Companies* issued by the Shenzhen Stock Exchange (SZSE), the *GRI Standards* issued by the Global Sustainability Standards Board (GSSB), and the Key Issues of the MSCI ESG Ratings.

## ESG Reporting Principles

### Materiality

This report follows the HKEX materiality principle to disclose the review of ESG issues by the Board of Directors and the ESG Working Group, the stakeholder engagement, the process of identifying material issues, and the materiality matrix. For detailed information, please refer to the corresponding sections below.

### Quantitative

The statistical standards, methodologies, assumptions and/or calculation tools for the quantitative Key Performance Indicators (KPIs) in this report, along with the sources of conversion factors used, are disclosed in the “notes” below the indicator tables.

### Balance

This report presents the Group's performance during the reporting period in an impartial manner to avoid choices, omissions, or presentation formats that may unduly influence the decisions or judgments of readers of the report.

### Consistency

The statistical methods used for the data disclosed in this report are consistent.

## References

| References in the report | Standing for |
|---|---|
| the Group, we | The Company and its subsidiaries |
| Pharmaron, the Company | Pharmaron Beijing Co., Ltd. |
| Pharmaron Xi'an | Pharmaron Xi'an Co., Ltd. |
| Pharmaron Tianjin | Pharmaron (Tianjin) Process Development and Manufacturing Co., Ltd. |
| Pharmaron Ningbo Tech | Pharmaron (Ningbo) Technology Development Co., Ltd. |
| Pharmaron Shanghai | Pharmaron Shanghai Co., Ltd. |
| Pharmaron Shaoxing | Pharmaron Shaoxing Co., Ltd. |
| Pharmaron Clinical Services | Pharmaron (Chengdu) Clinical Services Co., Ltd. |
| Pharmaron UK | Pharmaron UK Limited |
| Pharmaron Biologics UK | Pharmaron Biologics (UK) Ltd. |

## Reporting Currency

Unless otherwise specified, all references to monetary amounts in this report are in RMB (*yuan*).

# ESG Governance Statement from the Board

The Board of Directors of the Group places significant emphasis on sustainability and ESG management and has built an effective three-tiered ESG governance structure with clear responsibilities to support the sustainability and ESG management. The board identifies, evaluates, and manages ESG issues that are highly relevant to the Group's businesses and regularly receives reports from its committees and members of the executive management team. The board reviews the Group's ESG report annually and monitors the progress on implementing ESG-related goals. The ESG Executive Committee under the Strategy Committee is responsible for identifying major ESG issues and risks, developing ESG-related goals, formulating and updating ESG management strategies, and reporting to the Strategy Committee.

This report aims to provide updates on the Group's ESG-related progress and achievements in 2021. It was reviewed and approved by the board before publication. The board and all the directors of the Group guarantee that the information in this report does not contain false records, misleading statements, or omission of material facts, and they assume individual and collective accountability for the authenticity, accuracy, and completeness of its contents.

# A Message from Our Chairman

2021 was a challenging year as the global COVID-19 pandemic continued. 2021 was also a year of hope, as vaccines and drugs to treat COVID-19 emerged and became available with the development of science and technology, which enabled the world to fight the pandemic in a more efficient and powerful way. This new year has both opportunities and challenges. Our team continues to be guided by our mission "to support our partners' success in discovery, development and commercialization of innovative medicines" which is cemented by our competitive edge—our fully integrated end-to-end clinical service platform. Through the provision of our integrated drug R&D services, we helped our customers reduce the timelines and costs of their R&D projects that are making unique contributions to improving human life and health.

Solid ESG management is crucial to our business sustainability and is also the keystone of ESG implementation. We are committed to continuously improve our ESG governance and management systems and integrate ESG governance into the overall corporate governance and operations. We are improving our ESG performance via reforming the policies and systems, initiating special actions, increasing operational transparency, etc.

- We built a three-tiered ESG governance structure that comprised the three levels of "governance, management, and implementation." We delegated responsibilities to each level, department and individual employee. We have set up an effective ESG governance structure with clear responsibilities to ensure the effective implementation of our ESG strategies.

- We issued and implemented the ESG Management Measures and the ESG Information Management Handbook to formalize and optimize ESG management.

- We continued to place a heightened emphasis on closely monitoring our interactions with the stakeholders. We assessed the materiality of the ESG issues through ongoing communication with our stakeholders, which included questionnaire surveys and interviews. These results assisted in our responsibility management, strategic decision-making and disclosure strategies. We actively responded to stakeholder concerns and improved management system to meet the stakeholder's expectations.

- We continuously improved the compliance management system. We identified, prevented and mitigated compliance risks that focused on anti-corruption and other core areas while developing robust whistleblower and investigation procedures to ensure our business' sustainable growth.

We understand the prospect of a business is associated with the sustainable development of the society. As a corporate citizen, we should assume our due responsibilities and obligations. With a commitment to business sustainability, we also undertake our social responsibilities on a deeper and broader scale to serve the interests of the society, environment, employees, customers, supply chain, etc.

- We provide our customers with high-quality, high value-added services and novel solutions. Our quality assurance system seamlessly manages the entire product lifecycle from customer acceptance through raw material procurement, R&D service execution, and quality inspection onto R&D product delivery and more; our complete set of information security management strategies served to protect information security and ensure the confidentiality, integrity, and availability of the information assets; our five-level intellectual property rights (IPR) protection system consisting of "Management Safeguard, Policy Safeguard, Legal Document Safeguard, Training Safeguard, and Technical Safeguard" was effective in delivering reinforced IPR protection.

- We abided by ethical norms in all research activities and experiments. We used a number of management policies and operational norms to regulate preclinical animal testing and ensure physiological, environmental, hygienic, psychological and behavioral welfare of the laboratory animals and provided professional clinical research services. We consistently

implement the risk management system throughout the lifecycle of the clinical trial projects. In this process, we safeguarded the rights and safety of the subjects and delivered high-quality clinical trials.

- We remained committed to the "Honesty, Credibility, Mutual Benefit and Win-Win" principles when engaging with our suppliers. We managed and controlled environmental and social risks in the supply chain relating to core issues, such as business integrity, business information security, supply chain labor rights, and supply chain environmental protection. We implemented transparent procurement to maintain a fair environment for our prospective suppliers.

- Our sustainable growth is built on the values created by our employees. We set up a talent empowerment platform that fostered cooperation and sharing. We encouraged our employees to adopt new technologies and new methods, adapt to new demands and the ever-changing environment and to stay positive when tackling challenges. We have created an inclusive and equal work environment and a warm home for employees to allow our teams to thrive.

- "Green" and "low carbon" have remained the keywords along our development. In 2020, we achieved the five-year environmental targets we set in 2016, reducing the water consumption and the energy consumption per RMB10,000 of output value by 25% and 20% respectively compared with 2016, which showed solid results in energy savings and emissions reduction. In 2021, we further developed the 2021-2025 Environmental Targets based on the characteristics of our industry and the development landscape. The targets are applicable to all operating sites and align with the United Nations (UN)'s advocacy for climate action, as well as the peak carbon emissions and carbon neutrality targets of the countries where we operate. We will continuously shape our targets into daily operations and take concrete actions to achieve progress in our environmental management system, resource savings, waste & pollutant reduction, and upgrades to create green facilities. Moreover, we will consistently discover new solutions to transition the Group to a "Green Growth Path" by promoting green chemistry practices while building more suitable and efficient processes to reduce waste and pollutants.

The research and development of new drugs is fundamental to human health and wellness. In the coming year, we will, as always, treasure safety, regard science and life with reverence and fulfill our responsibilities for all stakeholders including the society, environment, investors/shareholders, employees, customers, supply chain, etc. We will follow our ESG commitments to being green, sustainable and transparent as well as strive to continuously improve economic, environmental and social sustainability.

Pharmaron Beijing Co., Ltd.

Dr. Lou Boliang

Chairman and Chief Executive Officer

# About Us

## Group Profile

Pharmaron (Stock Code: 300759.SZ/3759.HK) is a premier R&D service provider for the life sciences industry. Founded in 2004, Pharmaron has invested in its people and facilities and established end-to-end drug R&D and manufacture service solutions focusing on multiple therapeutic modalities in small molecules, biologics and CGT products throughout drug discovery, preclinical and clinical development processes. Pharmaron has established excellent corporation with its partners in North America, Europe, Japan and China through the high-quality solutions delivered by about 15,000 employees in China, the U.S. and the U.K.

## Awards and Recognitions


The editorial board of the authoritative pharmaceutical journal Progress in Pharmaceutical Sciences, China Biopharmaceutical Industry Chain Alliance for Innovation and Transformation, Pharmedcafe, United Pharmacodia Database, China Industrial Securities


Hong Kong Ta Kung Wen Wei Media Group


Hong Kong Ta Kung Wen Wei Media Group


Frost & Sullivan, Leadleo


Association of Chartered Certified Accountants (ACCA)


Top 100 Hong Kong Listed Companies Research Centre (Top100HKLCRC)

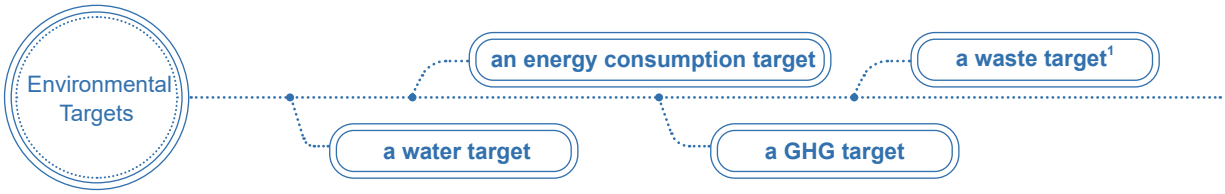

Top100HKLCRC


Top100HKLCRC


Top100HKLCRC

# ESG Performance Highlight

The Group set the 2025 Environmental Targets,




By December 31, 2021,

The Group had

**14,923** employees

with female employees accounting for

**52.47%**

During the reporting period,

The Group hosted

**2,621** training sessions

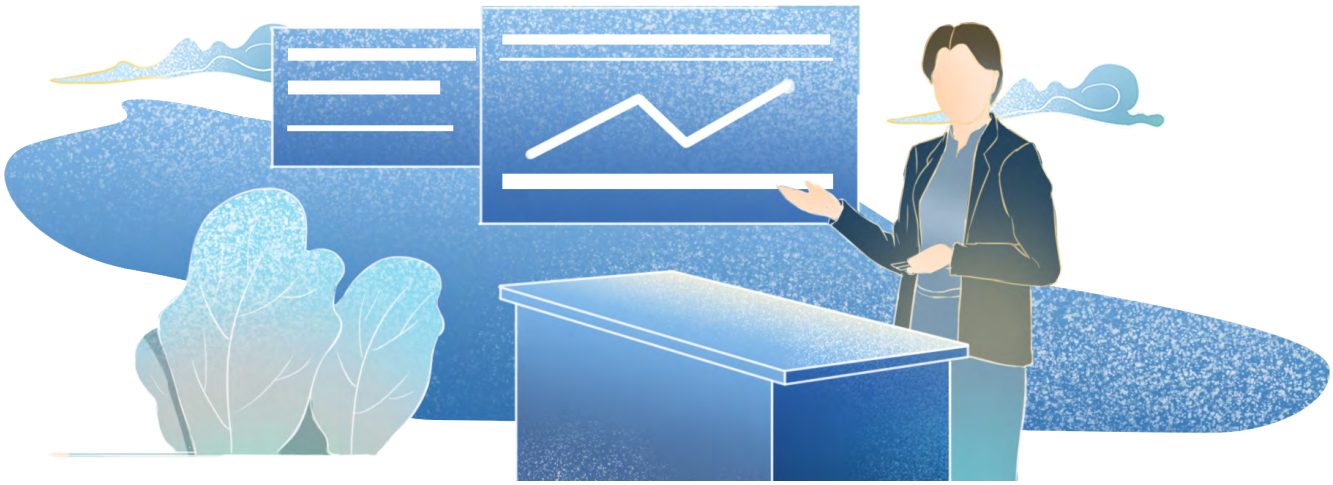
recording

**943,116.50** hours of total employee training time

The Group made contributions and donations to Beijing Yicheng Cooperative Development Foundation and Zhaoqing Rural Development and Alxa SEE (Society of Entrepreneurs and Ecology) projects,

totaling RMB

**4** million



[1] For details of the targets, please refer to “Developing Environmental Targets” in “5.1 Environmental Management” of this report.

# 01

# ESG Governance

Effective ESG governance is vital for building a robust business, both at present and into the future, in the face of complex change and challenges such as climate change and public health and safety emergencies. We have built an evolving ESG governance structure and continuously integrate ESG oversight and management responsibilities into corporate governance. We carefully manage environmental and social related risks and continue to enhance communication with our stakeholders to improve ESG governance and build a sustainable business.

# ESG Philosophy and Structure

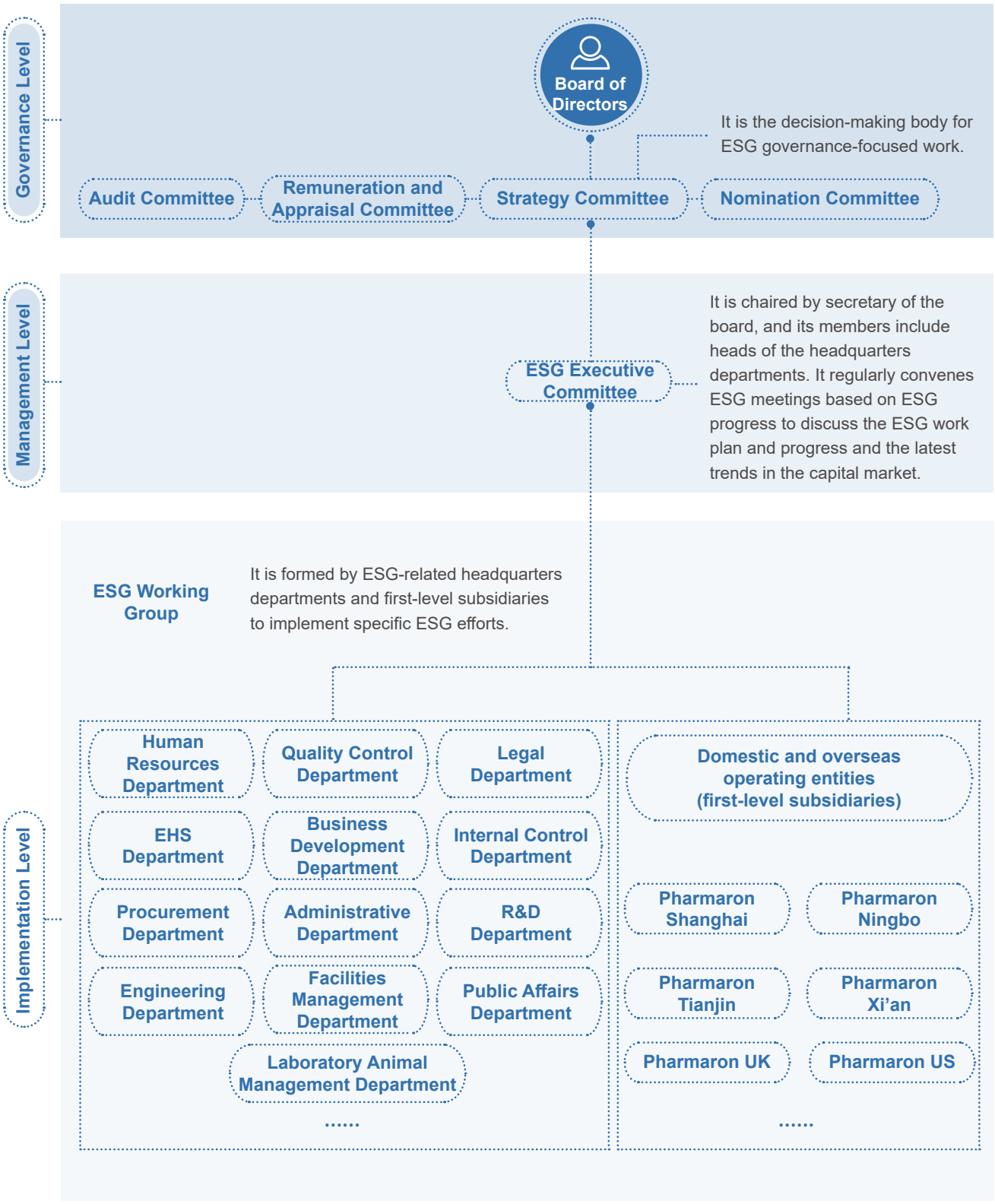
We believe that a company's sustainable development should take both economic activities and corporate social responsibilities into consideration. As we understand the importance of strong ESG governance in driving sustainable business growth, we passed the *Proposal on Developing ESG Control Objectives and Management Measures*, the *ESG Management Measures*, and the *ESG Information Management Handbook*, making solid progress in ESG governance and disclosure at the 10th meeting of the second session of the Board of Directors and the second meeting of the second session of the Board of Directors Strategy Committee on April 28, 2021.

## ESG Governance Principles

| | |
|---|---|
| **Strategy** | Integrate ESG governance into the Group's overall development strategy, system desgin and layout to promote economic, social, and environmental sustainability. |
| **Planning** | Plan ESG efforts in an integrated and systematic way with horizontal coordination and vertical alignment. |
| **Classification** | Implement classified management in line with the actual control mode, streamline work processes, build ESG into operations and production activities, and create reasonable and well-functioning ESG governance systems and work procedures. |
| **Progress** | Consolidate the foundation of management and make phased progress in overall and ESG governance in line with the actual situation. |
| **Inclusion** | Embed ESG governance into all operations and management segments and processes, communicate effectively with key stakeholders including investors, government, employees, partners, customers, and the community, and use their input to inform improvements in the decision-making and management of the Group through stakeholder engagement. |

An effective governance structure is key to integrating ESG into our daily operations. We have built an effective ESG governance structure with clear responsibilities to ensure that our ESG strategies can be effectively implemented. We delegate responsibilities to each level, department, and individual employee to improve ESG performance on all fronts. Our ESG governance has a three-tiered structure comprising the "governance, management, and implementation" levels. At the "governance level" are the Board of Directors and the Strategy Committee, the ESG Executive Committee at the "management level" reports to the Strategy Committee, and daily ESG work is assigned to the "implementation level" composed of all departments and first-level subsidiaries.

## ESG governance structure



# ESG Governance Structure and Responsibilities

**Strategy Committee**

- Reviews, monitors and defines the Group's ESG strategy, goals, etc.
- Reviews material ESG issues and the identified risks
- Reviews updates to the Group's ESG governance structure and responsibilities
- Reviews the Group's annual ESG work plan
- Reviews the Group's annual ESG report
- Reviews and approves other important ESG-related matters of the Group

**ESG Executive Committee**

- Identifies major ESG issues and risks, develops ESG goals, formulates and updates ESG-related management systems, and reports to the Strategy Committee
- Allocates ESG goals into annual action items for relevant departments; coordinates and facilitates the implementation of the annual ESG work plan, tracks and reviews the progress towards the ESG goals
- Develops ESG-focused project plans and authorizes the lead departments
- Coordinates and manages the annual ESG report and reports meaningful milestones to the Strategy Committee
- Follows and studies ESG compliance requirements, summarizes ESG capital market performance, and reports to the Strategy Committee

**ESG Working Group**

- Implements the annual ESG work plan and carries out ESG-focused projects
- Implements ESG goals and regularly monitors, discusses, and reports on the achievement of the ESG goals
- Coordinates and facilitates daily ESG implementation
- Collects yearly ESG data and assists in the preparation of the ESG report

# Stakeholder Engagement

We engage in ongoing communication with our stakeholders through multiple channels. When preparing the 2021 ESG report, we distributed questionnaires to collect the needs and expectations of relevant stakeholders such as the government, investors/shareholders, customers, partners, employees, and the community. We developed our management and information disclosure strategy on the basis of the survey results, aiming to facilitate the sustainable development of both our relevant stakeholders and ourselves.


Pharmaron Ningbo hosted an investor open day

| Stakeholders | Relevant parties | Needs and expectations | Channels of communication and response |
|---|---|---|---|
| Government and regulators | China's national ministries, local governments, China Securities Regulatory Commission (SCRC), market supervision, emergency management, ecosystem, tax, customs, etc.; local governments, market supervision, ecosystem, tax, etc. abroad | • Implementing national policies, laws, and regulations<br>• Strengthening local economy<br>• Boosting the pharmaceutical and life sciences industry<br>• Operational transparency and compliance<br>• Corporate citizenship | • Email and telephone<br>• Questionnaire and information filing<br>• Visits and inspections<br>• Information disclosure |
| Investors / shareholders | Investors and institutions making equity or debt investment in the Group | • Returns on investment<br>• Operational compliance<br>• Safe production | • Group announcements<br>• Subject reports<br>• Visits and inspections |
| Customers and partners | Companies, start-ups, research institutions, scientists, entrepreneurs, hospitals, well-known universities, industry associations, etc. related to the pharmaceutical and life sciences industry | • Legal compliance and duty fulfillment<br>• Business integrity<br>• Quality products and services | • Business communication<br>• Customer Satisfaction Survey<br>• Exchanges and seminars |
| Suppliers | Suppliers of raw materials and equipment | • Legal compliance and duty fulfillment<br>• Business integrity | • Business communication<br>• Exchanges and seminars |
| Employees | Group employees | • Rights protection<br>• Occupational health and safety<br>• Compensation and benefits<br>• Career development | • Employee activities<br>• Employee benefits<br>• Information display<br>• Democratic communication<br>• Career development paths |
| Community and the public | Community residents, NGOs, civil societies, media, etc. at operating sites | • Improving community environment<br>• Charitable commitments<br>• Information disclosure and transparency | • Information disclosure on the Group website<br>• Group announcements<br>• Interviews and exchanges<br>• Community activities |

The Group assessed the materiality of the ESG issues to stakeholders and to the Group itself in accordance with the HKEX *ESG Reporting Guide*, with reference to the *Guidelines for Corporate Social Responsibility of Shenzhen Stock Exchange Listed Companies* issued by the SZSE, the *GRI Standards* issued by the GSSB, and the Key Issues of the MSCI ESG Ratings. Our ESG Working Group led the materiality assessment using different methods such as questionnaire survey and interview, and identified the ESG topics into a materiality matrix as shown in the "Pharmaron ESG Materiality Matrix 2021". This report has been built around those prioritized material ESG issues and relevant management work.

