PharmaEngine
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2023 Sustainability Report

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About the Report

Description of the Report

The Company believes environmental sustainability, social responsibility and integrity management are the basic principles and core values of an enterprise recognized by the international community. To enhance stakeholder communication, PharmaEngine published the first 2011 Corporate Social Responsibility Report in 2012 (renamed to Sustainability Report in 2021) and this year is the 13th consecutive year of publishing such report. The Company commits to continue issuing sustainability reports to fully disclose our continuous planning and achievements in enhancing integrity management, social responsibility, and environmental sustainability.

Report Content and Guidelines for Follow-up

This report is written in accordance with the GRI Standards (2021) issued by the Global Reporting Initiative (GRI), SASB Standards by Sustainability Accounting Standards Board and Tack Force on Climate-related Financial Disclosures (TCFD). The information covers various units of the Company.

To implement environmental protection, only an electronic version of the announcement is available. Please download the PDF file from the official website: 2023 Sustainability Report

Information Recompilation and Report Change

Compared with previous reports, this report has no significant changes in the scope of the categories and themes, and there is no recompilation of information.

Scope and Boundary

The reporting period is from January 1, 2023 to December 31, 2023, and the scope of the information disclosed is mainly related to the operation activities of PharmaEngine in Taiwan.

External Assurance/Assurance

The statistical data disclosed in this report were based on financial statements certified by PricewaterhouseCoopers (PwC) Taiwan. Limited assurance about the partial information of this report was conducted by PwC Taiwan in accordance with the Assurance Engagements Other than Audits or Reviews of Historical Financial Information of the ISAE3000 principles, published by the Accounting Research and Development Foundation, and the said assurance report can be found in appendix 4 of this report.

Date of Issuance

2023 Report/August 2, 2024 (2022 Report/ September 1, 2023)

Feedback

If you have any questions about the 2023 PharmaEngine Sustainability Report, you are welcome to contact us and help us continue to improve.

Contact us>>>

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Tel: 886-2-2515-8228

Message from the President & CEO

Hong-Ren Wang, Ph.D.

In the past few years, the world has been experiencing the effects of climate change. We have seen severe droughts and floods happening at the same time. We have also seen wildfires in North America, Europe and Australia become harder to control. The severe change in temperature has traumatic effects on animals and their habitats. As a member of this beautiful planet, PharmaEngine believes immediate actions and drastic changes need to happen for us to maintain the existing ecosystem.

When PharmaEngine ponders about "Our Mutual Future", a very important topic in the sustainability community, our focus is on the R&D of new drugs for oncology treatments through innovative technology with the aim to improve patients' quality of life and meet the medical demand of patients around the world. Our current commercial product ONIVYDE has successfully been expanded for the first-line treatment of metastatic pancreatic ductal adenocarcinoma (PDAC), benefiting more patients in need. In addition, our new drug project, PEP07, which is an oral small-molecule CHK1 inhibitor, has made significant progress as both phase 1 clinical trials for hematologic cancers and solid tumors had patient dosed. Other projects on the pipeline have also made scientific breakthroughs in the early discovery and preclinical stages. We believe this is PharmaEngine's most direct way in keeping our commitments to sustainability which is to use our innovative strengths in new drug R&D to fulfill unmet medical needs in the oncology field, hoping to extend the patients' life, improve quality of life, and help build a healthier future.

In the process of building a sustainable business, employees have been one of PharmaEngine's most important assets! We strongly value the health and the balance of life and work of our employees. In 2023, PharmaEngine held many relative activities throughout the year such as Walk for Love, in which we began a walking/hiking competition within the company, encouraged employees to adopt the habit of exercising, and promised to transfer the accumulated total step count of the whole company into New Taiwan Dollar and donate to cancer charities. We also combined the cultural and environmental elements into our walking/hiking activities as we walked around in the traditional Taiwanese town, Dadaocheng, hiked in Fuyang Eco Park, strolled around in Lin An-Tai Historic Mansion, and more. These events helped us stay healthy while gaining a deeper understanding and appreciation of Taiwanese traditional culture and the history of Taipei. Moreover, we had many employee care and growth activities such as the "Happy Learning Club", a seminar to learn how to reduce plastic wastes, a class to learn how to make shampoo bars, and a team-building event to learn how to communicate effectively and efficiently. These events provided coworkers a chance to share environmental, work-, or life-related knowledge with each other to broaden the horizon.