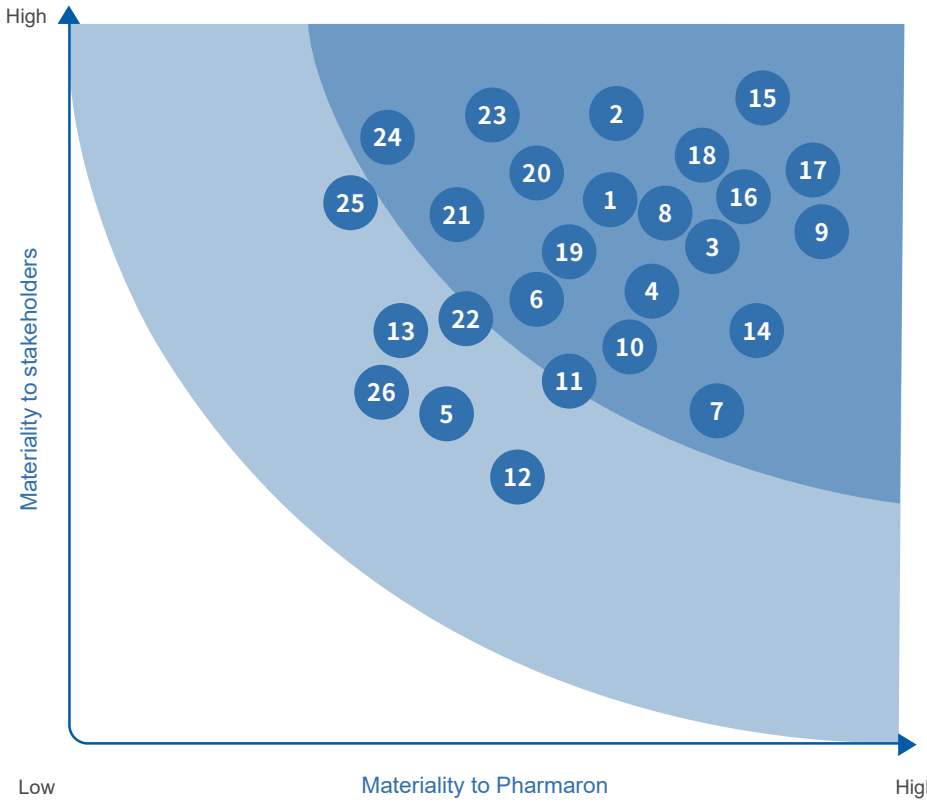
During the reporting period, the Group identified the stakeholders' top concerns in day-to-day work while collecting input from key stakeholders with a questionnaire survey. During the fiscal year, the Group undertook a stakeholder questionnaire survey on material ESG issues. Its results summarized the "Pharmaron ESG Materiality Matrix 2021" outlining issues to be given prominence by the Group, along with a corresponding reporting plan. The issues were ranked by their importance to the stakeholders based on the feedback from regulators, investors/shareholders, employees, customers and potential customers, suppliers, partners, communities and the public, and experts. The issues concerning the stakeholders and senior management through the questionnaire survey have been responded to and disclosed in this ESG report.

The focus areas of the questionnaire are: domestic and international industry policies and standards, peer benchmarking, stakeholder insights, and expert analysis and identification

Collected 292 valid stakeholder questionnaire responses through stakeholder engagement

Formed the materiality matrix by prioritizing ESG issues based on stakeholder responses and expert opinions

## Pharmaron ESG Materiality Matrix 2021




1. Operational compliance
2. Business ethics and anti-corruption
3. Risk management
4. ESG governance
5. Responding to climate change
6. Energy conservation, emissions reduction, and environmental management
7. Green chemistry
8. Occupational health and safety
9. Employee training and development
10. Employee rights and benefits
11. Diversity and equal employment
12. Supplier evaluation, review, and training
13. Supply chain environmental and social risks
14. Fair and green procurement
15. Business information security and privacy protection
16. Intellectual property rights protection
17. Technology and innovation
18. Product and service quality
19. Quality management system
20. Safe production
21. Ethics of clinical trials
22. Animal welfare
23. Anti-corruption oversight management systems and mechanisms
24. Anti-corruption reporting channels
25. Anti-corruption training
26. Community contributions and industry development

# 02

# Ethics and Compliance

We are committed to ethics and compliance, which are essential for carrying out business activities. We operate in a compliant and ethical manner and do our utmost to protect the rights and interests of the customers, partners, subjects, laboratory animals, etc. to demonstrate our social responsibilities.

# Business Integrity

We adhere to all applicable laws, regulations, and policies including the *Criminal Law*, the *Company Law*, the *Anti-Unfair Competition Law*, and the *Pharmaceutical Industry Compliance Management Practices* of China, the *Foreign Corrupt Practices Act* of the U.S., and the *Bribery Act 2010* of the U.K. We have used them as the guidance in formulating the *Anti-Fraud and Whistleblowing Regulations* and the *Code of Ethical Conduct* as our compliance guidelines, along with additional policies such as the *Integrity and Compliance Pledge* and the *Employee Handbook* to improve regulatory compliance. This helps us to effectively prevent and mitigate compliance risks and build a culture of integrity and compliance that drives sustainable business outcomes.

In 2021, there were no legal actions taken against the Group due to corruption or fraud.

**Our Commitment**

Have zero tolerance for bribery and corruption and uphold professional, fair, and ethical conduct in all business activities and relationships at all locations where we operate.

## Continuous Compliance Management Improvement

**Compliance risk identification and prevention**

- Promoted the development of a locally adapted law and regulation identification database at all the departments, branches, and subsidiaries to keep up to date with the latest local laws, regulations, standards, etc. relevant to our business.

**Compliance reporting and investigation mechanism**

- Whistleblower protection: Firmly implemented all applicable laws and regulations and whistleblower protection policies during investigation, such as information provision and testimony, to protect the whistleblowers and people involved in the investigations from retaliation or discrimination.
- Confidentiality of information: Provided an anonymous reporting process and, to the extent permitted by applicable laws, maintained the confidentiality of all communications with the whistleblowers and the reported individuals.
- Reporting obligations: Encouraged employees and related personnel to take the initiative to report conflicts of interest, internal control violations, fraudulent behaviors, etc. that came to their notice.

Total anti-corruption training hours at director level

**2**

Total number of anti-corruption training sessions at director level

**1**

Total number of employee anti-corruption training sessions

**79**

Total employee anti-corruption training hours

**6,508**

Percentage of board members participating in anti-corruption training (%)

**100**

Notes:

1. The Group placed a heightened focus on anti-corruption/fraud training and education in 2021 and developed more diversified online and offline training, furthering supporting employee participation while offering special board-level training to improve anti-corruption and compliance management across the Group.

**Compliance reporting channel**

- Set up an anti-fraud whistleblowing hotline for reporting any actual or suspicious activities of bribery, corruption, fraud or other violations of relevant laws, regulations, or Group policies.

**Compliance training and awareness**

- Provided anti-corruption/fraud and compliance training for the board and senior management to enhance compliance awareness in the managemnt team.
- Promoted mandatory compliance training for employees to ensure that 100% of the employees passed the exam before they started on the job.
- Developed a compliance education courseware and quiz, allowing employees to access the latest compliance knowledge through online and offline training, to enhance their awareness of compliance and self-discipline.

# Business Information Security

It is our responsibility and obligation to protect information security and ensure the proper flow of information. Our *Information Security Management Policy* serves as the guidelines for information security management. In addition, we have imposed the *Information Asset Risk Assessment Management Regulations* to strictly classify and grade the information assets and conduct regular risk assessments; we follow the *Employee Information Security Handbook*, the *Information Security Incident Management Regulations*, the *IT Network and System Security Management Regulations*, the *Daily Operation Safety Management Regulations*, etc. to maintain information security in our office activities; apply the *IT Physical and Environmental Security Management Regulations* to closely control the physical and environmental security of the IT computer rooms, the office areas, and other important areas, which we further tightened by adding access control systems and monitoring systems; stipulate access control requirements regarding the accounts, passwords, user access control, etc. into the IT networks and information systems through the *Information System Access Control Management Regulations*, strictly controlling employee access in the system, regularly auditing privileged accounts, and ensuring the security of access control in key systems. This complete set of regulations constitutes our information security management system and ensures the confidentiality, integrity and availability of our information assets.

## Information Security Management Policy

| | |
|---|---|
| **Information security organization** | Continue to improve the information security framework and strengthen the information security management organization to support the achievement of information security goals. |
| **Personnel safety management** | Effectively administer personnel information security, involving security control throughout employee onboarding, employment, and offboarding and access control of third-party personnel. |
| **Information asset risk management** | Identify and scientifically and effectively classify information assets and conduct risk assessment and mitigation to limit the residual risk of information assets within an acceptable range. |
| **Physical and environmental security management** | Specify physical and environmental security management requirements, adequately protect the information systems, infrastructure, and data, and effectively control the risks caused by illegal physical access, natural disasters, and environmental factors. |
| **Access control management** | Specify access control management requirements to guide and promote the design and application of access control measures throughout network and application system planning, construction, operation, and maintenance. |
| **Information system construction and project safety management** | Independently develop or purchase outsourced information systems in line with the development security guideline of “business first and active prevention” to achieve the information security goals in the information system development and construction process (planning, development, design, testing, launch, etc.). |

| | |
|---|---|
| **Information system security operations management** | Establish the ISO 20000-compliant operations process system, specifying the identification and monitoring of information security risks, the protection, audit, and recovery of information systems, and the management objectives and requirements of related processes, to reduce the risk of unauthorized use or abuse of the information systems and ensure that employees and third-party* personnel operate in a correct and safe manner. |
| **Third-party information security management*** | Manage information security risks of third parties from their entry through the service process onto their exit; effectively control the information security risks introduced by third parties while ensuring they deliver up-to-standard services by imposing legal constraints on security service indicators in the contracts and agreements and implementing process monitoring of the service delivery security indicators, among other measures. |
| **Password security management** | Protect organizational information assets by applying appropriate cryptographic encryption and decryption technologies as aligned with applicable national laws and regulations, policy requirements, business characteristics, and IT development, coupled with the proper and effective use of cryptography, to achieve the security protection target of confidentiality, integrity, and availability. |
| **Legal compliance management** | Establish a hierarchical and systematic information security management system and implementing regular updates and maintenance in step with the latest requirements of national laws and regulations, regulatory agencies, and technological developments to keep the system continuously evolved and adapted. |

* Third parties include all external units that provide support services for the Company (e.g., infrastructure, property services, system development and operations support).

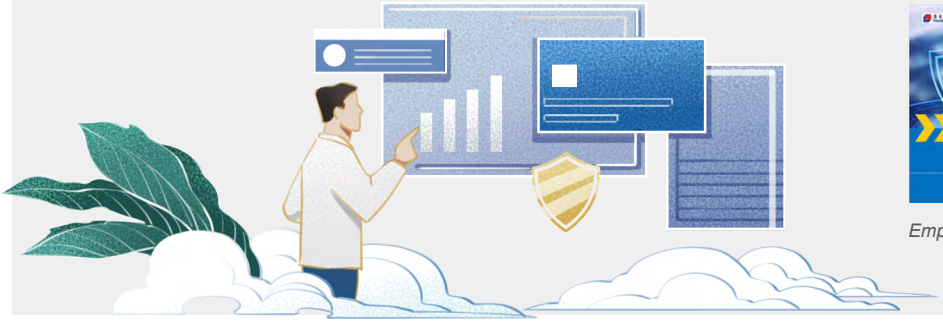
# Employee Information Security Management

Complied with the requirements of the *Employee Handbook* while specifying the responsibilities and obligations of employees in relation to information confidentiality

Implemented the *Employee Information Security Handbook*, regulating employee behavior in terms of computer systems, mobile office equipment, email, anti-virus protection, etc.

Required new employees to complete information security training and pass the exam before starting on the job to continuously build stronger information security awareness among employees

Provided regular Group-wide information security awareness training to acquaint the whole workforce with new standards and knowledge in the field of information security




*Employee Information Security Handbook*

## Case | Obtaining the ISO 27001 information security management system certification

ISO 27001 is a globally recognized international standard for information security published by the International Organization for Standardization (ISO). It sets out the specification for information security management related to software development, system integration, and software and hardware operations and maintenance. ISO 27001 requires companies to adopt internationally benchmarked security management systems and to be able to ensure information security and IT system reliability and stability during operations. Winning high acclaim from the review panel, Pharmaron was successfully certified to ISO 27001 in November 2021, which attested to the Company's outstanding ability to keep information safe for partners and customers.


ISO 27001 Certificate

# Ethics of Clinical Trials

The growing demands for healthcare have brought the ethical issues of medical research into sharper focus. In compliance with a set of principles of medical ethics such as the *World Medical Association Declaration of Helsinki* and relevant laws and regulations of our operating sites such as China's *Good Clinical Practices for Clinical Trials of Drugs* ("*Drug GCP*"), *Good Clinical Practice for Medical Devices* ("*Device GCP*"), and *Personal Information Protection Law of the People's Republic of China*, the *EudraLex* of the EU, and the *Food, Drug and Cosmetics Act* of the U.S., we developed and continuously improved standard operating procedures (SOPs) and work instructions which served as the basis for internal management. We embed risk management throughout the lifecycle of clinical trial projects and use a role-based training matrix to develop strong work ethics among employees and improve their skill sets. We give top priority to the rights and safety of the subjects and build quality into clinical trials to move the healthcare industry forward and make unique contributions to improving human health.

## A Fully Embedded Commitment to Ethics of Clinical Trials

### Protocol design

- Developed a protocol that conformed to clinical trial ethics by following applicable medical ethics principles, guidelines, and legal and regulatory requirements of the operating sites so that the dignity, rights, safety, and health of the subjects were safeguarded.

### Protocol review

- Reviewed the protocol in compliance with internal SOPs and work instructions so that the rights and safety of the subjects were protected.

### Before trial

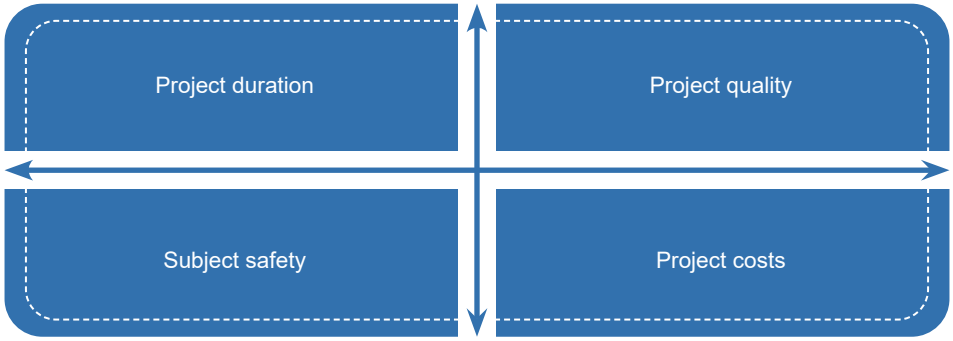
- Submitted the protocol and informed consent form, along with other documents, to the Clinical Trial Ethics Committee and cooperated with the committee's clinical trial ethics review.
- Reviewed and screened the qualifications of research centers and researchers in accordance with the SOPs.
- Developed the annual training plan, setting up courses to match the knowledge and skills needs of relevant personnel and help them upskill.
- Developed a project risk management plan for identifying, evaluating, controlling, communicating, reviewing, and reporting the various risks in the trial process to optimize risk control and clinical trial quality and protect the rights and interests of the subjects.

### During trial

- Verified the compliance of the clinical trial process with applicable regulations and internal management requirements and prompted corrective and preventive actions (CAPA) for identified problems based on internal quality control and audit procedures.
- Provided timely training for relevant personnel as needed in the trial process.
- Reported and handled problems relating to the rights and interests of subjects in accordance with internal requirements.

## Risk Management

| Risk identification | Risk analysis | Risk response | Risk monitoring |
|---|---|---|---|
| Assessed risks that could impact subject safety and/or data quality and regulatory compliance by means of checklists, chart analysis, etc., prior to the trial. | Assessed the likelihood and impact of risks, identified processes where the risks resided, assessed the risk data quality, and implemented classification accordingly. | Addressed risks in a cost-effective manner through appropriate measures of risk avoidance, risk transfer, risk mitigation, risk acceptance, etc. | Monitored identified risks as planned to ensure the effectiveness of management approaches to risk monitoring and risk assessment; continued to identify new risks and reassess existing risks to optimize risk response and make informed updates to the plan. |




Dimensions of risk impact analysis of clinical projects

## Protection of Subject Privacy

- We conduct clinical trials in full compliance with the Personal Information Protection Law of the People's Republic of China. The subjects' personal information includes their name, date of birth, ID number, biometric information, address, phone number, e-mail, health information, whereabouts information, etc. Information that constitutes privacy is sensitive personal information. According to the Personal Information Protection Law, the processing of sensitive personal information requires a specific and necessary purpose and strict protective measures. Prior to the trail, there should also be a Personal Information Protection Impact Assessment, and the relevant individuals must be informed of the necessity for processing such information and how this affects his/her rights or interests. Therefore, the subjects must read and accept the content of the *Informed Consent Form* before enrolling and, after they are on board, sign the Informed Consent Form before the formal trial
- We strictly follow operating procedures as set out in the *Confidential Information of Clinical Trial Subjects*, *Ethical Submission,* etc. during trials
- We apply data anonymity in data processing, omitting information that could identify the subjects' individual identities
- All employees in related fields are required to sign dedicated confidentiality agreements after joining the Company and complete subject privacy-related training to ensure that they operate in compliance with relevant regulations and operating procedures

Case | Improving the training system to match job needs

We have developed a training matrix that accommodates the different roles of clinical trials to match the learning needs of employees in different functions and levels, offering contents in basic laws and regulations, internal management systems, soft skills, etc.

We flexibly combine online training via the E-learning system with offline training to support all-round employee upskilling and deliver high-quality clinical trials.

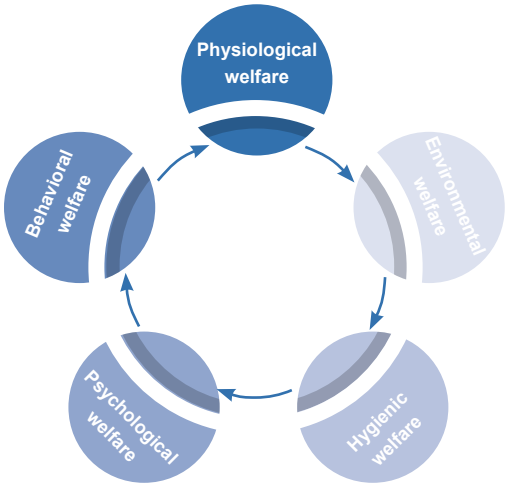
Clinical knowledge training


Objectives of the training matrix

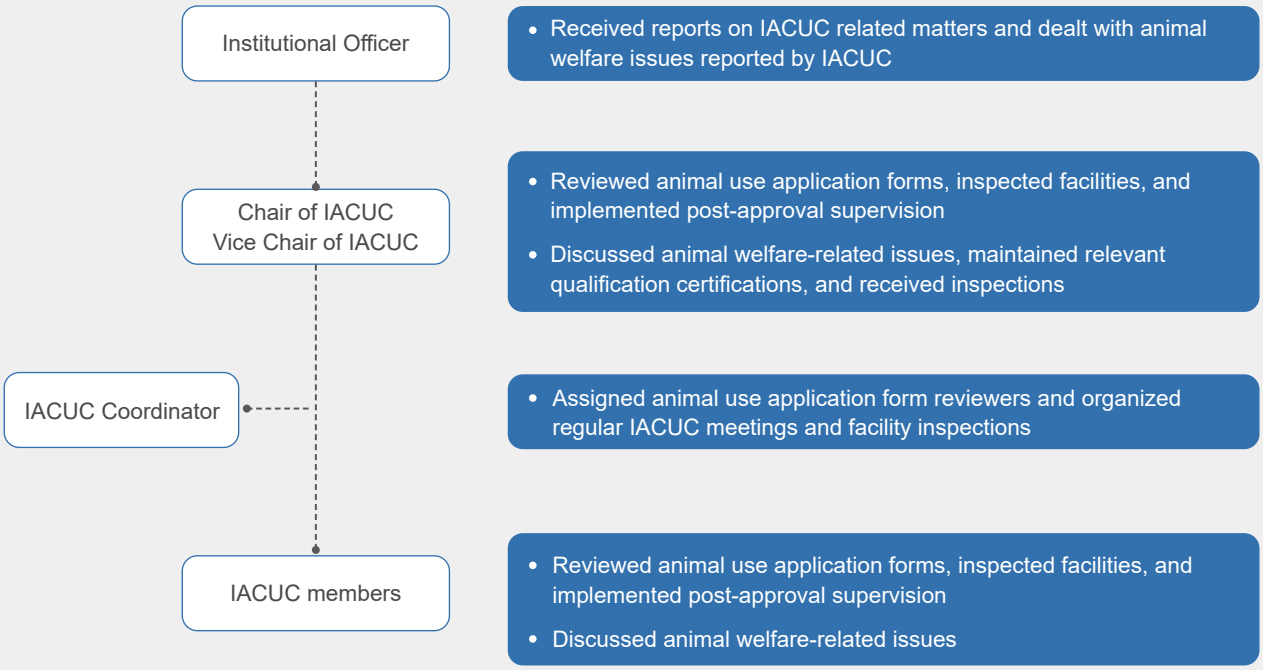
# Animal Welfare

Ensuring the welfare of laboratory animals is our principle and goal in laboratory animal management. We comply with globally recognized standards for animal welfare and ethics and the legal and regulatory requirements of the countries where we operate, including the *Regulation on the Administration of Laboratory Animals* and the *Laboratory Animal – Requirements of Environment and Housing Facilities* of China, the *Animals (Scientific Procedures) Act 1986 (Amended 2012)* of the U.K., and the *Animal Welfare Act* of the U.S., and subject our animal use activities to the review and supervision of the Institutional Animal Care and Use Committee (IACUC). We also have in place policies and procedures, along with professional in-house breeders and veterinarians, to minimize the harm caused to laboratory animals. In doing so, we seek to "serve science" and guarantee the physiological, environmental, hygienic, psychological, and behavioral welfare of the laboratory animals.

During the reporting period, the types of laboratory animals we used mainly included non-human primates, dogs, pigs, rabbits, and rodents. We have obtained licenses including Laboratory Animal Use, AAALAC International accreditation and PHS Animal Welfare Assurance.




The five essential areas we focus on




Organizational chart of the Institutional Animal Care and Use Committee (IACUC)

# Animal Welfare Safeguards

**Personnel credentials**

- Regularly organized training according to internal SOPs for animal feeding and management to standardize the operations throughout all stages of animal feeding and testing and train employees in both humane education and technical skills.
- Ensured that all employees related to animal testing possessed relevant certifications of the operating sites, such as the "Laboratory Animal Practitioner Post Certificate", and were thus "certified to work".

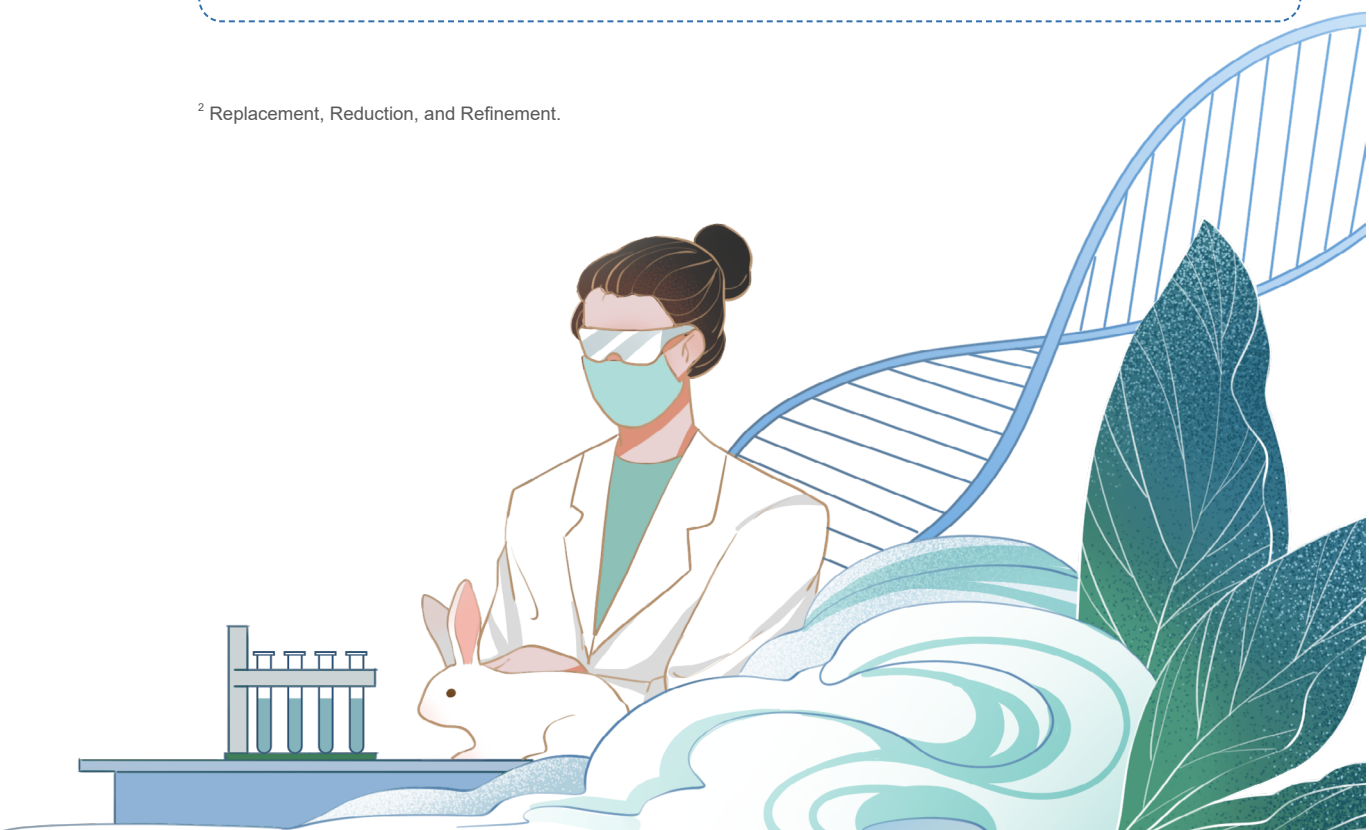
**Animal breeding**

- Regulated the temperature, humidity, ventilation frequency, and other conditions of the breeding environment and reasonably designed the breeding facilities to accommodate the habits of laboratory animals in compliance with the *Laboratory Animal – Requirements of Environment and Housing Facilities* to keep the laboratory animals safe and comfortable.
- Minimized impact on laboratory animals except for necessary activities such as feeding, nursing, and cleaning.
- Enriched the living environment of animals by giving them toys, novel food, and other tools or materials to better accommodate their varied physical, habitual, and sociological needs.

**Animal testing**

- Developed the animal testing protocol in line with the "3Rs"[2] principle. When conditions permitted: used a smaller number of animals to obtain the same amount of testing data or used a certain number of animals to obtain more testing data; used other testing methods instead of animals or used lower animals to achieve the same purpose; avoided or alleviated pain and stress unrelated to the testing purpose caused to the animals in a scientific way by bettering the conditions, treating the animals kindly, and adopting improved testing procedures and techniques.
- Grasped, immobilized, anesthetized, and operated on the animals in full compliance with requirements of internal operating procedures and completed animal testing in a scientific, quick, concise, and accurate manner.

[2] Replacement, Reduction, and Refinement.



# 03

# Responsible Operations

We are committed to maintaining high standards of product quality and safety. We continue to make advances in scientific and technological innovation and R&D to drive greater service efficiency and quality; we continue to improve supplier management and create a fair and transparent business environment. We embed sustainability principles into all aspects of our business operations and deepen cooperation with our stakeholders such as customers and suppliers to strive for enduring business growth.

# Quality Assurance

## Quality Management

High-quality products are the key to the Company's sustainable growth. We observe the WHO *Guidance on Good Data and Record Management Practices* and relevant laws and regulations of the places where we operate, including the *Drug Administration Law* and the *Good Manufacturing Practice (2010 Revision)* of China, the EudraLex and Orange Guide provided by MHRA, and the *Food, Drug and Cosmetics Act* of the U.S. We have used them along with a set of industry principles and international benchmarking to guide the development of relevant company policies, such as the *Quality Manual* and the *Quality Guidelines*. The principles include the *Data Integrity and Compliance with cGMP Guidance for Industry*, the *GXP*[3] *Data Integrity Guidance and Definitions*, the *International Conference on Harmonization*, the *Good Manufacturing Practice Guidance for Active Pharmaceutical Ingredients*, the *ICH Q8 Pharmaceutical Development*, the *ICH Q9 Quality Risk Management*, and the *ICH Q10 Pharmaceutical Quality System*, among others. We work to create a culture of quality and have over the years explored the establishment of a seamless quality management system and comprehensive quality control testing procedures. To add to that, we have well-established laboratories, clear roles and responsibilities, and an effective communication framework. All of those serve to ensure that our products are produced and controlled to the quality standards for their intended use.

In 2021, we passed 75 GMP audits conducted by domestic and foreign pharmaceutical companies, including large international pharmaceutical companies.

## Quality Management System

### Observing regulatory requirements

- Observed applicable laws and regulations issued by the U.S. Food and Drug Administration, the European Medicines Agency, China's National Medical Products Administration, etc. at the operating sites to ensure operational compliance

### Developing quality guidelines and manuals

- Established a full-fledged quality management system and endorsed a culture of quality; delivered products that not only met the final specifications but also followed consistent procedures and conditions every time

### Standardizing procedures and processes

- Developed 300+ SOPs to ensure regulated and standardized operations
- Regulated all the quality-related operations to ensure that the products met key regulatory quality requirements

### Developing worksheets and records

- Collected, analyzed, and reported data generated during the work process and kept records such as forms, notes, and reports on an ongoing basis

[3] Abbreviation for "Good x Practice", for example, good manufacturing practice and good clinical practice.

## Quality Culture

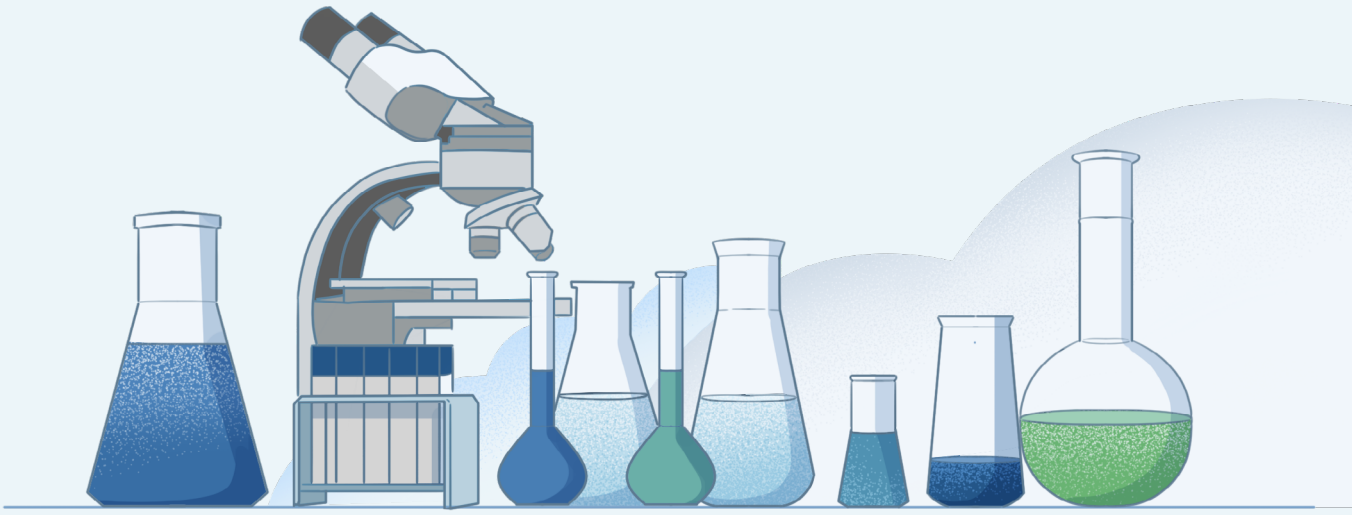
| | | |
|---|---|---|
| Provide customers with high-quality services and high-quality products as a strategic and critical business decision | Top Down / Bottom Up | Quality is everyone's responsibility - Ownership Mindset |
| Create a transparent and trustworthy environment in quality operation | | Individuals work together in daily activities to ensure GMP[4] compliance - Team Effort |
| Cross-functional leadership collaboration with the same quality goals | | Individuals not only follow SOPs, but understand and make them better - Continuous Improvement |
| Build a quality reputation as one of Pharmaron's strengths | | Patient safety centered - Social Responsibility |

## Product Recall and Response

As a drug R&D company, we provide customers with active pharmaceutical ingredients (APIs) and finished drugs for different stages of clinical research based on our presence in different parts of the world. We have strict pre-delivery product testing in place to maintain service and product quality. We implement the *Standard Operating Procedure for Product Recall* to handle recalls of defective products, which standardizes complaint handling to safeguard the common interest of the customers and ourselves and prompt improvements in the quality of our products and services. This helps ensure that future product recalls due to safety problems or serious quality deficiency are conducted in accordance with standard operating requirements.

In 2021, we had zero product recalls. We completed a mock product recall at Pharmaron and Pharmaron UK respectively to familiarize ourselves with the standard product recall procedures.

[4] GMP: Good Manufacturing Practice



# Innovation, Research and Development (R&D)

## Actively Innovating

Innovation is the driving force for our development. With a commitment to technological innovation and R&D, we continue to invest in cultivating and augmenting our R&D capabilities. Through industry R&D exchanges, academic seminars and forums, etc., we keep our academic researchers well informed of the latest developments and technological platforms and inspire workplace innovation and creativity, continuously fostering a culture of "Learning at Pharmaron".

With technology and innovation being core elements of our approach, we continued to increase investment in new technologies during the reporting period. We achieved notable progress in all of our laboratory services including high-throughput experimentation (THE) platform for reaction condition screening, DNA-encoded chemical library technology platform, chemical proteomics platform, multi-electrode array (MEA) platform on basis of human iPSC-derived cardiomyocyte, *in vivo* imaging technology platform, X-ray radiotherapy technology, screening assay platform of 3D spheroid and organoid, etc.

**High-throughput experimentation (HTE) platform for reaction condition screening**

The HTE platform rapidly identifies the best possible reaction condition using 24/48/96-well parallel reactors. Hundreds of conditions can be screened within 24 hours, to provide solutions to challenging reactions. In 2021, state-of-the-art automated HTE equipment was installed, which enabled the automation and miniaturization of the platform and improved the efficiency significantly. More than 220,000 conditions which have optimized nearly 5,000 reactions were screened in the platform in 2021.

**DNA-encoded chemical library technology platform**

In 2021, Pharmaorn's DNA-encoded chemical library technology platform had been fully upgraded. Currently, we have over 10 billion new small molecule drug-like compounds with innovative and unique structures in our collections. Many DNA-encoded chemical probes and DNA-encoded compound libraries were effectively synthesized for diverse clients' projects, and many series of biologically active compounds were successfully discovered using the Pharmaron's DEL libraries selected for screening against many customers' protein targets of interest. We have continuously expanded and optimized the technological capabilities of Pharmaron's DNA-encoded compound library platform by closely tracking and implementing the cutting-edge DEL technologies. We have continuously strengthened the expertise on new technologies by routinely developing new technologies capable of synthesis of DNA-encoded compound libraries, continuously creating novel DELs. We have submitted 9 patent applications to the Chinese Patent Office, and one research paper has also been accepted by a peer reviewed journal.

**Chemical proteomics platform**

The chemical proteomics is a comprehensive platform combining chemical probes with biological activity with proteome analysis, involving multiple disciplines including medicinal chemistry, biology, bioinformatics, pharmacology, and mass spectrometry. It can not only reveal new drug target proteins in a high-throughput manner, but also help discover potential new targets for the existing drugs. It will play the essential roles in preclinical drug development and greatly improve the development efficiency. In 2021, we fully utilized the strength of chemical proteomics platform by screening covalent binder libraries and established the high-throughput workflow to identify the new targets. Additionally, based on a variety of established quantitative proteomics methods, we not only are capable of determining the binding strength of effective drugs to targets in the cellular context, but also have developed the ability to explore the dynamic landscape of targets across times for protein post-translational modifications and level of highly active sites of amino acid.

**Multi-Electrode array (MEA) platform on basis of human iPSC-derived cardiomyocyte**

With the issuing of a guideline titled "Clinical and Nonclinical Evaluation of QT/QTc Interval Prolongation and Proarrhythmic Potential" in section of E14/S7B, by International Conference for Harmonization (ICH), the traditionally one in-vitro cardiac safety index through hERG channel evaluation, has been facing increasing challenges in industry. We have thus upgraded this in vitro cardiac safety evaluation platform by moving in vitro evaluation on single ion channel to the comprehensive cardiomyocyte study. At Pharmaron, we are able to induce the differentiation of human iPSC cells to human cardiomyocytes which is then evaluated for in vitro cardiac safety assessment for potential drugs. The unique feature of this platform allows test articles to be screened on human cardiomyocytes and access to measurement of electrophysiological process of action potentials. Moreover, the drug-evoked cardiac proarrhythmia is also evaluated based on MEA data with high spatial resolution in micrometer and sufficient sampling frequency in millisecond. The achievement of this technique enables our transition from single ion channel assessment to the comprehensive CiPA studies on human cardiomyocytes, in assistance to achieve the short time cycle for cardiac safety screening. Pharmaron, therefore becomes one of very few CRO companies in China owning both high-throughput patch clamp recording system for single ion channel study and MEA system for real time measurement of cardiac action potentials of human samples.

***In Vivo* Imaging Technology Platform**

An image technique is widely used in mechanism based and efficacy evaluation on orthotopic and metastatic tumor models. The *in vivo* imaging system (IVIS) can help monitor the tumor growth in the orthotopic and metastatic models in-life through fluorescent and bioluminescent imaging technology. Currently, we have established 270 luciferase-expressed tumor cell lines and 112 orthotopic or metastatic tumor models, which cover 30 different cancer types and have been widely utilized in new drug research and development. Meanwhile, we have provided service for dozens of clients to evaluate the blood-brain-barrier permeability and antitumor effect of test articles by utilizing 31 orthotopic and metastatic brain tumor models.

**X-ray radiotherapy technology**

X-ray can be widely applied to multiple fields of stem cells and DNA damage, oncology, immunology and drug development. An X-ray irradiator with high energy was introduced in Pharmaron, with power up to 225 KV. With precisely targeted X-ray irradiation, a series of radiotherapy models for different tumors were developed for in vitro and *in vivo* studies. The combined therapy models based on radiotherapy sensitization can evaluate the effect of radiotherapy and chemotherapy on subcutaneous xenograft tumor models, orthotopic and metastasis models. Meanwhile, the related biomarkers of DNA damage response can be well analyzed using *ex-vivo* assays. Pharmaron had provided services to many clients for a large number of radiotherapy and chemotherapy studies *in vivo* and i*n vitro,* which successfully verified mechanism of action and effects of several radiation sensitizers, and provided substantial important data for study of radiotherapy and chemotherapy induced DNA damage mechanism, as well as for precision radiotherapy.

**Screening assay platform of 3D spheroid and organoid**

Compared with traditional technique of 2D cell culture, 3D spheroid as well as the organoid is better in mimicking the complex human *in vivo* conditions that could reduce the variation between in vitro and *in vivo* study systems. Using 3D culture as an in vitro assay model to evaluate the drug efficacy and safety in the preclinical study is more clinically meaningful. In 2021, Pharmaron has already established a well characterized 3D liver spheroid model which has been validated by testing the chronic hepatotoxicity of 42 clinical drugs that have been known and classified with different hepatotoxicity categories, against our 3D liver spheroid model and also primary human hepatocyte. We have analyzed several key biomarkers which indicate the mechanisms of liver injury and provided more insightful data for the drug candidates regarding its mechanism to induce the liver injury.

To further boost our production efficiency and competitive edge in CMC (small molecule CDMO) services, we continued to increase investment in our fluid chemistry technology and biocatalysis technology during the reporting period, delivering steady progress.

**Flow chemistry**

As a revolutionary green pharmaceutical technology, flow chemistry technology can reduce the use of catalyst and solvent, and reduce by-product during process, with high process safety, high product yield, less impurities, less waste discharge and other huge advantages. In 2021, our flow chemistry technology has made great progress. Multi-step continuous reaction technology, continuous extraction and separation technology, online process analysis PAT technology and automatic control system have been established. From process condition screening to DOE design, a comprehensive flow chemistry service platform has been established. A pilot scale automatic control continuous flow system was established with continuous reaction and continuous extraction, with the capacity of manufacturing of tons of products. In 2021, with the help of flow chemistry technology, a total of nearly 100 projects over kilogram scale had been completed. In 2022, we will continue to enhance our flow chemistry capabilities and build large-scale commercial production capacity of flow chemistry.

**Biocatalysis**

Biocatalysis refers to the application of biological enzymes to catalyze chemical reactions. Enzymes are nature occurring catalysts that have higher catalytic efficiency, about $10^7$-$10^{12}$ times higher than the general chemical catalysts. Biocatalysts are non-toxic, low energy consumption, high stereoselectivity, and environment friendly. It is an essential technology for “green chemistry” and “green manufacture”. Since the establishment of the biocatalysis department in 2020, we have produced about 2,000 catalytic enzymes, established the enzyme screening and directed-evolution platforms. We also provided services for our clients to identify high selective enzymes for chiral compound synthesis and production. We are going to clone and produce more biocatalytic enzymes, to optimize the enzyme screening and evolution platforms, to build the larger scale enzyme production plant. We expect the production plant will be in operation by 2022.