This year, based on our competitive advantage, we reintroduced six core values: **Sense of Urgency, Critical Thinking, Diversity, Continuous Learning and Growth, Work and Life Balance,** and **Teamwork**. These six core values represent our company culture and the values and attitudes shared by all PharmaEngineers.

PharmaEngine's conviction is continuing to hold true to our core values without setting limitations as we believe the future is filled with immense possibilities! We will continue to do our part in social responsibility, commit to our vision of corporate sustainability, promote change, move toward achieving our goal to become the most professional and innovative new drug development company that specializes on oncology therapies in Asia, and bring new oncology treatment options to patients.

1.1 Company Profile

PharmaEngine, Inc. began operations in February 2003. PharmaEngine is a networked pharmaceutical company that operates according to the "Virtual Pharmaceutical Company Business Model" to focus on new drug development and lower related risks. PharmaEngine focuses on oncology therapies.

Our commercial product, ONIVYDE®, is a cancer medicine that blocks an enzyme called topoisomerase I, which is involved in copying cell DNA needed to make new cells. By blocking the enzyme, cancer cells are prevented from multiplying and eventually die.

We also have another project, PEP07, a CHK1 inhibitor, compared with both domestic and international peers, it has features such as high potency, high kinase selectivity, oral bioavailability, and brain penetrating.

PharmaEngine continues to provide ONIVYDE® in the Taiwan market and establish a drug safety reporting system to ensure patient medication safety, while aggressively develops new projects in our pipeline.

PharmaEngine also conducts, collaborates or licenses-in early-stage new drug discovery and development projects with international partners. With extensive experience in drug development and project management, we continue to promote and expand our pipeline and accelerate drug development and the subsequent commercialization of new medicines.

Primary Brands, Products, and Services

The Company is mainly engaged in the development of new drugs. ONIVYDE® is currently used as the regimen for the treatment of metastatic pancreatic cancer following gemcitabine-based therapy and has received marketing approvals in the US, Europe, and Asia and many more countries around the world. On expanding applications, the ONIVYDE® regimen (NALIRIFOX) for 1L PDAC has received sNDA approvals from the US, Australia, Taiwan, and the EU and has been launched in Germany in the first half of 2024.

One of our new projects, PEP07, is a checkpoint kinase 1(CHK1) inhibitor, has began Phase 1 clinical trials in Taiwan and Australia for hematologic cancers and Phase 1 clinical trials for solid tumors just had the first patient dosed in April 2024.

PharmaEngine continues to focus on developing new drugs for oncology therapy and expand our pipeline using AI platforms.

Nature of Ownership

The Company is established under the laws of the Republic of China and it complies with the laws and regulations of the Republic of China on corporate governance, environmental protection, labor, human rights, products, and accounting.

The main operating activities are concentrated in Taiwan, but have been extended to Europe, the Americas, and Asia through preclinical or clinical trials of new drug development.

Cultural Walk: Lin An-Tai Historic Mansion

For more information about PharmaEngine, click to visit our company website.

Scale of Reporting Organization (as of Dec. 31, 2023)

Name	PharmaEngine, Inc. (Stock Code: 4162.TWO)
Location of organization's HQ	11F, 10 Minsheng E. Road, Sec. 3, Taipei 104, Taiwan
Employees	36
No. of operational locations	1
Net sales (2023)	767,669 (Thousand NTD)
Paid-in capital	1,456,782 (Thousand NTD)
Product	安能得®(ONIVYDE®)

Markets

New Drug Development Project	Sales (Supply) Region	Customer and Beneficiary Type
安能得® (ONIVYDE®)	Authorized the right to develop and sell ONIVYDE® product in Asia (excluding Taiwan) and European region to IPSEN S.A.. Sales in Taiwan are handled by PharmaEngine.	ONIVYDE® is a novel and stable encapsulated form of the marketed chemotherapy drug irinotecan in a long-circulating nanoliposome for the treatment of 1L PDAC patients and PDAC patients who have been previously treated with gemcitabine-based therapy.
PEP07	PharmaEngine exercised the option for a Worldwide Exclusive License Agreement for PEP07 from UK-based Sentinel Oncology in 2022.	PEP07 acts as a checkpoint kinase 1 inhibitor (CHK1 inhibitor) in the DDR mechanism. It could be applied in AML, MCL and metastatic solid tumors.

Note: Currently, the Company's products and services have not been prohibited in any specific markets, hence it has not been a major theme asked by stakeholders or engaged in public discussions.