**Case | Strengthening cooperation to promote innovation**

On September 9, 2021, the Group and China Resources Pharmaceutical Group Limited signed a comprehensive strategic cooperation agreement. The two companies were to collaborate more closely in developing new products and new technologies so that they can bring together their existing preclinical and clinical drug R&D platforms and whole-industry-chain advantages to push ahead China’s innovative biopharmaceuticals field. Under the framework cooperation agreement, they would join efforts in cooperative development, equity cooperation, project investment, resource sharing, etc., with a focus on innovative drug development projects. They would leverage complementary strengths and deliver beneficial results to meet the clinical needs of major disease categories and improve domestic and global health.

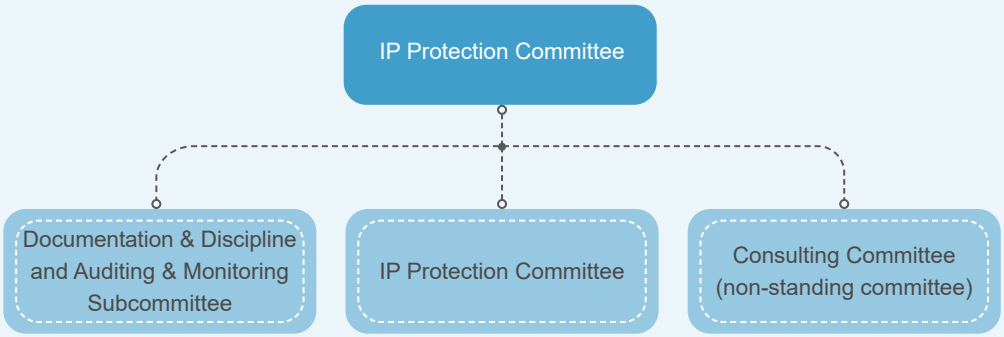
## Intellectual Property Rights Protection

As a drug R&D company, we are fully aware of the profound impact of scientific and technological innovations on our own development. We recognize and respect the importance of intellectual property rights and are committed to protecting intellectual property rights, especially the IPR entrusted to us by our customers, which are valuable assets of our customers. We have created a five-level IPR protection system comprising “Management Safeguard, Policy Safeguard, Legal Document Safeguard, Training Safeguard, and Technical Safeguard” to keep our customers’ IPR properly protected while facilitating the adoption of technological innovations and driving progress in the pharmaceutical and life sciences field.

# Intellectual Property Protection System

## Management Safeguard

Constitution of the IP Protection Committee:




IP Protection Committee duties:

The committee manages all IPR protection related matters in and of Pharmaron, and reviews and provides written approval for all rules, guidelines, procedures, and standards in relation to IPR protection in and of Pharmaron; its members meet regularly to review and discuss the IPR protection related documents submitted to the committee to continuously improve IPR management.

## Policy Safeguard

Developed the *Pharmaron IP Handbook* based on the *Regulation on Information Security and Confidentiality of Pharmaron*, providing a framework and procedures for IPR protection and requiring all employees to comply with relevant requirements and guidelines to sufficiently protect customers' intellectual property rights.

## Legal Document Safeguard

Signed the confidentiality agreement with external partners in time, welcomed and assisted customers to conduct auditing onsite to Pharmaron's IPR protection practices at any time, and collected customers' suggestions to make improvements.

Internally, required every employee to sign the Employee Proprietary Information and Inventions Agreement as part of the employment contract.

## Training Safeguard

Implemented an employee IPR protection training program and included confidentiality and security system training in new-employee orientation training; conducted a variety of IPR protection training courses regularly to all existing employees, including the quarterly online course, semi-annual training, in-person training, etc.; provided a compulsory pre-internal transfer confidentiality training course for employees who would be transferred from one project or group for one customer to another project or group for a different customer in addition to the transfer interview conducted by HR.

## Technical Safeguard

Set up the information databases and multiple layers of firewalls to protect Pharmaron's databases, and the username, password, and personal information dynamic control system, using technology to protect online information security.

# Quality Services

We are committed to providing comprehensive and fully integrated new drug R&D and manufacturing services to the global pharmaceutical and life sciences industry. We put customers first and uphold professionalism, an international outlook, and quality in all of our business undertakings. We make every effort to shorten the timelines of new drug development and drive down the development costs so that we can best serve our customers by providing efficient and high-quality R&D services. We have developed the *Standard Operating Procedure for Customer Complaints* and other operational norms, which standardize the handling of customer complaints, to further improve customer satisfaction, better understand customer needs, and ensure timely and efficient handling and response to all customer complaints. All the efforts serve to ensure that we continuously protect the common interest of the customers and ourselves, improve product and service quality, and help catalyze drug innovation.

In 2021, we fully implemented the *Standard Operating Procedure for Customer Complaints* for all customer complaints received at home and abroad. We dove deep to find the root causes and addressed them with promptness and efficiency while maintaining communication with the customers. The complaint resolution rate reached 100%. We also developed effective CAPA to facilitate advance management and prevent similar problems from arising in the future.


Complaint handling SOP

# Supply Chain Management

We are committed to creating a stable and sustainable supply chain. We have issued a set of policies, including the *Supplier Code of Conduct*, the *Procurement Management Regulations,* and the *Supplier Management Regulations*, to address core issues in the supply chain such as business integrity, business information security, labor rights, and environmental protection. We endeavor to build lasting and fruitful relations with suppliers across different regions who supply us with a variety of products and services. In addition, we continuously strive to improve supply chain lifecycle management, prevent and control environmental and social risks in the supply chain, and improve suppliers' management capabilities to foster mutually beneficial relationships.

**Business integrity**

Prohibit any form of bribery and corruption; prohibit the giving, granting, or accepting of bribes or other forms of improper or illicit benefits

**Business information security**

Respect intellectual property and fair trade and protect customers' information security and trade secrets

**Environmental protection**

Provide products and services that are green, environmentally friendly, energy-efficient, and lower-emitting.

**Labor rights**

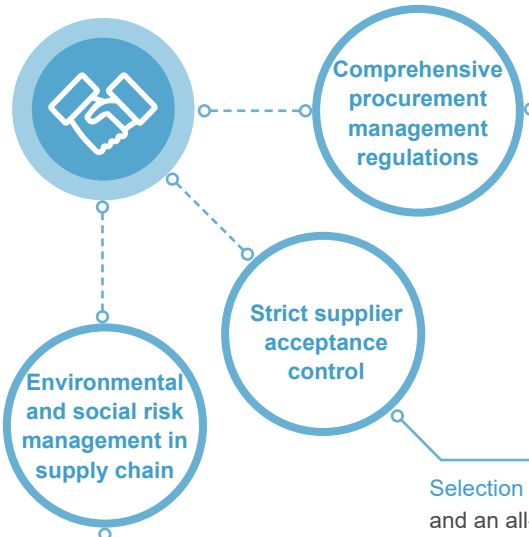
Comply with labor laws, protect employees' rights and interests, and protect employees' health and safety

**Product quality**

Provide products and services that meet quality requirements

Core issues of supply chain management

## Established Supplier Management System




Policies and regulations: Developed the *Procurement Management Regulations* to standardize procurement practices; required procurement staff to abide by the *Code of Ethical Conduct* and commit to integrity and self-discipline to promote fair and transparent procurement.

Operating procedures: Each one of our facilities formed its own SOP for procurement management as suited to its business characteristics and organizational structure to continuously optimize procurement lifecycle management from procurement application through order processing and product return management onto remittance making.

Selection criteria: Implemented a stringent quotation and price comparison procedure and an all-round evaluation, using quotation only as one of the many criteria for supplier selection, which included product quality, environmental and social performance, etc.; required suppliers to provide relevant credentials such as green production and environmental management certifications.

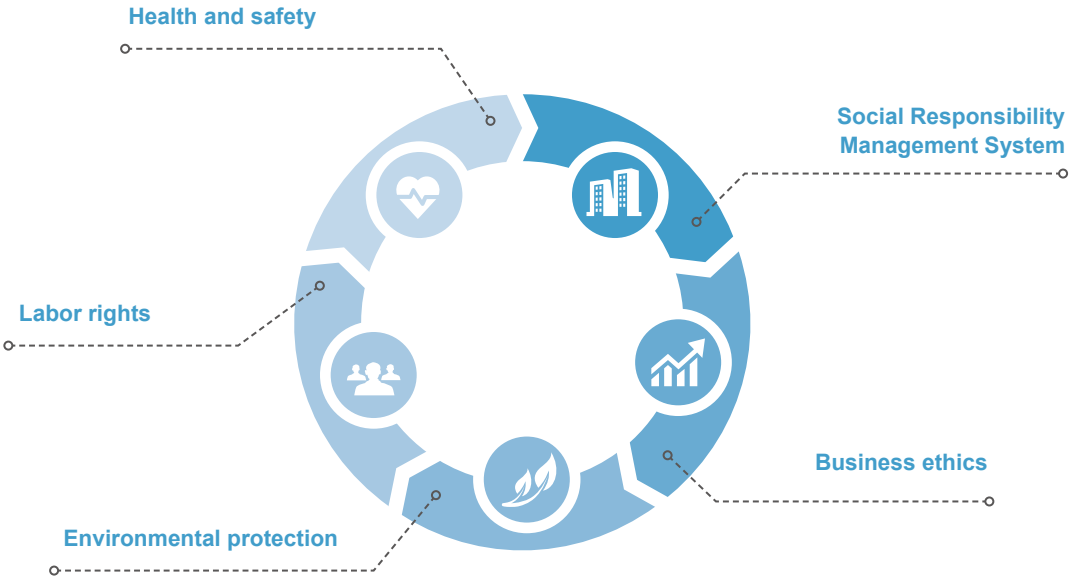
Responsibility commitments: Required new suppliers to sign the *Supplier Code of Conduct* or relevant contracts before cooperation officially started, requesting them to abide by business ethics standards, respect and safeguard employees' rights and interests, provide fair wages and benefits for employees, and care for their health, among other issues, so that the cooperation is built on a shared commitment to responsible practices.

Contract clauses: The suppliers were bound by the Supplier Contract to fulfill responsibilities and obligations with respect to business integrity, business information security, labor rights, environmental protection, etc.

Social responsibility evaluation and review: Comprehensively evaluated the suppliers' environmental and social performance with the *Supplier Environmental Management Questionnaire*, the *Supply Chain Security Evaluation Form*, the *Supplier Social Responsibility Evaluation and Review Sheet*, the *Supplier Quality Systems Questionnaire*, etc.

Annual evaluation: Carried out the annual important supplier evaluation, scoring suppliers along a number of dimensions such as quality, packaging and storage, and social and environmental performance and using the results as an important basis for estimating whether to continue the partnership or not.

Prioritizing environmentally friendly products and services in procurement: Gave priority to products from manufacturers that adopted green processes or had obtained the ISO 1400 certification when purchasing raw materials or equipment; looked for the 3C Certificate in electrical appliances and prioritized those with Class-1 energy efficiency.




Core topics in the *Supplier Social Responsibility Evaluation and Review Sheet*

Total number of suppliers

**3,332**

Number of suppliers implementing relevant practices

**3,332**

Total number of suppliers in China (Hong Kong, Macao, and Taiwan included)

**2,857**

Total number of overseas suppliers

**475**

Number of supplier reviews

**1,160**


防疫手册

# 04

# Empowering Talent Development

Besides core technologies and business integrity, we believe that talent is a company's most powerful competitive advantage for achieving sustainable development. We have set up a talent empowerment platform that fosters cooperation and sharing. We create an inclusive and equal work environment, a warm home for employees, and do our utmost to facilitate employee growth and promotion and empower employee value creation.

# Equality and Diversity

## Compliant and Equal Employment

We adhere to the *Labor Law*, the *Labor Contract Law*, and the *Social Insurance Law* of China, the *Employment Rights Act 1996* and the *Equality Act 2010* of the U.K., the *Pay Transparency Nondiscrimination Provision* of the U.S., and other applicable laws and regulations of the countries where we operate. We are committed to maintaining compliance and fairness in hiring and employment, fully respect our employees, and prohibit all forms of discrimination to build harmonious labor relations and help our employees reach their full potential.

In 2021, there were no violations related to employment discrimination, forced labor, child labor, etc.

## Diversity and Equal Employment Opportunity

**Promoting fair recruitment**

Specifying job requirements: Truthfully described the job duties and requirements when recruiting so that candidates could develop a clear idea of a particular vacancy and properly assess whether they had the right credentials or whether it fit their expectations.

Ensuring impartiality and voluntariness: Introduced the applied vacancies to relevant candidates in detail during job interviews, including the duties and requirements, relevant policies and management regulations, etc., in particular information about working hours, wages and benefits, etc.; put impartiality and voluntariness first, fully respected the candidates' thoughts and will, and prohibited the recruitment of any employee by any coercive or deceptive means.


**Respecting employees**

- Respect the individuality and dignity of employees and prohibit the use of violence, threats, or other means to restrict employees' personal freedom or for forced labor.

**Prohibiting discrimination**

- Oppose all forms of discrimination within the scope of current laws and regulations and prohibit discrimination due to gender, ethnicity, region, religion, etc. and the resulting unfair treatment.
- Implement the salary management principles of gender equality and equal pay for equal work.

**Creating a corporate culture of diversity, inclusion, and equality**

As of the end of 2021, we had employees from 20+ countries who were of different genders, races, and age groups. They collaborated and shared knowledge with each other to create a diverse and inclusive work environment.

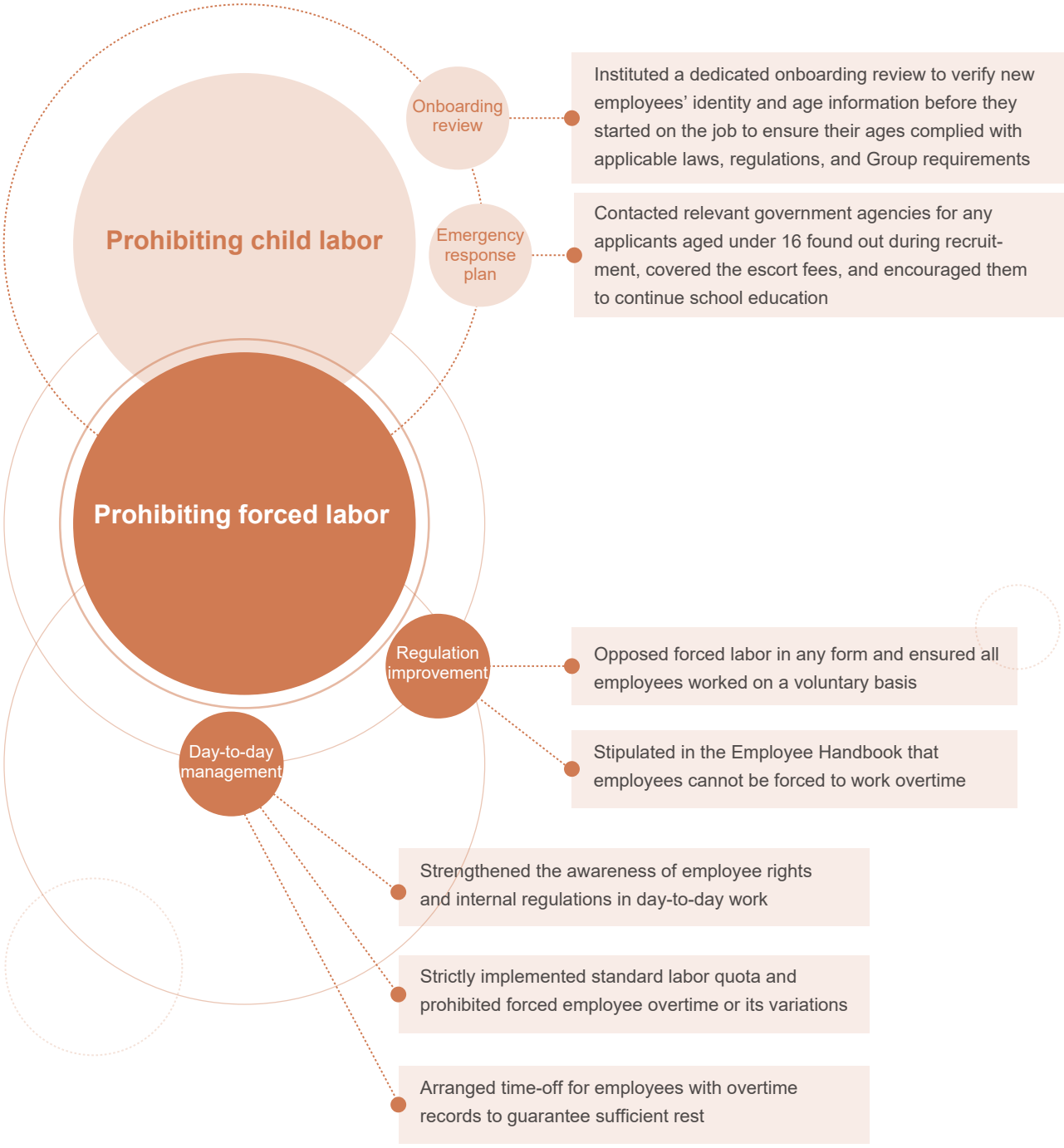
Maintained an open, respectful, and inclusive attitude, valuing and listening to all viewpoints, and worked to eliminate implicit discrimination and biases in the workplace.

Highlighted diversity in career development and promotion and gave employees equal opportunity for work and promotion.

Placed a heightened focus on employee happiness and motivation and built a sense of belonging in the workplace.

## Prohibition of Child and Forced Labor

We follow the laws and regulations of the places where we operate, including the *Labor Law*, the *Labor Contract Law*, the *Law on the Protection of Minors*, and the *Provisions on Prohibition of Child Labor* of China, the *Children (Protection at Work) Regulations 1998* and the *Children Act 2004* of the U.K., and the *National Labor Relations Act* of the U.S., and do not tolerate child or forced labor. We build risk prevention and mitigation into our policy and system formulation, hiring process, and day-to-day management to protect the rights and interests of our employees.



## Employee hiring

| Indicators | unit | 2021 |
|---|---|---|
| Total number of employees | Person | 14,923 |
| Number of male employees | Person | 7,093 |
| Number of female employees | Person | 7,830 |
| Number of full-time employees | Person | 14,906 |
| Number of part-time employees | Person | 17 |
| Number of employees aged 30 and under | Person | 10,202 |
| Number of employees aged 31-50 | Person | 4,548 |
| Number of employees aged 51 and over | Person | 173 |
| Number of employees with a bachelor's degree or lower | Person | 10,606 |
| Number of employees with a master's degree | Person | 3,647 |
| Number of employees with a doctoral degree or higher | Person | 670 |
| Number of Chinese employees (Hong Kong, Macao, and Taiwan included) | Person | 13,773 |
| Number of overseas employees | Person | 1,150 |
| Number of senior managers | Person | 87 |
| Number of middle managers | Person | 2,862 |
| Number of non-management employees | Person | 11,974 |
| Employee turnover rate | % | 14.79 |
| Turnover rate of employees with 3+ years of service in the Company | % | 2.82 |
| Male employee turnover rate | % | 18.06 |
| Female employee turnover rate | % | 11.84 |
| Turnover rate of employees aged 30 and under | % | 16.53 |
| Turnover rate of employees aged 31-50 (%) | % | 10.75 |
| Turnover rate of employees aged 51 and over | % | 19.11 |
| Turnover rate of Chinese employees (Hong Kong, Macao, and Taiwan included) | % | 14.68 |
| Turnover rate of overseas employees | % | 16.09 |

Notes:

1.The employee turnover data is based on our full-time employees.

# Talent Attraction and Retention

We hold talent attraction and development with high regard. For recruitment, we source talent across a variety of avenues and continue to improve the recruitment process; in daily-to-day management, we make sure our employees are sufficiently cared for and supported in terms of life and work needs, compensation and benefits, health and safety, etc.; for talent development, we have been constantly refreshing the training system and expanding promotion opportunities to create an environment where our employees can grow their careers and thrive together with the Group.

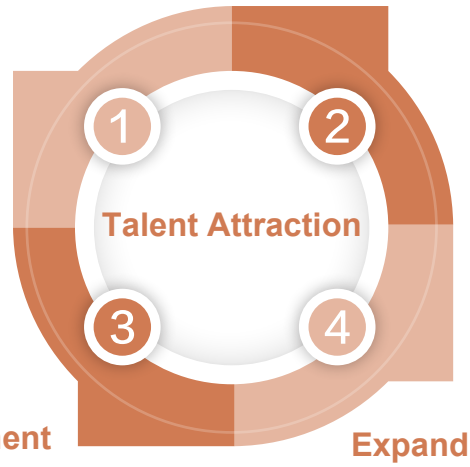
## Talent Attraction

### Building a talent pool

Launched the e-recruiting system with continuously upgraded modules and established a talent pool of both fresh graduates and experienced professionals through batch transfer, personalized search, etc.

### Promoting school-enterprise cooperation

Opened up potential recruitment channels, setting up the Pharmaron Internship Practice Base with 22 universities in China, which supplied the Group with 243 employees in 2021.




### Broadening recruitment channels

Conducted offline recruitment programs in addition to online recruiting, hosting 109 campus recruitment programs, participating in 36 mutual selection campus job fairs, and recruiting 1,509 employees through campus recruitment in 2021.

Leveraged employee referral and encouraged all employees to contribute to recruitment with a procedural reward mechanism to bring in talent through all available avenues and improve the quality and efficiency of recruitment.

### Expanding recruitment methods

In terms of campus recruitment, innovatively used online recruitment lectures and online job fairs instead of traditional face-to-face recruiting to avoid gatherings during COVID-19 in compliance with relevant pandemic response requirements and ensure that the recruitment of fresh graduates continued in an orderly fashion.

In terms of social recruitment, flexibly adopted online approaches such as telephone interview and video interview to break the spatial and temporal restraints and avoid risks that could be brought by offline interviews during COVID-19, creating a considerate interview experience.

| Indicators | unit | 2021 |
|---|---|---|
| Total number of employee training sessions | Time | 2,621 |
| Total number of employee training participations | Person | 119,128 |
| Total employee training hours | Hour | 943,116.50 |
| Average training hours per employee | Hour/Person | 63.27 |
| Percentage of female employees trained | % | 99.92 |
| Average training hours per female employee | Hour/Person | 53.02 |
| Percentage of male employees trained | % | 98.67 |
| Average training hours per male employee | Hour/Person | 74.60 |
| Percentage of senior managers trained | % | 61.90 |
| Average training hours per senior manager | Hour/Person | 8.79 |
| Percentage of middle managers trained | % | 47.57 |
| Average training hours per middle manager | Hour/Person | 39.50 |
| Percentage of non-management employees trained | % | 97.94 |
| Average training hours per non-management employee | Hour/Person | 69.34 |

Notes:

1.The training data is based on our full-time employees.

Campus recruitment in fall 2021

# Talent Retention

## Compensation and Benefits

We act in compliance with relevant legal and regulatory requirements of the places where we operate, including the *Labor Law*, the *Labor Contract Law*, the *Social Insurance Law*, the *Payment of Wages Tentative Provisions*, and the *Regulations of Paid Annual Leave of Employees* of China, the *Equality Act 2010* of the U.K., and the *Fair Labor Standards Act* of the U.S. We implement a total compensation strategy that combines novel incentive programs with traditional ones. The strategy guarantees that our compensation is internally equitable and externally competitive and maximizes the role of compensation in driving business development. We also work to offer our employees a fully built-out compensation and benefits plan to improve their life and accommodate their diverse needs.

Case | Improving employees' living conditions to make them feel more comfortable

We continue to improve the living environment of our employees at all the operating locations, not only creating a more comfortable living space but also greatly shortening their commuting time.

**In Ningbo**

we moved employees from rented apartments to new dormitories inside the facility, with each room decorated with air-purifying green plants. In the new dormitories, employees could choose between 3-bed and 2-bed rooms.

New employee dormitory at Pharmaron Ningbo

**In Shanghai**

we moved employees from the transitional housing of eight people to new dormitories that accommodated a maximum of five people each room. We also arranged for cleaning staff to change the bedding every week and clean the rooms every day.

New employee dormitory at Pharmaron Shanghai

| | | |
|---|---|---|
| Compensation | Base salary | • Developed reasonable base salary standards and grades as tied in with employees' position, professional competencies, output, and other indicators based on an in-depth market research to offer employees job stability and make them feel secure at work |
| | Bonuses | • Provided performance-based bonuses with a built-out performance management system to keep employees motivated and engaged at work |
| | Long-term incentives | • Implemented a restricted stock incentive plan, granting stock options to employees every year based on the Group's operational performance to motivate and reward employees who have made exceptional contributions; as of the end of 2021, we granted a cumulative total of 672 employees with long-term stock incentive plan, which included senior managers, middle managers and technical leaders, and frontline managers and technical personnel |
| | Compensation adjustment | • Made annual compensation adjustments in accordance with the changes in the price index, industry compensation surveys, and employee performance to maintain a competitive employee compensation and benefits plan |
| Benefits | Insurance and medical security | • Paid for employees' insurances, social security, housing fund, etc. in full pursuant to applicable laws and regulations of the places where we operated so that employees could enjoy a wide range of benefits<br>• Built a multi-level medical security system, providing employees with locally adapted medical insurance plus diverse health services to cater to employees' needs, such as supplemental health insurance, commercial insurance, physical examinations, digital general practitioners, and mental health consultation |
| | Paid leave | • Offered employees a wide range of leave options in accordance with relevant laws and regulations of the places where we operated, such as annual leave, marriage leave, maternity leave, paternity leave, breastfeeding leave, pregnancy leave, and bereavement leave, plus personal leave and sick leave |
| | Food services | • Meal allowance: Provided employees with meal allowance as suited to local conditions, which we timely adjust in step with price changes<br>• Canteen services: Set up canteens at all our locations offering meals that accommodated the needs of local employees, such as Chinese food, Western food, vegetarian food, and halal food, and sought employees' opinions and feedback on the quality, variety, and price of the food to make improvement |
| | Supporting amenities | • Based on the conditions of our facilities, equipped them with gyms, barber shops, bakeries, coffee shops, etc. and operated commuter shuttles that covered different routes, offering employees much greater convenience both in their personal lives and at work<br>• Provided staff dormitories or public rental housing for employees as appropriate to make sure they were properly housed |

## Employee Care

### Supporting female employees

- Provided pregnant and breastfeeding employees with roles suited to their physical conditions or with vacations of varied lengths for them to rest depending on their own preferences
- Provided education on female health, hosting lectures such as *Positive Psychology* and *Women's Workplace Health and Health Management Approaches* to raise female employees' awareness of self-care

### Needy employees

- For employees with serious illnesses, we organized Group-wide donations while communicating with local trade unions for additional critical illness subsidies and paid their salaries in full during treatment to alleviate their financial burden
- For employees who ran into financial difficulty due to illnesses or emergencies, we actively communicated with local trade unions to help them apply for subsidies to get through the hard times
- For employees with disabilities, we ensured equal employment and fair treatment and improved accessible design in the workplace to facilitate their professional and personal lives

### Culture and entertainment

- Team building: Regularly organized outdoor team building activities in spring and autumn to give employees breaks in the nature and build teamwork, loyalty, and engagement
- Starting clubs: Hosted a rich selection of clubs, for example, Go, basketball, football, badminton, and English leaning, which organized activities every week to add variety to employees' life and build bonds and teamwork
- Holiday activities: Organized internal trainers to host salons on Teachers' Day, where employees could share their training experience; organized an annual symposium of new doctoral hires on Christmas, where senior doctoral employees were invited to give speeches to help facilitate new doctoral employees' orientation to the new environment

## Case | Helping employees relax in nature and enjoy life through rich activities

"Cohesion, Teamwork, and Excellence" team building activity of Pharmaron Ningbo

Pharmaron's team building activity at the Jingdong Grand Canyon

A badminton game Pharmaron Ningbo participated in

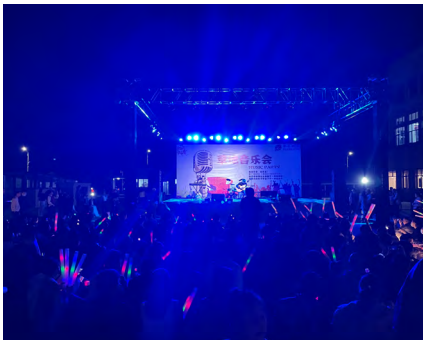
## Case | A happy Spring Festival with dumpling-making

As people in China were called on to celebrate the Chinese New Year "in place" during the ruthless COVID-19 pandemic, Pharmaron Ningbo distributed various perks and benefits to the employees. It also organized the "Celebrating Spring Festival Together in 2021" dumpling-making event, where employees spent a happy and meaningful Spring Festival together by having little dumpling-making contests, puzzle games, etc.

Happy dumpling-making

## Case | Pharmaron Ningbo holding a meadow concert

Pharmaron Ningbo held an annual meadow concert in its facility on October 29, 2021. The concert included a live show and a party, and a lot of versatile employees performed on stage. The concert provided a good opportunity for the employees to enjoy themselves in their spare time and bond with each other.

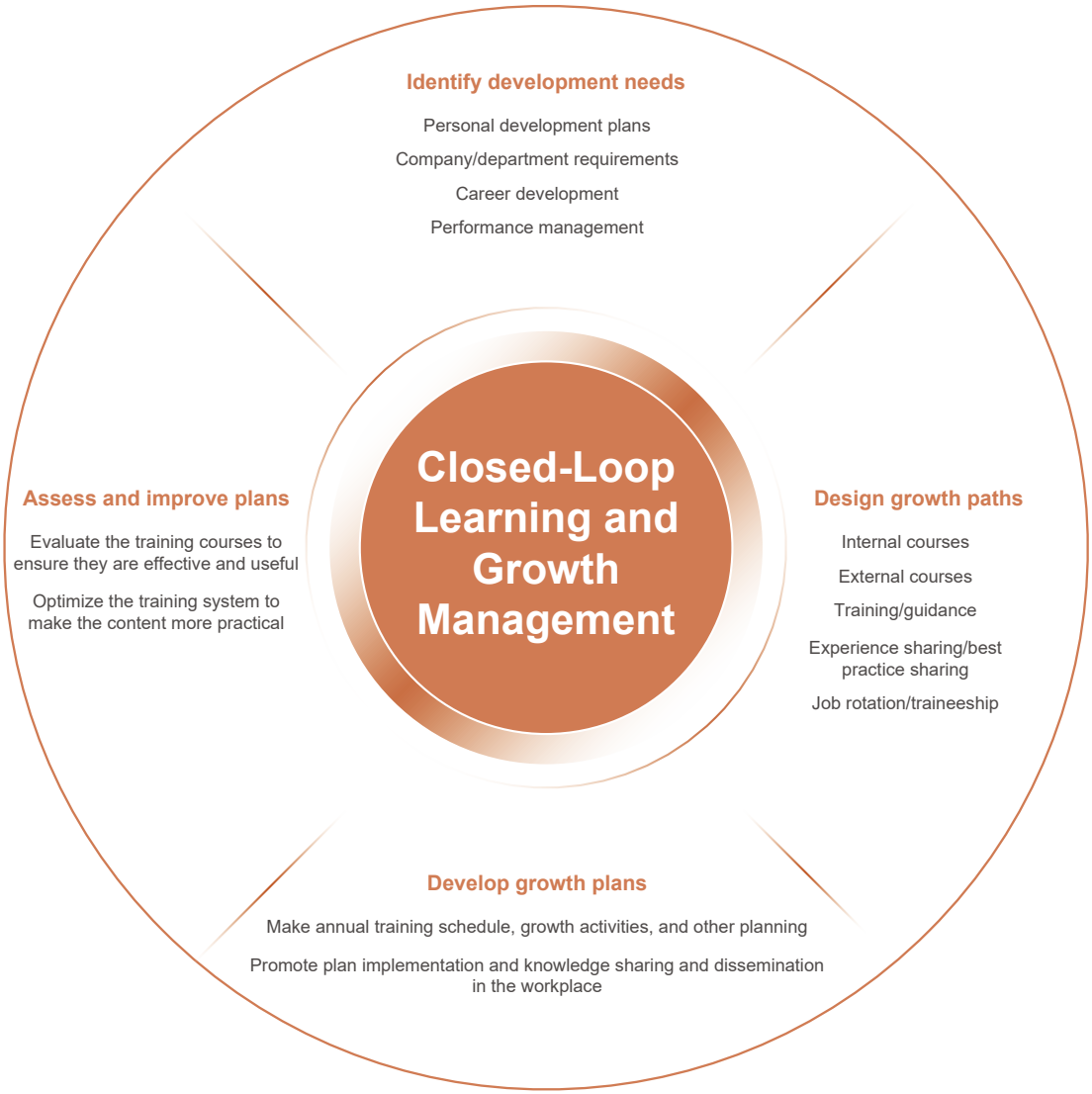


Concert held by Pharmaron Ningbo

# Talent Development

## Employee Training

We do our best to create learning opportunities for employees. We empower their growth by offering systematic training, analyzing their learning and development needs, and developing matching courses.




| Areas of efforts | Highlight data | Specific measures |
|---|---|---|
| **Facilitation for beginners** | New employee training coverage reached **100%** | We helped new employees progressively phase into their roles and the broader corporate culture by familiarizing them with the work environment and job duties through the *Employee Handbook*, job instruction manuals, field visits, and skills training |
| **Enhancing professional capabilities** | • Held a cumulative total of 64 internal seminars, recording 5,120 training participations<br>• Held a cumulative total of 7 seminars given by external expert, recording 1,120 participations<br>• Held a cumulative total of 12 Virtual Lectures, recording 1,026 participations | The successful R&D of new drugs relies on the expertise of professionals. Well aware of the crucial value of our academic researchers, we kept them well informed of the latest developments and technological platforms by integrating internal and external channels to foster continued innovation and academic excellence<br>• Internally, we organized free public academic lectures every month to help employees stay in touch with cutting-edge academic information and novel technologies; organized academic lectures in biology and chemistry every week to foster a positive atmosphere and culture of learning<br>• Externally, we regularly invited well-known experts and scholars from renowned universities and institutions both at home and abroad, including Oxford University in the U.K., Shanghai Jiao Tong University in China, Princeton University in the U.S., and the Max Planck Institute for Coal Research in Germany, to share new industry knowledge and discoveries with our academic researchers, creating opportunities for face-to-face communication<br>• Increasing online sharing: Regularly shared industry knowledge and the Company's latest developments and practices in R&D and innovation on the Company's website, WeChat subscription account "Reaction of the Day", and other channels, to create a motivating learning atmosphere within the Company |
| | | "Pharmaron College": Provided in-service employees with vocational training through our corporate university "Pharmaron College" to continuously train and supply high-caliber talent. Trainees who complete knowledge and skills learning at "Pharmaron College" will receive a degree certificate upon graduation, which will earn them a matching compensation and benefits package within the Company |
| **Improving language skills** | • Held a cumulative total of 18 Business English small classes and VIP classes, recording 1,026 participations<br>• Held Business English Writing classes twice a week, cumulatively recording 3,120 participations<br>• Held Oral English classes twice a week, cumulatively recording 3,120 participations | Developed the "Pharmaron Customized Master Class" together with professional third parties, which invited experienced foreign teachers to give small classes in English writing, oral English, and business English for management-level employees to improve their English skills |

## Case | Inviting Nobel Prize winners in Chemistry, among other experts, to participate in academic exchange

Staying in touch with cutting-edge technologies and maintaining dialogues with leading experts in academia and industry are important ways for us to keep our R&D work at the frontier. Throughout the years, we have been inviting experts and scholars from all over the world to attend academic seminars and forums. Among them are the two 2021 Nobel Prize winners in Chemistry: Professor Benjamin List, a German chemist working at the Max Planck Institute for Coal Research, and Professor David W.C. MacMillan of Princeton University of the U.S.

On April 18-19, 2019, Prof. MacMillan, together with Professor Corey Stephenson of the University of Michigan and Professor Tehshik Yoon of the University of Wisconsin-Madison, gave a two-day class to our academic researchers on photocatalysis. Then on September 21 of the same year, Prof. MacMillan attended the Pharmaron Annual Academic Seminar at our invitation. At the seminar, Prof. MacMillan talked about the application of photocatalysis in chemical synthesis, including the efficient construction of C-C and C-heteroatom bonds, and how the adoption of organometallic catalysts in photochemical systems further expanded the application of photochemical reactions. Prof. MacMillan also introduced a new concept, PhotoChemBio, which was formed by bringing together photocatalysis and protein science, especially noting its application in photocatalytic labeling of cell membrane proteins by citing the latest achievements.

On August 26, 2021, Prof. List attended the 14th "Frontiers of Synthetic and Medicinal Chemistry" online lecture themed "On the Universality of Selective Acid Catalysis". Prof. List discussed contemporary breakthroughs in selective catalysis, including the activation of unreactive and unbiased small substrates, and the associated key challenges. He showed us how his team had achieved a variety of asymmetric catalysis using different organic strong acid catalysts, yielding highly enantioselective products.


Professor Benjamin List's online lecture on "Frontiers of Synthetic and Medicinal Chemistry"

Prof. MacMillan attended Pharmaron's Annual Academic Seminar

## Employee Promotion

### Evaluation

- Implemented policies such as the *Performance Evaluation Regulations* at all our facilities for fairly evaluating employee performance; developed employee evaluation indicators and provided procedural coaching and communication to make employees feel engaged and respected.
- Provided a fair, efficient, equal, and two-way communication channel for employees who found it necessary to challenge their evaluation results.

### Promotion

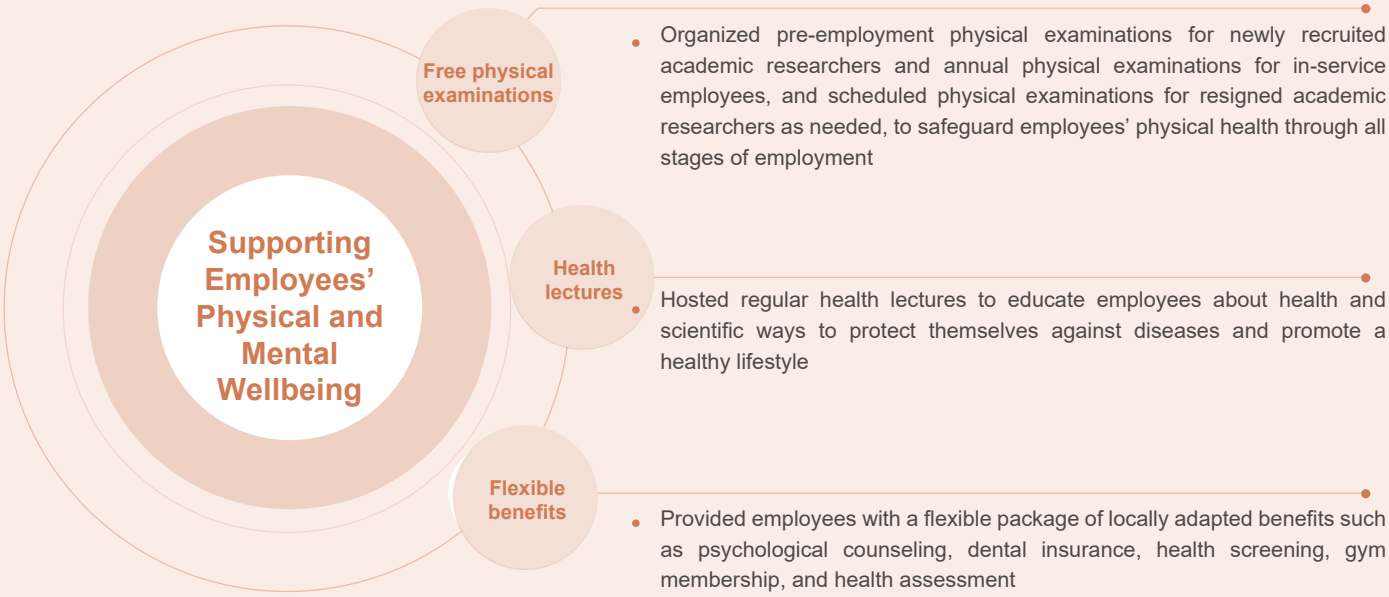
- Implemented policies such as the *Promotion Regulations* at all our facilities, promoting well-performing employees based on a comprehensive regular evaluation of their work performance, deliverables, management capabilities, etc. and providing matching training courses to build a well-rounded workforce.

### Awards

- Set up a variety of awards as suited to the development stage and industry characteristics, such as “Talent Referral Award”, “Chemistry Star Award”, “Safety Allowance”, and “Star-Level Laboratories”. Created the “New Practice Award” in 2021 and presented it to 19 subject projects, including 29 individual winners, along with prize money, to further stimulate our researchers’ enthusiasm for innovation.

# Health and Safety

We highly value the wellness and benefits of our employees and comply with relevant laws and regulations of the countries where we operate, such as the *Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases*, the *Health and Safety at Work Act 1974* and the *Management of Health and Safety at Work Regulations 1999* of the U.K., and the *Occupational Safety and Health Act* of the U.S. We have formulated company policies, including the *Occupational Hazard Warning and Notification Management Procedures*, and continue to do more in preventing and treating occupational diseases to improve occupational health and safety management. We provide our employees with mental health support and physical examinations, among other health-related perks, and institute routine pandemic response efforts to create a positive and safe environment.