Company Strategy

01 Focus on new drug R&D model

02 Establish a new competitive and diverse drug production line

03 Establish a cohesive international R&D team

04 Strengthen international cooperation to tap into global new drug development resources

05 Accelerate the completion of new drug development and marketing

Short-term Business Plan

Administration and Management

- Proactively recruiting international talents
- Integrate international resources and select eligible partners to establish a long-term collaboration relationship for our global new drug development plan

Marketing Planning of ONIVYDE®

- Accomplish marketing plans and sales target in Taiwan
- Continue to advance 1L PDAC marketing and sales strategy

Project Development

- **Project of PEP07**
  >>Aggressively implement PEP07 Phase 1 clinical trials for both hematologic and solid cancers
  >>Continue to move forward with multiple hematologic and solid tumors preclinical trial efficacy testing and biomarker discovery
- **Other Research Projects**
  >>Accelerate the screening and pre-clinical development plan of new drug candidates

R&D strategy

- Aggressively in-licensing new drug projects that meet the criteria of business strategy and core competence of PharmaEngine
- Accelerate the launch of new drug products by international collaboration
- Enhance the Company's own R&D capacity with the help of diversified and innovative drug R&D platform collaboration models (such as AI new drug development platform)

Long-term Business Plan and Vision

◆ Adopting the business model of "Virtual Pharmaceutical Company" and reinforcing the collaboration with international partners to establish an international R&D team.
◆ Expand and advance R&D projects on the pipeline.
◆ Actively training and nurturing R&D personnel of the Company, improving the techniques in new drug development, and achieving the sustainable growth of the Company.
◆ Our Vision: **To become the most professional and innovative new drug development company, which specializes on the medical treatment of cancers, in Asia.**

1.2 Economic Performance

Financial Performance

Unit: NT$ Thousands

Item / Year	Operating Revenue	Operating Cost (Cost of Goods and Expenses)	Operating Income	Non-operating Income and Expenses	Profits before Income Tax	Profits for the Year	Basic Earnings per Share (EPS) (NTD)
2022	654,383	371,644	282,739	109,726	392,465	318,783	2.22
2023	767,669	490,486	277,183	60,791	337,974	274,650	1.91

Direct Economic Value Generated and Distributed

Unit: NT$ Thousands

Stakeholders	Calculation of Economic Value	2022	2023
Shareholders	Cash dividend	387,711	287,194
Employees	Payroll, employee stock options, labor and health insurance, pension, directors' remuneration and other employment costs	113,815	115,537
Government	Corporate income tax	140,859	92,352
Licensors and Contract Research Organization	Drug development cost	112,080	199,651

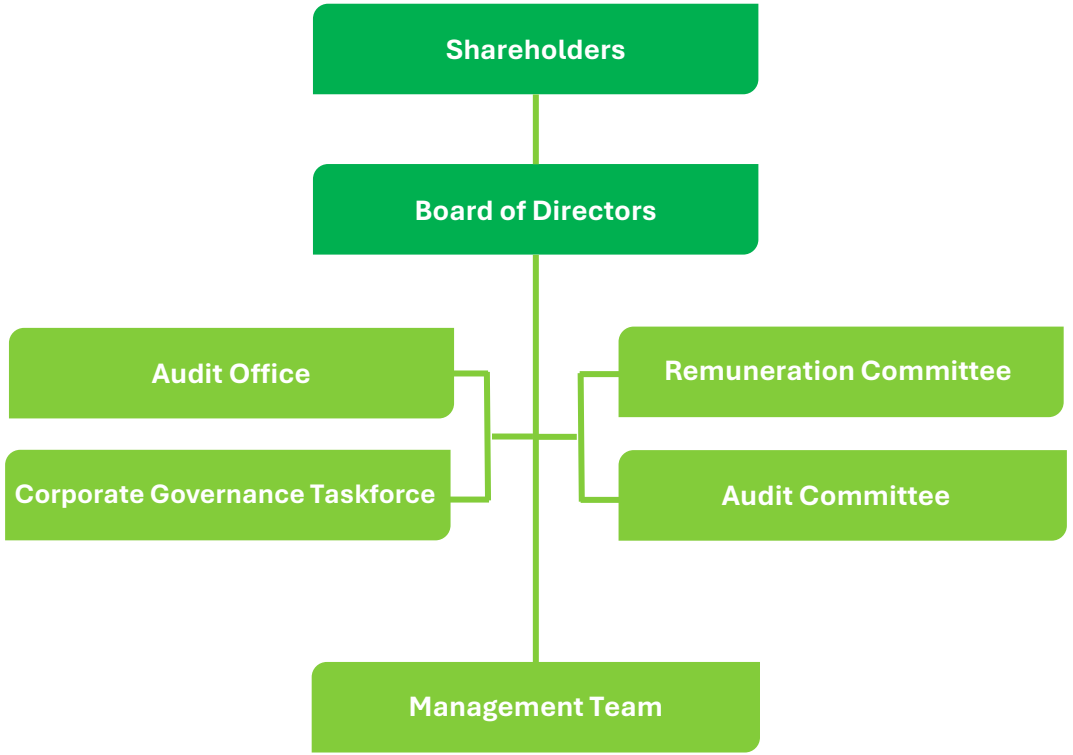
Note: The Company did not receive government subsidies for the fiscal year of 2022 and 2023.