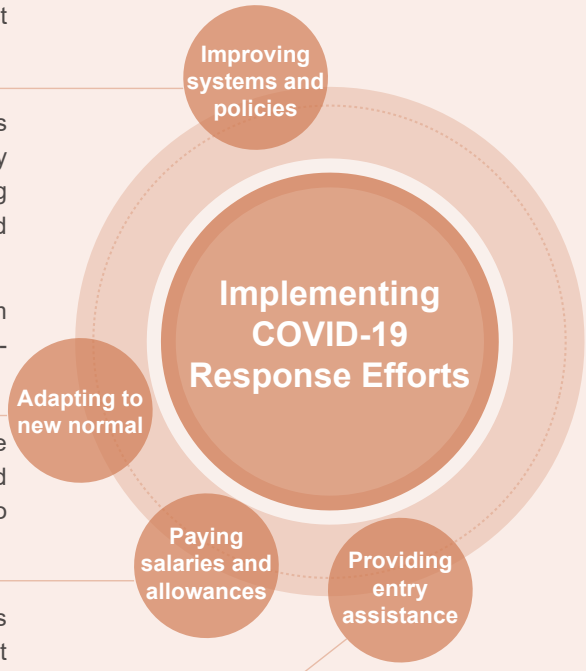


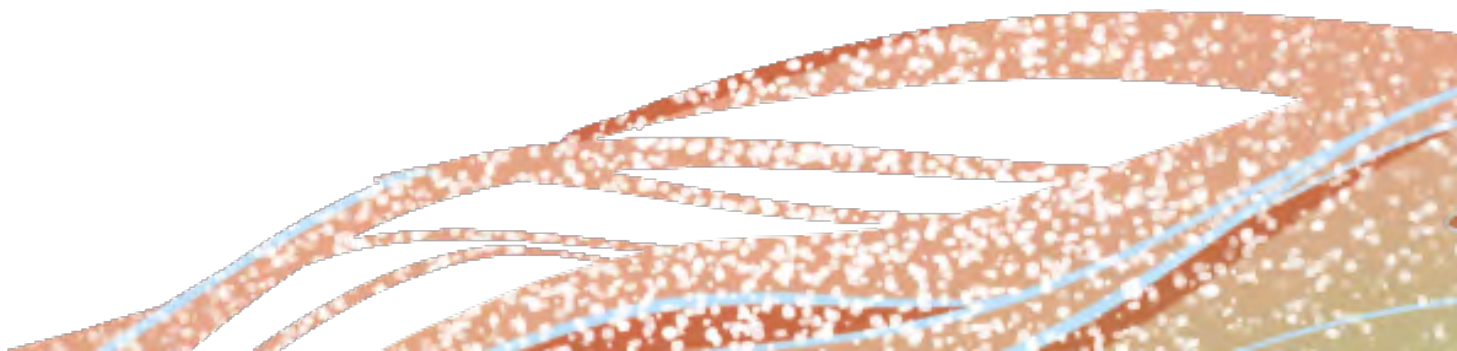

## Case | Supporting the physical and mental wellbeing of employees

The mental health of the employees is closely tied to their work performance and, by extension, to the performance of the business as a whole. Pharmaron Biologics UK's Liverpool facility put together a team of Mental Health First Aiders, which the employees could turn to for needed support when experiencing mental health issues or emotional distress. The facility also hosted a weekly online yoga class to help employees stretch their muscles and improve flexibility, plus online aerobic training camps to encourage employee participation in training and exercise.

We pay for our employees to obtain the Certified Industrial Hygienist (CIH) qualification, which, by the end of 2021, was recognized as the most prestigious certification in the field of occupational health and safety. In the U.K., we encourage our employees to strive towards the National Examination Board in Occupational Safety and Health (NEBOSH) certificate or the National Compliance and Risk Qualifications (NCRQ). By doing so, we continue to build professionalism into our EHS efforts.

- Kept up to date with the latest COVID-19 response requirements of our operating sites and developed internal response plans accordingly to protect the health and safety of our employees
- Put in place strict pandemic control measures in the workplace such as temperature measurement, QR code scanning, and disinfection; regularly organized free Group-wide nucleic acid testing, provided commuting employees with nucleic acid testing, distributed protective equipment, and organized employee vaccination
- Based on the developments of COVID-19, allowed employees to work from home and instituted a range of COVID-19-related paid leave policies including sick leave, family leave, etc.
- Paid salaries as usual to employees who could not return to work because of quarantine caused by objective reasons during COVID-19; granted special allowances to employees engaged in COVID-19 response efforts to show appreciation for their contribution
- With full compliance with relevant COVID-19 policies, we helped employees stranded overseas apply for an “invitation letter” from the Chinese government and covered the expenses of their quarantine upon entry, doing our best to facilitate their entry back into China; protected the jobs of employees who could not return to work for objective reasons and paid their salaries as usual




- Informed employees of the possible occupational hazards associated with the job and their consequences, prevention, and treatment when signing the labor contract and when their job duties changed, and included such content in the labor contract
- Informed employees through the OA system and on-site EHS announcements of the rules, regulations, and operating procedures related to occupational hazard preven tion and treatment, the emergency response measures for occupational hazard incidents, and the results of workplace occupational hazard detections and assessments
- Set up warning signs, warning lines, warning signals, automatic alarms, and communications alarm devices in workplaces with occupational disease hazards such as dust, radioactive materials, and other toxic or harmful substances
- Worked with qualified occupational health technical service agencies to identify and determine the noise, poison, radioactivity, and other hazard factors and hazard points present at the production sites and conduct regular inspections and assessments; in 2021, Pharmaron successfully completed the annual occupational hazard factor identification and detection

| Indicators | unit | 2019 | 2020 | 2021 |
|---|---|---|---|---|
| Number of fatal work injuries | Person | 0 | 0 | 0 |
| Fatal work injury rate (%) | % | 0 | 0 | 0 |
| Working days lost due to workplace injury | Day | 513 | 514 | 562 |

## Case | Safeguarding employee safety through the “Safe Production Month” initiative

In August 2021, Pharmaron hosted a series of “Safe Production Month” activities to build stronger safety awareness across the Group and foster joint efforts in creating a safe work environment.

**Safety training:** Trained 430 part-time safety officers in the management requirements of hazard response policies; entered 200+ medicine cabinet managers in Red Cross first aid training, which included an overview of on-site first aid, cardiopulmonary resuscitation (CPR), four first aid skills, etc.

**Emergency drills:** Organized emergency drills to strengthen employees’ emergency rescue knowledge and build adequate emergency preparedness

**"I Suggest Safety" event:** Received 98 valid entries, which raised constructive suggestions on safe development

**Safety hazard investigation:** Implemented continuous laboratory safety hazard investigations based on the “Safe Production Month” initiative to ensure laboratory safety

**Safety knowledge quizzes:** Organized safety knowledge quizzes among employees to improve their safety and health knowledge

**Top 10 Safety Officers:** Named Top 10 Safety Officers to encourage them to continue to lead by example and motivate the 430 part-time safety officers to further engage in safety management

Pharmaron employees during an evacuation drill

Safety hazard investigation

# 05

# Environmentally Sustainable and Low-Carbon Operations

Tackling climate change and achieving carbon neutrality are top-ranking global concerns at present. We break down peak carbon emissions and carbon neutrality targets into corporate actions and incorporate low-carbon concepts into the production and operations processes. We continuously explore green approaches enabling us to consume fewer resources, reduce our environmental footprint, and generate fewer emissions to live our commitment to green and sustainable development.

# Environmental Management

## Developing Environmental Targets

To fulfill our commitment to green and low-carbon development, we have set the 2021-2025 Environmental Targets, pledging to continuously operate in a more environmentally friendly and sustainable way.

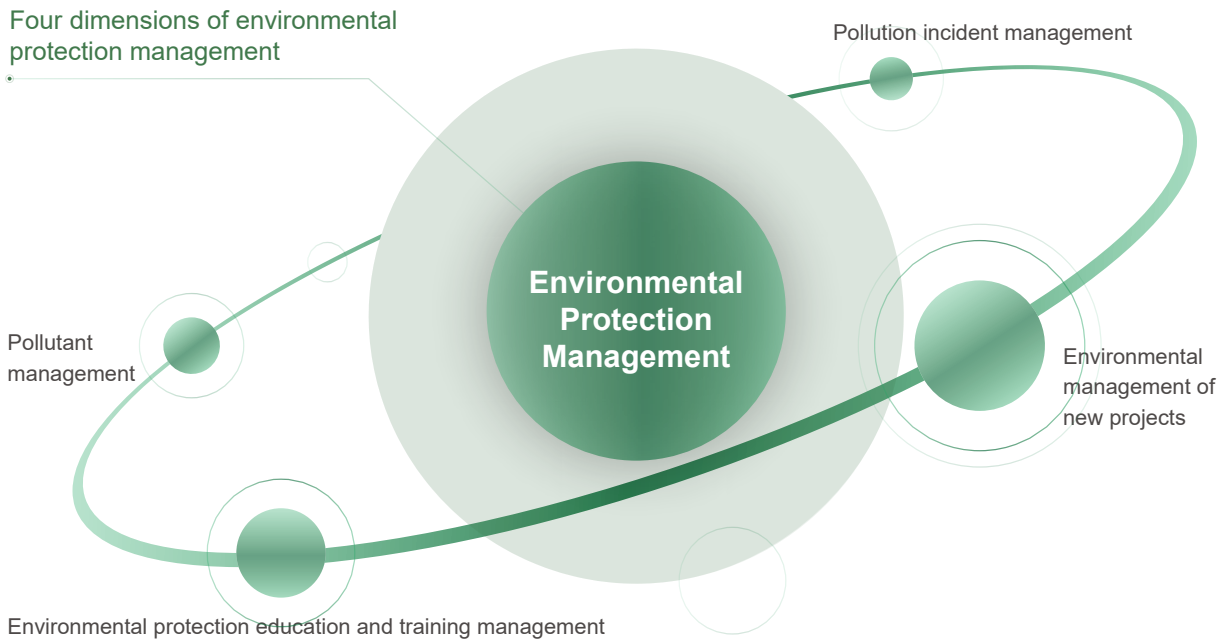
### 2021-2025 Environmental Targets

| 10% | 10% | 10% | 100% |
|---|---|---|---|
| Reduce $CO_2$ emissions by 10% per RMB10,000 of output value by 2025 from a 2020 base year | Reduce energy consumption by10% per RMB10,000 of output value in 2025 from a 2020 base year | Reduce water consumption by 10% per RMB10,000 of output value in 2025 from a 2020 base year | Maintaining 100% compliance in waste disposal |

## Improving Environmental Management

We have developed an environmental management system at all of our operating locations to ensure all applicable legal and regulatory requirements of our operating sites are complied, including the *Environmental Protection Law and Energy Conservation Law* of China, the *Environmental Protection Act 1990* and the *Environment Act 2021* of the U.K., and the *Energy Policy Act of 2005* of the U.S. The system was developed upon a set of policies including the *Environmental Protection Management Procedures*, the *Environmental Inspection Management Procedures*, the *Environmental Pollution Incident Management Procedures*, the *Environmental Factor Identification and Evaluation Procedures*, and the *Emergency Response Plans for Environmental Emergencies*. We continue to improve the environmental management system which is comprised of four key pillars, namely pollutant management, pollution incident management, environmental protection management of new projects, and environmental protection education and training management, to reduce negative environmental impact and create more positive impact.

In 2021, the Group did not have any major accidents impacting environment and natural resources or administrative penalties from environmental regulators.



## Optimizing Environmental Protection Systems

### Pollutant management

- Developed and observed a number of SOPs including the *Wastewater Treatment Station Management Procedures*, the *Waste Management Procedures*, and the *Exhaust Gas Control Management Procedures*; strengthened pollutant control and management and minimized waste emissions to strive towards the target of 100% compliance in waste disposal

### Pollution incident management

- Developed and updated the , instituting environmental accident risk assessment and analysis, regular drills etc. to strengthen preparedness and rescue response for environmental accidents

### Environmental management of new projects

- Strictly followed the principle that "the environmental protection facilities of a construction project must be designed, constructed, and put into production and use at the same time as the main project", standardized the environmental protection management of new projects, and conducted environmental impact assessments (EIAs) as prescribed by relevant regulations
- For infrastructure construction and interior renovation, adopted greener, more environmentally friendly materials and measures to minimize negative environmental impact and protect the office area and its neighborhoods, including, for example, refitting the spacing between aluminum alloy windows to 12 mm and using calcium silicate boards for partition walls for better thermal insulation.
- Carried out construction work in full compliance with applicable laws and regulations of the operating sites, strictly prohibiting working at heights or with flying dust when winds exceeded level 4 and requiring dust control measures when winds reached level 3-4 such as putting up fences and spraying water to remove dust

Green Building Materials Product Certification

### Environmental protection education and training management

- Invited internal and external experts to give online and offline lectures on key ESG issues such as climate change, environmental protection, and waste management to spread green and low-carbon concepts

| | |
|---|---|
| All employees | Offered training courses such as "Types and Disposal of Scrap Chemicals" and "Safety Management System for Highly Toxic Chemicals" to cultivate increased awareness of environmental protection |
| Employees in special positions | Provided tailored training for employees in special positions, such as part-time safety officers, employees of the EHS Department, and laboratory-related researchers, covering topics like "common problems found during laboratory inspections" and "high-risk work permit training" |
| New employees | Included training on "environmental protection", "laboratory waste classification", and "laboratory waste management procedures", etc. in the orientation training to highlight the importance of environmental protection for new employees |

- Regularly advocated environmental protection among employees through the bimonthly "Pharmaron EHS Newsletter"

## Environmental Impact Assessment

We have closely monitored the environmental impacts associated with the Group's production and operations. We comprehensively assess the influences resulting from R&D procurement, testing storage, packaging, and transportation phases, and strive to minimize our environmental footprint and achieve sustainable business development.

We employ diverse methods, such as surveys and interviews, on-site observation, and process analysis, to make our environmental risk assessment more accurate and science-based so that we can better identify the scope, degree, and factors of our impact on the surrounding environment. We standardize the management SOP for wastewater treatment station and air pollution control systems, develop annual inspection schedule and collaborate with qualified service providers to conduct inspections on wastewater and exhaust gases regularly.

Environmental impact assessment system

| Dimensions of impact assessment | | | Scope of impact assessment |
|---|---|---|---|
| Emissions to the atmosphere | Discharge into water bodies | Waste management | The Group's activities, products, and services |
| Impact of noise on the community | The use of raw materials, natural resources, and energy | Other environmental impact | New, expansion, and renovation projects |

### Case | Promoting sustainability with tailored initiatives

The Group has locations in China, the U.S., and the U.K. We design environmental management initiatives that are suited to local conditions based on considerations of local legal and regulatory requirements, external environment, and the management structure, among other factors, to continuously improve our environmental management system and overall environmental performance. A Sustainability Team has been formed at our Pharmaron Biologics UK Liverpool facility, which leads and drives the core sustainability efforts. The team meets regularly to engage the various departments in discussions on the goals and actions that can be implemented to reduce material use and pollutant emissions and to assess the sustainability performance. Pharmaron Biologics UK displays sustainability-related projects that have been completed in the interaction area of the park to increase the employees' sustainability awareness.


"Tree of Sustainability" at Pharmaron Biologics UK's Liverpool facility

# Responding to Climate Change

Reducing carbon emissions and actively responding to climate change have been identified as key areas in terms of our future development. In alignment with the *United Nations 2030 Agenda for Sustainable Development*, we have prioritized climate change mitigation as a strategic pillar of sustainable development. On the Group level, we will enhance the overall climate change risk management; on the implementation level, we will strive to reduce GHG emissions at all out facilities via energy conservation and emissions reduction programs along with better carbon emissions disclosure. Climate change mitigation and adaption will be factored into the Group's future development plans.

## Climate Change Risk Assessment and Response

| | Climate change risks and opportunities | Our actions |
|---|---|---|
| Transition | China has pledged to peak carbon emissions by 2030 and achieve carbon neutrality by 2060, followed by the issuance of a set of supporting policies, driving a green and low-carbon transition across the country. Therefore, our green development path will boost investor confidence and the possibility of obtaining more capital in the future while reducing risks associated with high energy consumption, such as increased operating costs. | We formulated relevant management regulations such as the *Operating Instructions for Clean Production* and the *Statistical Energy Management Procedures* and followed them to systematically analyze and identify the sources and changes in GHG emissions; we set scientific GHG targets and implemented locally adapted energy saving and emissions reduction programs at all our facilities, including upgrading processes and equipment, optimizing the use of energy-consuming equipment such as air conditioners, purchasing clean energy, advocating green office practices, etc. The efforts led to marked reductions in carbon emissions and contributed positively to the achievement of the "3090" targets. |
| Physical | Extreme weather events and major natural disasters may damage the equipment and infrastructure at our facilities, threaten employees' lives, health, and safety, and significantly impact the Group's normal production and operating activities. | In response to the aggravating climate change and unexpected weather patterns, we closely followed the weather changes, developed contingency plans for a variety of weather conditions such as extreme high temperature, rainstorms, and typhoons, and put in place effective risk prevention and control through daily inspections, emergency drills, etc., continuing to building stronger extreme weather preparedness and response. |

## Reducing GHG Emissions

### Low-carbon production

- The primary types of energy we used in production and experiments were purchased steam, natural gas, and electricity; we implemented tailored energy conservation and emissions reduction measures at all our facilities, including innovating technologies and reducing the use of raw materials

### Building management

- Air conditioning: Set the upper and lower limits of air conditioner temperature to save energy; regulated air-conditioning temperature based on time of the day and manually controlled the temperature during working hours as appropriate; timely checked on and replaced the water supply and return pipes of the air conditioners to increase energy storage capacity and cut energy waste
- Fans: Used the automatic control system to set the fans to low-frequency mode at night and during holidays to cut unnecessary energy consumption
- Lighting: Used LED light sources in the lighting system; minimized the use of lighting when there was sufficient sunlight and turned off the lights when they were out of use or when everyone was off work
- Heating: Actively shifted to the use of energy-efficient boilers for heating and promoted the application of building management systems to manage and monitor the use of heating and cut unnecessary waste

### Case | Driving low-carbon development with smart energy

Smart energy management plays an important role in facilitating the transition towards cleaner and lower-carbon energy. Pharmaron Shaoxing continued to promote the Energy Management 2.0 System project, implementing three-level energy (water, electricity, steam, and natural gas) management. The company calculated and analyzed the energy consumption data every month and uploaded the data to relevant government departments. Based on the data analysis, the company was able to identify potential opportunities and take targeted measures to drive further energy savings and emission reductions.


Energy management 2.0 system (diagram)

## Clean energy

- Actively shifted to clean energy across our facilities following the calls and guidance of local governments to reduce carbon emissions; our Pharmaron Biologics UK Liverpool facility, for example, generated 100% of its electricity from renewable energy sources in 2021

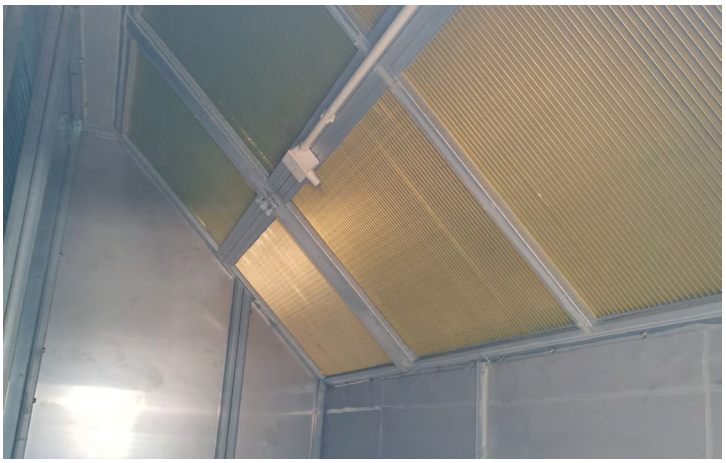
## Green transport

- Encouraged employees to use commuter shuttles or public transportation so as to reduce GHG emissions generated from employee commuting
- Installed charging piles at our facilities as appropriate to promote the use of new energy vehicles and reduce the use of fuel vehicles

New energy vehicles used by the Group

### Case | Using heat recovery units to improve energy efficiency

The high-capacity air-conditioning units in the laboratory buildings typically run 24 hours a day non-stop for long periods of time and are thus large energy consumers. To spur energy savings in this regard, Pharmaron Shaoxing installed heat recovery units in all of the air-conditioning systems of its laboratory building, which significantly enhanced energy recovery and reduced energy consumption.



Heat recovery unit in the air-conditioning system (plate-fin heat exchanger)

## Responding to Extreme Weather

### Weather emergencies

- Closely followed weather warnings and weather changes and regularly checked on emergency supplies
- Developed contingency plans and organized emergency drills for weather disasters such as typhoons and rainstorms; organized flood drills simulating scenarios like power distribution rooms being flooded due to the inrush of rainwater into the cable wells, and consolidated preparedness and response for extreme weather events and major natural disasters through situation reports, alert deployment, etc.
- Regarding extreme weather events such as typhoons and rainstorms, devised traffic plans to provide added security for employee transportation and offered flexible work arrangements such as leave shifting and vacations to ensure business continuity

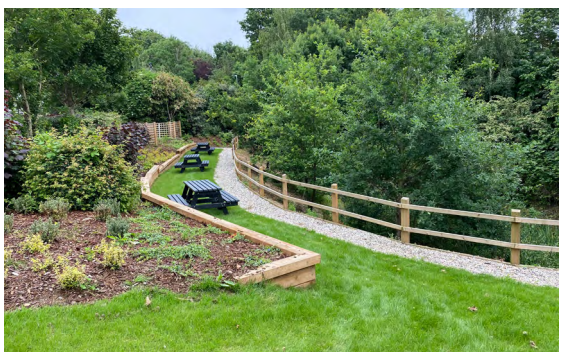
Flood-relief drill

### Seasonal extreme weather

- Before the arrival of cold air, put in place protective measures for areas vulnerable to freezing such as the pipelines of circulating water, air-conditioning water, firefight water, tap water, etc. and basement facilities
- Checked and adjusted the temperature of the air conditioners in time on hot summer days to protect the apparatus and devices from being damaged by high temperature and high humidity

**Case | Protecting surrounding environment and responding to climate change**

Pharmaron UK's Hoddesdon facility has implemented a sustainable drainage system plan with a view to preventing the park from polluting nearby creeks. The plan is designed to mitigate pollution risks and has served to reduce potential risks during high-precipitation periods as well, such as erosion and flooding. The work included clearing weeds, dredging creek outlets, planting activities, etc., which not only protected the local ecosystem but also reduced the risks of flooding and other hazards caused by extreme weather events.



Pond surroundings after renovations

## Energy consumption

| Indicators | unit | 2021 |
|---|---|---|
| Consumption of purchased electricity | kWh | 156,790,402.40 |
| Consumption of purchased heat | million kJ | 48,427.17 |
| Natural gas consumption | $m^3$ | 6,367,019.32 |
| Steam consumption | tonnes | 91,999.00 |
| Gasoline consumption | liters | 46,344.02 |
| Diesel consumption | liters | 18,356.27 |
| Comprehensive energy consumption | tonnes of standard coal | 41,293.86 |
| Comprehensive energy consumption per RMB10,000 of revenue | tonnes of standard coal/RMB10,000 | 0.055 |
| Total GHG emissions (Scope 1 + Scope 2) | $tCO_2e$ | 128,660.07 |
| GHG emissions per RMB10,000 of revenue | $tCO_2e$/RMB10,000 | 0.17 |
| Scope 1: Direct GHG emissions | $tCO_2e$ | 14,084.53 |
| Scope 2: Indirect GHG emissions | $tCO_2e$ | 114,575.54 |

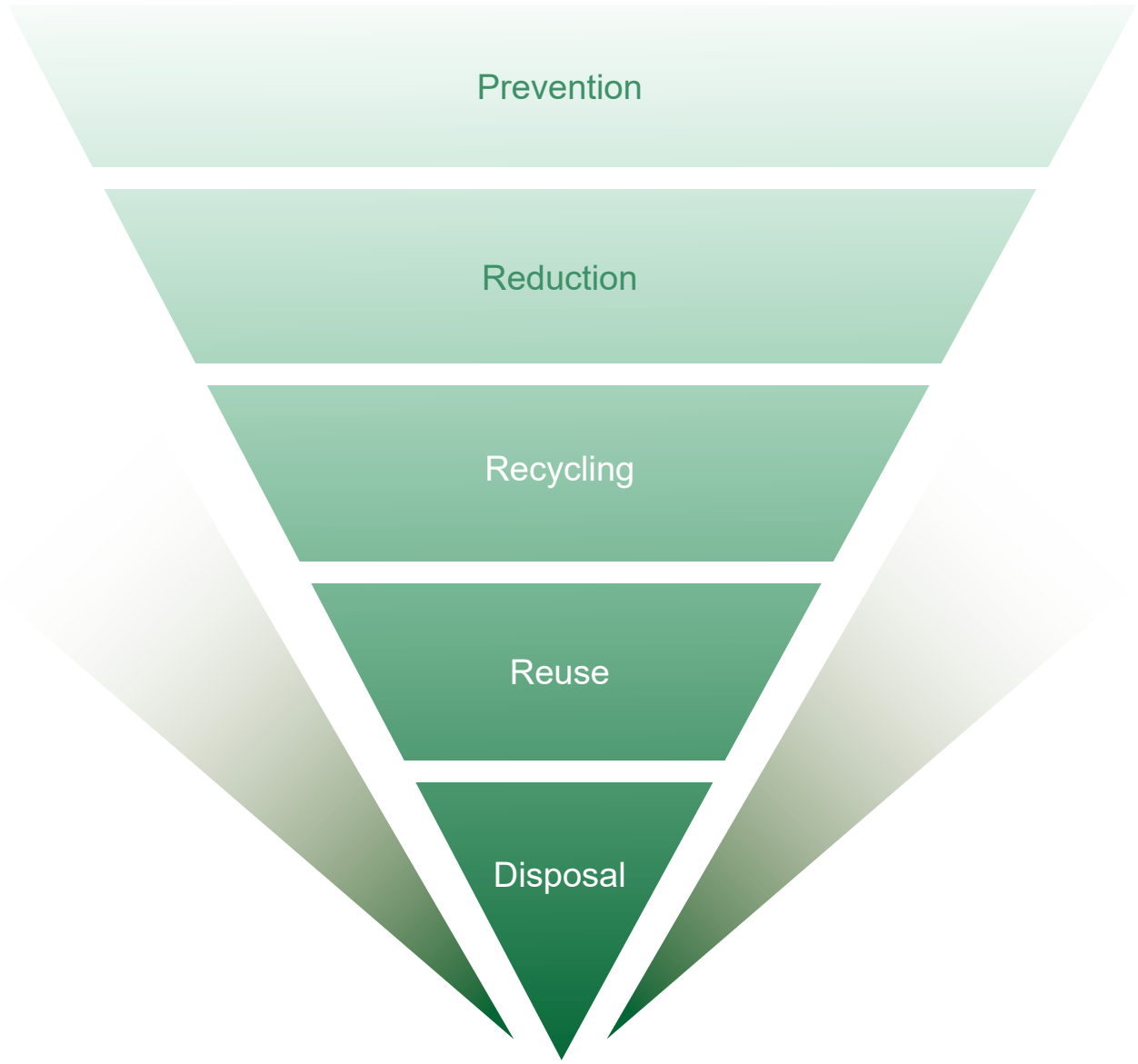
Notes:

1. In terms of energy consumption, the comprehensive energy consumption was calculated based on the *GB/T 2589-2020 – General rules for calculation of the comprehensive energy consumption* developed by the National Technical Committee for the Standardization of Energy Foundation and Management with the statistical and calculation calibers refined based on the Group's actual conditions; guided by the target of reducing energy consumption per RMB10,000 of output value by 10% in 2025 compared with 2020, the Group implemented blended measures at all the operating sites, such as rolling out energy conservation initiatives, using cleaner and more efficient energy, and upgrading and replacing energy-consuming equipment to improve the environmental benefits and efficiency. Through those efforts, the Group reduced the energy consumption density, bringing down the comprehensive energy consumption per RMB10,000 of revenue from 0.090 tonnes of standard coal/RMB10,000 in 2020 to 0.055 tonnes of standard coal/RMB10,000 in 2021, representing a drop of 38.4% and positive results in optimizing energy structure and saving energy;

2. In terms of greenhouse gases, the GHG emissions were calculated based on the *GHG Protocol Corporate Accounting and Reporting Standard* jointly created by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) and the *Fifth Assessment Report* published by the Intergovernmental Panel on Climate Change (IPCC); the in-grid emission factors used for calculating Scope 2 GHG emissions were from the following sources: Chinese grid used the *Corporate GHG Emissions Accounting Methodology and Reporting Guidance 2021* released by the Department of Climate Change of the Ministry of Ecology and Environment of the People's Republic of China, US grid used the *Emissions & Generation Resource Integrated Database* released in 2021 by the United States Environmental Protection Agency, and UK grid used the *Conversion factors 2021 - revised January 2022* jointly released by the Department for Business, Energy & Industrial Strategy and the Department for Environment Food & Rural Affairs of the UK. While the overall business volume increased in 2021, the Group drove a relative reduction in GHG emission density guided by the target of reducing $CO_2$ emissions per RMB10,000 of output value by 10% in 2025 compared with 2020. Through measures such as using cleaner and more efficient energy, reducing energy consumption and emissions in all areas of experiments, production, and office activities, the Group reduced $CO_2$ emissions per RMB10,000 of output value from 0.18 $tCO_2e$/RMB10,000 in 2020 to 0.17 $tCO_2e$/RMB10,000 in 2021, representing a drop of 4.0% and positive results in reducing GHG emissions.

# Pollution Prevention and Mitigation

Our actions are driven by the commitment to environmental protection and green development. We have set goals in reducing and avoiding pollutant generation, protecting and improving the environment, promoting human health, etc. We conduct business in compliance with applicable laws and regulations of the places where we operate, such as the *Integrated Emission Standard of Air Pollutants*, the *Law on the Prevention and Control of Water Pollution*, and the *Law on the Prevention and Control of Environment Pollution Caused by Solid Wastes* of China, the *Control of Pollution act 1974* and the *Waste (England and Wales) Regulations 2011* of the U.K., and the *Clean Water Act* and *Clean Air Act* of the U.S. In regulating the exhaust gases, wastewater, and solid waste generated in our production and operations, we adopt a closed-loop management approach consisting of "classification, treatment, and monitoring", along with advanced processes and equipment which we continuously evolve. Those efforts have facilitated cleaner production and a balance between economic growth and environmental benefits.




Waste Treatment Guidelines

## Control over Sources of Pollution

During experiment, encouraged and supported experimenters to reduce the use of raw materials through awareness campaigns, the “Incentives for Reduction of Solvent Use” project, and other initiatives that helped us reduce pollutant emissions at the source

After experiment, reused the residual chemicals and solvents from the experiments to reduce waste

In terms of process, following the green chemistry principle, we selected more suitable, higher-efficiency processes by looking at the specific steps and the operations, solvents, and methods involved in each step, to improve the conversion rate and reduce waste and pollutant generation

### Case | Continuously promoting cleaner production through the “Incentives for Reduction of Solvent Use” project

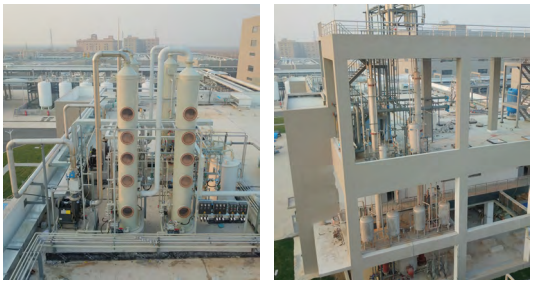
Organic solvents are commonly used as a raw material in medicinal chemistry experiments and drug production. We have been implementing the “Incentives for Reduction of Solvent Use” project since 2016 to reduce the generation of waste organic solvents at the source. Taking the per capita solvent usage in the previous year as the baseline, we encourage relevant teams to use solvents in an efficient way by granting them 35% of the value of the actual solvent savings as a reward. As of the end of the reporting period, the project had been launched in our Beijing and Ningbo facilities, leading to a collective saving of 511,534 liters of solvents in 2021 thanks to the Incentives. The project contributed to notable reductions in our waste discharge and furthered the building of a beautiful home with blue skies and clear water.

### Case | Taking multiple measures to reduce pollutant emissions

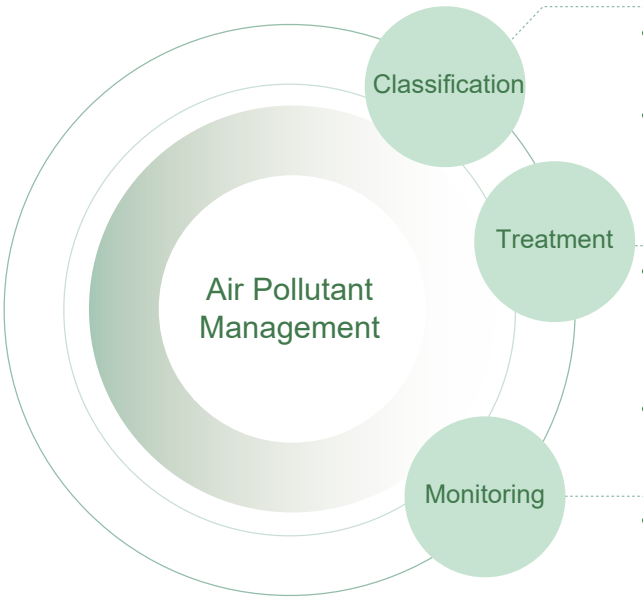
We assess and analyze the impact of production operations and waste discharge on the environment and take appropriate and timely measures to control it. Pharmaron UK’s Hoddesdon facility has replaced the original chillers with safer, more energy-efficient chillers which use non-toxic and non-flammable carbon dioxide as the refrigerant. During the replacement process, it also recycled the F-gases generated for reuse. Meanwhile, Pharmaron UK’s Rushden facility has replaced the F-gases in all of its air-conditioning and refrigeration units to minimize the environmental footprint on neighboring communities.

### Case | Building a green plant and implementing a low-carbon approach

Reducing pollutant discharge and effectively disposing of the “three wastes” are important focal areas of sustainable development. Driven by a top-down approach, Pharmaron Shaoxing has been committed to green and low-carbon development since day one. The company has designed and built a standalone solvent recovery plant (including two high-efficiency distillation columns with supporting facilities), which enables it to recycle and reuse waste solvents. When running at full capacity, the plant can save around 3,600 tonnes of fresh solvents every year.



Solvent recovery plant



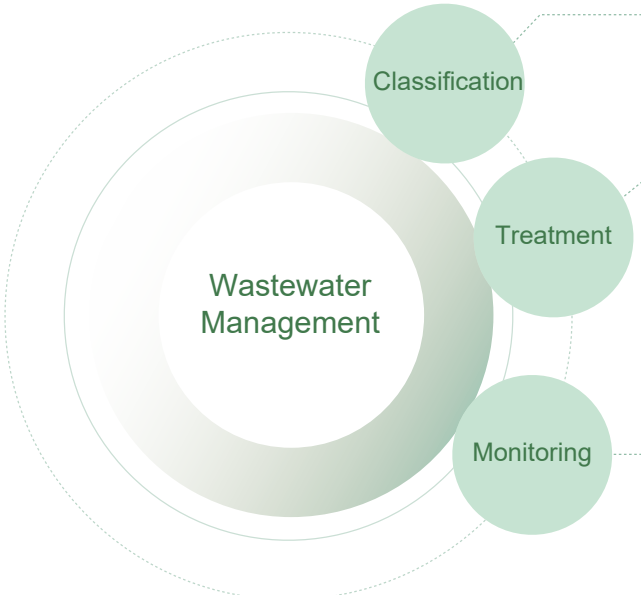

- Classified the exhaust gases generated, e.g., boiler exhaust gases, laboratory exhaust gases, and animal laboratory exhaust gases
- Capped all the chemical containers in time to minimize the volatilization of volatile organic compounds (VOCs) and placed them in ventilated explosion-proof cabinets and medicine cabinets

- Applied activated carbon adsorption at all exhaust gas outlets except the boilers and regularly replaced the activated carbon filter screens; checked on the fume hoods and ventilation management to reduce pollutants in the production exhaust gases and protect the air quality of the facilities
- All boilers were low nitrogen gas fired, which reduced the exhaust gas emissions and produced environmental benefits

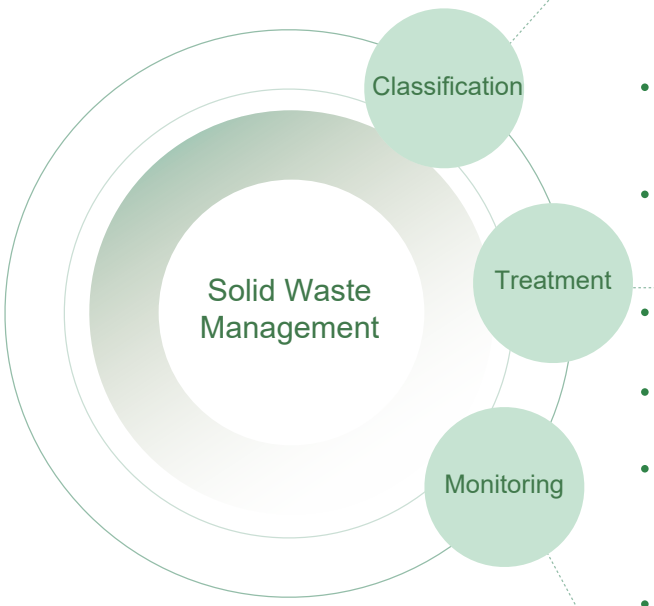
- Used qualified third-party monitoring; passed all the quarterly experiment exhaust gas inspections and monthly boiler exhaust gas inspections in 2021

## Case | Boosting green development through VOCs management

The proper management of VOCs is key to better air quality. To reduce VOCs contained in the exhaust gases, Pharmaron Tianjin invested in building a regenerative thermal oxidizer (RTO) and upgrading the exhaust gas systems, and successfully kept VOCs and odors in the exhaust gases at much lower levels. The RTO will be officially put into operation in 2022 and is expected to lead to a 46% decrease in total annual VOCs emissions compared with 2021.




- Diverted rainwater from wastewater generated by production and living activities
- Treated wastewater effectively in the wastewater treatment stations and instituted routine inspections and equipment maintenance to ensure that the treated wastewater was stable in quality and met discharge standards
- Implemented targeted management of rainwater to protect the rainwater pipe networks from pollution and ensure that rainwater discharge met the discharge requirements of relevant national laws and regulations
- Used qualified third-party monitoring; passed all the monthly wastewater inspections in 2021




- In order to standardize waste management, divided relevant waste into household waste, general industrial waste, sharps waste, hazardous waste, and other waste based on the regulatory requirements of each operating location and the nature and sources of waste
- Placed waste bins at the departments and laboratories, putting up waste classification signs to guide classified waste disposal and forbid mixed disposal
- Assigned various functional departments to the storage and transfer of different types of waste, mandating “rainproof, anti-leakage, and anti-spill” storage to prevent secondary pollution
- Worked with qualified third parties to classify, transfer, and dispose of waste
- For hazardous waste such as waste organic solvents, recorded the type, quantity, disposal etc. to achieve real-time management
- Disposed of medical waste such as animal carcasses and tissues in accordance with relevant regulations, scheduling for them to be collected by designated personnel every day and stored in temporary waste storage rooms
- Provided relevant employees with training on waste collection and classification to ensure compliant operations
- Assigned the functional departments to monitor and inspect the generation, discharge, and disposal of waste; maintained 100% compliance in waste disposal in 2021

## Noise Management

Noise management is an important area of management of the Group. We abide by relevant laws, regulations, and industry standards of the countries where we operate, such as the *Law on the Prevention and Control of Pollution from Environmental Noise* and the *Emission Standard for Industrial Enterprises Noise at Boundary* of China, the *Control of Noise at Work Regulations 2005* of the U.K., and the *Noise Control Act* of the U.S. We prohibit the production of loud noises on weekdays and monitor noises in surrounding areas to sustain regulatory compliance in our manufacturing activities. We also take action to reduce the noise levels and maintain a peaceful and quiet environment for the employees and neighboring residents. For example, we replaced the old fans, which also offered the added benefit of greater energy efficiency.

### Exhaust gas emission

| Indicators | unit | 2021 |
|---|---|---|
| Total exhaust gas emissions | $SM^3$ | 19,743,411,681.69 |
| Exhaust gas emission density | $SM^3$/RMB10,000 | 26,523.40 |
| Sulfur dioxide | tonnes | 0.12 |
| Nitrogen oxides | tonnes | 1.34 |
| Particulates | tonnes | 0.08 |
| Volatile organic compounds | tonnes | 62.79 |
| Total wastewater discharge | tonnes | 820,896.50 |
| Wastewater discharge density | tonnes/RMB10,000 | 1.10 |
| COD | tonnes | 37.04 |
| Ammonia nitrogen emissions | tonnes | 2.64 |
| Total nitrogen | tonnes | 5.27 |
| Total phosphorus | tonnes | 0.53 |
| Total non-hazardous waste generated | tonnes | 14,720.46 |
| Non-hazardous waste density | tonnes/RMB10,000 | 0.02 |
| Kitchen waste | tonnes | 4,938.52 |
| Office waste | tonnes | 9,655.88 |
| Other non-hazardous waste | tonnes | 126.06 |
| Total hazardous waste generated | tonnes | 15,569.54 |
| Hazardous waste density | tonnes/RMB10,000 | 0.02 |

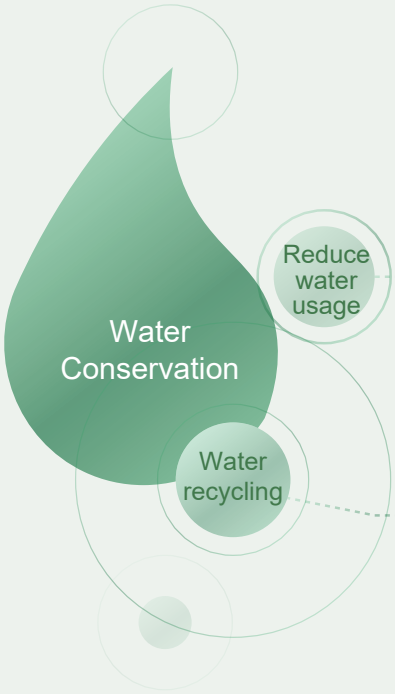
| Indicators | unit | 2021 |
|---|---|---|
| Medical waste | tonnes | 276.60 |
| Pharmaceutical waste | tonnes | 359.59 |
| Waste organic solvents and waste containing organic solvents | tonnes | 9,690.37 |
| Waste mineral oil and waste containing mineral oil | tonnes | 6.87 |
| Distillation residue | tonnes | 16.14 |
| Organic resin waste | tonnes | 102.08 |
| Mercury waste | tonnes | 1.00 |
| Other waste | tonnes | 5,116.89 |

Notes:

1. Guided by the goal of maintaining 100% compliance in waste disposal, the Group actively implemented relevant initiatives at all the facilities, including upgrading and replacing energy-consuming equipment to improve the environmental benefits and efficiency, instituting strict classified management, etc. The efforts delivered positive results in our wastewater and exhaust gas management, leading to a relative reduction in the exhaust gas emission density and wastewater discharge density, with the former decreasing from 27,089.65 $SM^3$/RMB10,000 in 2020 to 26,523.40 $SM^3$/RMB10,000 in 2021, representing a drop of 2.1%, and the latter decreasing from 1.25 tonnes/RMB10,000 in 2020 to 1.10 tonnes/RMB10,000 in 2021, representing a drop of 11.7%.
2. Hazardous waste was classified and calculated based on the *Directory of National Hazardous Wastes (Version 2021)*.

# Resource Conservation

Water, soil, and forests are the most precious natural resources surroundings us. We fully recognize the importance of protecting natural resources so that we strive to conserve resources from the beginning through process optimization, water recycling, paper saving, and other actions.