Tax

PharmaEngine only has one operational location. As the operational location, which is the Company's HQ, located in Taiwan, we abide by all tax laws and regulations in Taiwan. To manage risks in taxation, the accounting personnel communicates closely with the accountants to regularly monitor international taxation trends.

1.3 Corporate Governance and Board of Directors

Governance Structure



Click here for more information regarding our corporate governance.

Board of Directors Duties

PharmaEngine's board of directors should guide corporate strategies, monitor management, take responsibility for company shareholders, arrange and execute various corporate governance operations. The board of directors should exercise power within the premise of laws and regulations, articles of incorporation and shareholders' resolutions. The Board is the highest governing body overseeing the Company's impacts on the economy, environment, and society, as well as the Company's risk management policies and procedures, scope, organization structure and operation status.

Board of Directors Nomination, Election and the Current Board

It is specified in the "Articles of Incorporation" that the election of directors follows the candidate nomination system and in the "Corporate Governance Best-Practice Principles" that the composition of the Board of Directors shall be diversified and the diversification policy shall be prepared in terms of the Company's operation, operational pattern, and developmental demand and shall cover, without limitation, the basic requirements and values and professional skills and Knowledge.

Election of directors follows the candidate nomination system and is based on the "Procedures for Election of Directors". In addition, the Company defined the "Board of Directors Performance Evaluation Guidelines" on March 19, 2015. Through the performance evaluation items, including the management over the Company's goals and tasks, awareness of responsibilities, involvement in operation, internal relations management and communication, professional functions and continuing education, internal control, and expression of specific opinions, etc., the validity of the operation of the Board of Directors is confirmed and the performance of directors is served as reference in future director screening. The operational performance of the Board of Directors and functional committees is evaluated every year.

The 9 members of the 8th intake of Board of Directors (including 3 independent directors), in general, specialize in statistics, medicine, pharmacology, biotechnology, accounting, law, and corporate management. The composition of the Board of Directors meets the operational and developmental demand of the Company. In particular, Independent Director Chih-Li Wang is a professional CPA and has had worked as a CPA for more than 20 years.

Board of Directors

Name	Role	Main Education and Experience Background
Jan-Yau Hsu	Chairperson, representing TTY Biopharm Co. Ltd.	Mr. Hsu had previously served as Minister in Directorate General of Budget, Accounting and Statistics Executive Yuan, Minister without Portfolio in Executive Yuan and The Chairman of Taiwan Stock Exchange. He received his Master's degree in Statistics at National ChengChi University.
Kerry Hsu	Director, representing TTY Biopharm Co. Ltd.	Ms. Hsu is the Senior Vice President of WT Microelectronics Co., Ltd.. She received her Bachelor's degree in Land Economics from National Chengchi University.
Rui-Wen Wu	Director, representing TTY Biopharm Co. Ltd.	Mr. Wu is the Senior Director of the Secretariat Division of Board of Directors in TTY Biopharm Co., Ltd.. He received his master in Department of Law at Chinese Culture University, Taipei, Taiwan.
Ming-Shiang Wu, M.D., Ph.D.	Director, representing The National Development Fund, Executive Yuan	Professor Ming-Shiang Wu received his Ph.D. degree at Graduate Institute of Clinical Medicine College of Medicine National Taiwan University. He is the superintendent of National Taiwan University Hospital (NTUH), Distinguished Professor & Chair for the Department of Internal Medicine of College of Medicine (NTU), President of the Gastroenterological Society of Taiwan, and Secretary General of Taiwan Society of Internal Medicine. He was previously the vice superintendent of NTUH and the director of Internal Medicine department of NTUH.
Yi-Hui Lin	Director, representing The National Development Fund, Executive Yuan	Mr. Lin is Director of Audit Affairs at National Development Fund, Executive Yuan. He received his Master's degree in Public Policy at National Taipei University.
Ming-Feng Hou, M.D.	Director	Dr. Ming-Feng Hou is a distinguished professor in the Division of Breast Oncology and Surgery, Department of Surgery of Kaohsiung Medical University Hospital, Professor of Department of Biomedical Science and Environmental Biology, College of Life Science, Kaohsiung Medical University. Previously, Mr. Hou was the Superintendent of Kaohsiung Medical University Chung-Ho Memorial Hospital, Kaohsiung Municipal Hsiao Kang Hospital, Kaohsiung Municipal Ta-Tung Hospital. Mr. Hou received his Doctor of Medicine from Kaohsiung Medical University.
Chih-Li Wang	Independent Director	Mr. Wang is an accountant at Moores Rowland CPAs. He received his Bachelor's degree in Accountancy from Soochow University.
Ming-Daw Chang	Independent Director	Mr. Chang was previously the Chairperson of Bank of Panhsin. He received his Master's degree in Department of Law at Chinese Culture University, Taipei, Taiwan.
Chien-Huang Lin, Ph.D.	Independent Director	Professor Chien-Huang Lin received his Ph.D. degree at Graduate Institute of Pharmacology and EMBA degree at National Taiwan University. He is a professor at the Graduate Institute of Medical Science, TMU. He was previously the president, vice president, dean of Academic Affairs, dean of R&D Office of TMU to name a few. Currently, he is also the board member of National Applied Research Laboratories, and the board member of Center of Drug Evaluation, Taiwan. In addition, he's also the director of Institute for Biotechnology and Medicine Industry, Taiwan.