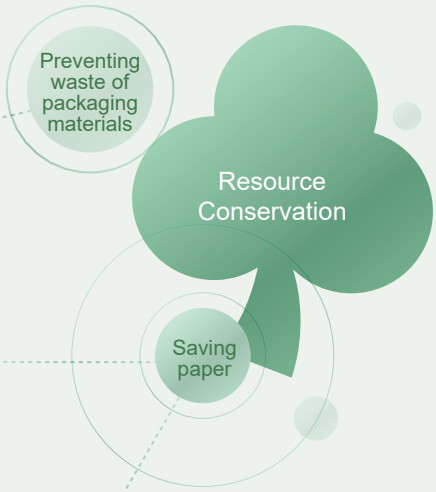

- Gradually rolled out faucet renovation, applying low-flow faucets that could alleviate water stress; when completed, the renovation is estimated to save water by 30-50%
- Put up water saving signs in the bathrooms and break rooms and regularly inspected the office area to ensure water-related problems were fixed in time to avoid waste of water

- Recycled steam condensate to supplement circulating water and reclaimed water and reduce corresponding losses
- Recycled the cooling water used for cleaning laboratory bottles to reduce the use of fresh tap water

| Indicators | unit | 2021 |
|---|---|---|
| Total water use | tonnes | 1,155,027.40 |
| Water use per RMB10,000 of revenue | tonnes/RMB10,000 | 1.55 |
| Total packaging materials used | kg | 11,170.00 |
| Packaging materials used per RMB10,000 of revenue | kg/RMB10,000 | 0.015 |

- The packaging materials we used included sterile bags, polyethylene bags, polyethylene bottles, polyethylene drums, etc. for drug sealing and packaging and cardboard drums and cartons for outer packaging and transportation. We reduced the use of packaging materials in dispensing and encapsulating pharmaceutical preparations while shifting to more environmentally friendly and sustainable packaging materials to continuously implement a green and low-carbon approach and reduce resource waste

- Promoted flexible paperless office practices at all operating locations, digitizing processes like leave application, attendance, and payroll and flexibly using online systems for accident reporting, risk assessment, auditing, etc. to reduce paper use at the source
- Advocated double-sided printing and waste paper recycling to avoid paper waste




Pharmaron UK replaced an old wet cooling tower with a dry cooling tower to save water and reduce chemical usage

Notes:

1. Guided by the target of reducing water consumption per RMB10,000 of output value by 10% in 2025 compared with 2020, the Group implemented water saving initiatives at all our facilities in 2021 such as equipment upgrading and water recycling. The efforts produced positive results, leading to a reduction in the water consumption density from 1.60 tonnes/RMB10,000 in 2020 to 1.55 tonnes/RMB10,000 in 2021, representing a drop of 3.0%;
2. Our packaging materials mainly included paper, cardboard, glass, metal, plastic, PVC, etc.; in 2021, the Group adopted more environmentally friendly and lightweight packaging with a high recycling rate to avoid waste, bringing down the use of packaging materials per RMB10,000 of revenue from 0.086 kg/RMB10,000 in 2020 to 0.015kg/RMB10,000 in 2021, representing 82.6% fewer packaging materials used

# 06

# Social Welfare and Charitable Contribution

In our role as a responsible corporate citizen, we actively engage in public welfare undertakings and maintain long-standing relationships with key non-profit organizations and associations to do our share for building a better society. We encourage employee to volunteer in their spare time to build a team of public-spirited citizens with a sense of mission. We provide funding for universities and research institutes and have set up the Pharmaron Scholarship and the Pharmaron Postdoctoral Fund in many universities and research institutes in China and abroad. We encourage outstanding students to join the top laboratories of their fields and fund their aspirations.

In 2021, Pharmaron made contributions and donations to Beijing Yicheng Cooperative Development Foundation and Zhaoqing Rural Development and Alxa SEE projects to help communities in the field of education, disaster relief, life and health, environmental protection, etc., totaling RMB4 million.

## 6.1 Contributing to Society

# Contributing to Society

## Leveraging the Synergy of Platforms

北京亦城合作发展基金会
康龙健康智慧专项基金管理委员会

Under the leadership of Beijing Yicheng Cooperative Development Foundation, we set up the “Pharmaron Health Wisdom” special fund in 2021 to funnel together resources from partners and capitalize on our industry expertise to support the communities we serve. The fund embodies not only our purpose to contribute the collective wisdom of Pharmaron to helping partners develop new drugs but also our resolution to use the wisdom to contribute to human health and social causes

Through the “Pharmaron Health Wisdom” special fund, we will be donating RMB3 million every year between 2021 and 2025 to support a range of non-profit public welfare projects in science and technology, education, culture, health, sports, environmental protection, etc. to improve people’s life on all fronts. In 2021, we donated RMB3.5 million in cash to Beijing Yicheng Cooperative Development Foundation (including RMB500,000 in original fund and RMB3 million in special fund)

## Important Charitable and Public Welfare Initiatives

| | |
|---|---|
| Natural disaster relief | • To the concern of everyone in China, a heavy rainfall flooded Henan Province in July 2021. We moved to donate RMB1 million to the First Affiliated Hospital of Xinxiang Medical College in the name of "Pharmaron Health Wisdom" special fund to help Henan tide over the challenging time |
| Advancing rural revitalization | • Donated RMB400,000 in November 2021 to support rural infrastructure construction in Zhaoqing City, Guangdong Province, helping it address the most underdeveloped areas of rural living environment and build beautiful villages |
| Supporting education | • Donated RMB1.36 million in "Pharmaron Scholarship" to the College Education Foundation of Chinese Academy of Sciences (CAS) to support the education and research efforts of CAS Shanghai Institute of Organic Chemistry<br>• Engaged in diversified forms of cooperation with well-known universities and institutions, including providing scholarships for colleges and universities such as Shaanxi Normal University, Nankai University, and Ningbo University; setting up Pharmaron lectures at Shanghai Jiao Tong University and Peking University Shenzhen Graduate School, where we made donations and invited internationally renowned scientists to communicate with the teachers and students about cutting-edge academic issues; supporting the postdoctoral studies at Oxford University through the Oxford University Postdoctoral Funding Program; donating to the Philadelphia Organic Chemists' Club to support the academic lectures and promote knowledge exchange and sharing<br>• Donated glassware and other laboratory equipment to local schools in the U.K. to stimulate students' interest in chemical experiments |
| Boosting industry development | • Supported overseas academic conferences to promote exchange between industries. For example, we partnered with the American Chemical Society Green Chemistry Institute Pharmaceutical Roundtable (ACS GCI Pharmaceutical Roundtable) to support green and sustainable chemistry |
| Encouraging employee involvement | • Encouraged employees to donate clothing to charities through UK clothing banks to help those in need |

**Case | Supporting sustainable chemistry and engineering development**

The ACS GCI Pharmaceutical Roundtable is a partnership between the ACS Green Chemistry Institute and a number of pharmaceutical corporations dedicated to catalyzing the adoption of green chemistry and engineering practices in the R&D and production of drugs. As a member, we give full play to our expertise and resources in new drug R&D. We actively contribute our knowledge and experience at roundtable discussions aside from making donations, doing our part to advance the adoption of green and low-carbon concepts in chemistry and engineering.

# HKEX ESG Reporting Guide Content Index

| Aspects | Indicator description | Disclosures | Sections |
|---|---|---|---|
| Aspect A1: Emissions | General Disclosure<br>Information on:<br>(a) the policies; and<br>(b) compliance with relevant laws and regulations that have a significant impact on the issuer<br>relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.<br>*Note: Air emissions include $NO_x$, $SO_x$, and other pollutants regulated under national laws and regulations.*<br>*Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.*<br>*Hazardous wastes are those defined by national regulations.* | Disclosed | Environmental Management<br>Responding to Climate Change<br>Pollution Prevention and Mitigation |
| Aspect A1: Emissions | A1.1<br>The types of emissions and respective emissions data. | Disclosed | Pollution Prevention and Mitigation |
| Aspect A1: Emissions | A1.2<br>Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility). | Disclosed | Responding to Climate Change |
| Aspect A1: Emissions | A1.3<br>Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility). | Disclosed | Pollution Prevention and Mitigation |
| Aspect A1: Emissions | A1.4<br>Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility). | Disclosed | Pollution Prevention and Mitigation |
| Aspect A1: Emissions | A1.5<br>Description of emissions target(s) set and steps taken to achieve them. | Disclosed | Responding to Climate Change |
| Aspect A1: Emissions | A1.6<br>Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them. | Disclosed | Responding to Climate Change |

| Aspects | Indicator description | Disclosures | Sections |
|---|---|---|---|
| Aspect A2: Use of Resources | General Disclosure<br>Policies on the efficient use of resources, including energy, water and other raw materials.<br>*Note: Resources may be used in production, in storage, transportation, in buildings, electronic equipment, etc.* | Disclosed | Resource Conservation<br>Responding to Climate Change |
| Aspect A2: Use of Resources | A2.1<br>Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility). | Disclosed | Responding to Climate Change |
| Aspect A2: Use of Resources | A2.2<br>Water consumption in total and intensity (e.g. per unit of production volume, per facility). | Disclosed | Resource Conservation |
| Aspect A2: Use of Resources | A2.3<br>Description of energy use efficiency target(s) set and steps taken to achieve them. | Disclosed | Resource Conservation |
| Aspect A2: Use of Resources | A2.4<br>Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them. | Disclosed | Resource Conservation |
| Aspect A2: Use of Resources | A2.5<br>Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced. | Disclosed | Resource Conservation |
| Aspect A3: The Environment and Natural Resources | General Disclosure<br>Policies on minimising the issuer's significant impacts on the environment and natural resources. | Disclosed | Environmental Management |
| Aspect A3: The Environment and Natural Resources | A3.1<br>Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them. | Disclosed | Environmental Management |
| Aspect A4: Climate Change | General Disclosure<br>Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer. | Disclosed | Responding to Climate Change |
| Aspect A4: Climate Change | A4.1<br>Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them. | Disclosed | Responding to Climate Change |
| Aspect B1: Employment | General Disclosure Information on:<br>(a) the policies; and<br>(b) compliance with relevant laws and regulations that have a significant impact on the issuer<br>relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare. | Disclosed | Equality and Diversity |

| Aspects | Indicator description | Disclosures | Sections |
|---|---|---|---|
| Aspect B1: Employment | B1.1<br>Total workforce by gender, employment type (for example, full- or part- time), age group and geographical region. | Disclosed | Equality and Diversity |
| Aspect B1: Employment | B1.2<br>Employee turnover rate by gender, age group and geographical region. | Disclosed | Equality and Diversity |
| Aspect B2: Health and Safety | General Disclosure Information on:<br>(a) the policies; and<br>(b) compliance with relevant laws and regulations that have a significant impact on the issuer<br>relating to providing a safe working environment and protecting employees from occupational hazards. | Disclosed | Health and Safety |
| Aspect B2: Health and Safety | B2.1<br>Number and rate of work-related fatalities occurred in each of the past three years including the reporting year. | Disclosed | Health and Safety |
| Aspect B2: Health and Safety | B2.2<br>Lost days due to work injury. | Disclosed | Health and Safety |
| Aspect B2: Health and Safety | B2.3<br>Description of occupational health and safety measures adopted, and how they are implemented and monitored. | Disclosed | Health and Safety |
| Aspect B3: Development and Training | General Disclosure<br>Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.<br>*Note: Training refers to vocational training. It may include internal and external courses paid by the employer.* | Disclosed | Talent Attraction and Retention |
| Aspect B3: Development and Training | B3.1<br>The percentage of employees trained by gender and employee category (e.g. senior management, middle management). | Disclosed | Talent Attraction and Retention |
| Aspect B3: Development and Training | B3.2<br>The average training hours completed per employee by gender and employee category. | Disclosed | Talent Attraction and Retention |
| Aspect B4: Labour Standards | General Disclosure Information on:<br>(a) the policies; and<br>(b) compliance with relevant laws and regulations that have a significant impact on the issuer<br>relating to preventing child and forced labour. | Disclosed | Equality and Diversity |

| Aspects | Indicator description | Disclosures | Sections |
|---|---|---|---|
| Aspect B4: Labour Standards | B4.1<br>Description of measures to review employment practices to avoid child and forced labour. | Disclosed | Equality and Diversity |
| Aspect B4: Labour Standards | B4.2<br>Description of steps taken to eliminate such practices when discovered. | Disclosed | Equality and Diversity |
| Aspect B5: Supply Chain Management | General Disclosure<br>Policies on managing environmental and social risks of the supply chain. | Disclosed | Supply Chain Management |
| Aspect B5: Supply Chain Management | B5.1<br>Number of suppliers by geographical region. | Disclosed | Supply Chain Management |
| Aspect B5: Supply Chain Management | B5.2<br>Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored. | Disclosed | Supply Chain Management |
| Aspect B5: Supply Chain Management | B5.3<br>Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored. | Disclosed | Supply Chain Management |
| Aspect B5: Supply Chain Management | B5.4<br>Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored. | Disclosed | Supply Chain Management |
| Aspect B6: Product Responsibility | General Disclosure Information on:<br>(a) the policies; and<br>(b) compliance with relevant laws and regulations that have a significant impact on the issuer<br>relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress. | Disclosed | Quality Assurance<br>Quality Services<br>Innovation, Research and Development<br>Business Information Security |
| Aspect B6: Product Responsibility | B6.1<br>Percentage of total products sold or shipped subject to recalls for safety and health reasons. | Disclosed | Quality Assurance |
| Aspect B6: Product Responsibility | B6.2<br>Number of products and service related complaints received and how they are dealt with. | Disclosed | Quality Services |
| Aspect B6: Product Responsibility | B6.3<br>Description of practices relating to observing and protecting intellectual property rights. | Disclosed | Innovation, Research and Development |
| Aspect B6: Product Responsibility | B6.4<br>Description of quality assurance process and recall procedures. | Disclosed | Quality Assurance |

| Aspects | Indicator description | Disclosures | Sections |
|---|---|---|---|
| Aspect B6: Product Responsibility | B6.5<br>Description of consumer data protection and privacy policies, and how they are implemented and monitored. | Disclosed | Business Information Security |
| Aspect B7: Anti- corruption | General Disclosure Information on:<br>(a) the policies; and<br>(b) compliance with relevant laws and regulations that have a significant impact on the issuer<br>relating to bribery, extortion, fraud and money laundering. | Disclosed | Business Integrity |
| Aspect B7: Anti- corruption | B7.1<br>Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases. | Disclosed | Business Integrity |
| Aspect B7: Anti- corruption | B7.2<br>Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored. | Disclosed | Business Integrity |
| Aspect B7: Anti- corruption | B7.3<br>Description of anti-corruption training provided to directors and staff. | Disclosed | Business Integrity |
| Aspect B8: Community Investment | General Disclosure<br>Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests. | Disclosed | Contributing to Society |
| Aspect B8: Community Investment | B8.1<br>Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport). | Disclosed | Contributing to Society |
| Aspect B8: Community Investment | B8.2<br>Resources contributed (e.g. money or time) to the focus area. | Disclosed | Contributing to Society |

# List of Laws, Regulations, and Internal Policies

| Category | Title |
|---|---|
| International principles and guidelines | *UN 2030 Agenda for Sustainable Development*<br>*World Medical Association Declaration of Helsinki*<br>*WHO Guidance on Good Data and Record Management Practices*<br>*Data Integrity and Compliance with cGMP Guidance for Industry*<br>*GXP Data Integrity Guidance and Definitions*<br>*ICH International Conference on Harmonization*<br>*Good Manufacturing Practice Guidance for Active Pharmaceutical Ingredients*<br>*ICH Q8 Pharmaceutical Development*<br>*ICH Q9 Quality Risk Management*<br>*ICH Q10 Pharmaceutical Quality System* |
| Chinese laws and regulations | *Criminal Law of the People's Republic of China*<br>*Company Law of the People's Republic of China*<br>*Anti-Unfair Competition Law of the People's Republic of China*<br>*Pharmaceutical Industry Compliance Management Practices*<br>*Good Clinical Practices for Clinical Trials of Drugs ("Drug GCP")*<br>*Good Clinical Practice for Medical Devices ("Device GCP")*<br>*Personal Information Protection Law of the People's Republic of China*<br>*Regulation on the Administration of Laboratory Animals*<br>*Laboratory Animal – Requirements of Environment and Housing Facilities*<br>*Drug Administration Law of the People's Republic of China*<br>*Good Manufacturing Practice (2010 Revision)*<br>*Labor Law of the People's Republic of China*<br>*Labor Contract Law of the People's Republic of China*<br>*Law on the Protection of Minors of the People's Republic of China*<br>*Provisions on Prohibition of Child Labor*<br>*Social Insurance Law of the People's Republic of China*<br>*Payment of Wages Tentative Provisions*<br>*Regulations of Paid Annual Leave of Employees*<br>*Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases*<br>*Environmental Protection Law of the People's Republic of China*<br>*Energy Conservation Law of the People's Republic of China*<br>*Integrated Emission Standard of Air Pollutants*<br>*Law of the People's Republic of China on the Prevention and Control of Water Pollution of the People's Republic of China*<br>*Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes*<br>*Law of the People's Republic of China on the Prevention and Control of Pollution from Environmental Noise*<br>*Emission Standard for Industrial Enterprises Noise at Boundary* |

| Category | Title |
|---|---|
| Chinese laws and regulations | *Law of the People's Republic of China on the Prevention and Control of Environment Pollution Caused by Solid Wastes*<br>*Law of the People's Republic of China on the Prevention and Control of Pollution from Environmental Noise*<br>*Emission Standard for Industrial Enterprises Noise at Boundary* |
| European and American laws and regulations | *US Foreign Corrupt Practices Act*<br>*US Animal Welfare Act*<br>*US Food, Drug and Cosmetics Act*<br>*US Pay Transparency Nondiscrimination Provision*<br>*US Fair Labor Standards Act*<br>*US National Labor Relations Act*<br>*US Energy Policy Act of 2005*<br>*US Occupational Safety and Health Act*<br>*US Clean Water Act*<br>*US Clean Air Act*<br>*US Noise Control Act*<br>*UK Bribery Act 2010*<br>*UK Animals (Scientific Procedures) Act 1986 (Amended 2012)*<br>*UK Employment Rights Act 1996*<br>*UK Equality Act 2010*<br>*UK Children Act 2004*<br>*UK Children (Protection at work) Regulations 1998*<br>*UK Equality Act 2010*<br>*UK Health and Safety at Work Act 1974*<br>*UK Management of Health and Safety at Work Regulations 1999*<br>*UK Environmental protection Act 1990*<br>*UK Environment Act 2021*<br>*UK Control of Pollution Act 1974*<br>*UK Waste (England and Wales) Regulations 2011*<br>*UK Control of Noise at Work Regulations 2005* |
| Internal policies and regulations | *ESG Management Measures*<br>*ESG Information Management Handbook*<br>*Anti-Fraud and Whistleblowing Regulations*<br>*Code of Ethical Conduct* |

| Category | Title |
|---|---|
| Internal policies and regulations | *Integrity and Compliance Pledge*<br>*Employee Handbook*<br>*Information Security Management Policy*<br>*Information Asset Risk Assessment Management Regulations*<br>*Employee Information Security Handbook*<br>*Information Security Incident Management Regulations*<br>*IT Network and System Security Management Regulations*<br>*Daily Operation Safety Management Regulations*<br>*IT Physical and Environmental Security Management Regulations*<br>*Information System Access Control Management Regulations*<br>*Confidential Information of Clinical Trial Subjects*<br>*Ethical Submission*<br>*Laboratory Animal – Requirements of Environment and Housing Facilities*<br>*Quality Manual*<br>*Quality Guidelines*<br>*Standard Operating Procedure for Product Recall*<br>*Regulation on Information Security and Confidentiality of Pharmaron*<br>*Pharmaron IP Handbook*<br>*Standard Operating Procedure for Customer Complaints*<br>*Supplier Code of Conduct*<br>*Procurement Management Regulations*<br>*Supplier Management Regulations*<br>*Code of Ethical Conduct*<br>*Performance Evaluation Regulations*<br>*Promotion Regulations*<br>*Occupational Hazard Warning and Notification Management Procedures*<br>*Environmental Protection Management Procedures*<br>*Environmental Inspection Management Procedures*<br>*Environmental Pollution Incident Management Procedures*<br>*Environmental Factor Identification and Evaluation Procedures*<br>*Emergency Response Plans for Environmental Emergencies*<br>*Wastewater Treatment Station Management Procedures*<br>*Waste Management Procedures*<br>*Exhaust Gas Control Management Procedures*<br>*Environmental Pollution Accident Emergency Rescue Plan*<br>*Operating Instructions for Clean Production*<br>*Statistical Energy Management Procedures* |

# Suggestions and Comments

Thank you for reading the Group's 2021 Environmental, Social and Governance Report. We would love to receive your feedback so that we can provide you and all the other stakeholders more valuable information while moving forward in our overall ESG performance. You can send us your feedback in the following ways:

Address: 6 Tai-He Road, Beijing Economic Technological Development Area, Beijing, China

Post code: 100176

Email: pharmaron@pharmaron-bj.com

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

A Government B Regulators C Shareholders D Customers E Employees

F Suppliers and partners G Community H The public and media

2. Do you think this report addresses all your concerns about the Group? _____

A Yes B No (What do you think should also have been disclosed in this report?)

3. Do you think the Group has well responded to all your expectations? _____

A Yes B No (Which of your expectations do you think are not well responded to?)

4. Do you think the content and design of this report make it a friendly read? _____

A Very friendly B Friendly C Average D Unfriendly

5. Do you have any other comments or suggestions on the Group's ESG performance or this report?

Thank you again for your time!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