Note: None of the directors of the Company holds concurrent posts as employees or managers.

Click here for more information regarding our Board of Directors.

Board Diversity

Name	Role	Gender	Age	Term	Operation decision-making/ Management	Accounting/ Finance/Legal	Business Management	Crisis Management	Industry Knowledge/ Expertise	International Market/ Macroeconomy	Organizational Leadership
Jan-Yau Hsu	Chairperson	Male	70-79	<3 years	V	V	V	V	V	V	V
Rui-Wen Wu	Director	Male	50-59	3-6 years	V	V	V	V	V	V	V
Kerry Hsu	Director	Female	50-59	<3 years	V	V	V	V	V	V	V
Yi-Hui Lin	Director	Male	40-49	3-6 years	V	V	V	V		V	
Ming-Shiang Wu M.D., Ph.D.	Director	Male	60-69	<3 years	V		V	V	V	V	V
Ming-Feng Hou, M.D.	Director	Male	70-79	<3 years	V		V	V	V	V	V
Chih-Li Wang	Independent Director	Male	60-69	3-6 years	V	V	V	V	V	V	
Ming-Daw Chang	Independent Director	Male	70-79	<3 years	V		V	V	V	V	V
Chien-Huang Lin, Ph.D.	Independent Director	Male	50-59	<3 years	V		V	V	V	V	V

Board Diversification Policy

We aim to include more diversity in our Board of Directors. We have set a Board Diversity Policy which states that for the composition of the board, there should be at least one expert in each of the following fields: statistics, medicine, pharmacology, biotechnology, accounting, law, corporate management, and corporate governance. We also added one female board member for the 8th term. Our mid- to long-term goal is to have at least 1/3 of board seats be female directors.

Click here for more information regarding Board Diversity Policy.

Board of Directors Operations

In order to implement corporate governance and improve the operational efficiency of the board of directors, and promote the actual participation of directors in the Company's operating decisions, the Company has formulated relevant articles of association in accordance with the "Regulations Governing Procedure for Board of Directors Meetings of Public Companies ". In accordance with the regulations, the Board of Directors shall convene at least once a quarter and arrange for an internal audit manager and certified accountants to regularly participate in communication to understand and supervise the implementation of operating plans, important financial business reports, internal audit business reports and their tracking status, as well as whether the Company's overall operations comply with relevant laws and regulations. A total of 4 board meetings were held in 2023.

Abiding by Guidelines for Ethical Behaviors

In order to align the conduct of the Company's directors and managers with ethical standards and make the Company's stakeholders more aware of the Company's ethical standards, according to the "Guidelines for the Adoption of Codes of Ethical Conduct for TWSE/ TPEx Listed Companies", relevant guidelines are set to regulate directors and managers to prevent conflicts of interests, avoid opportunities for personal interests, maintain confidentiality, fair trade, protect and properly deploy company assets, and comply with decrees etc.

★ In 2023, there were no major issues raised by stakeholders through the official channel or any other procedures.

Avoiding Conflicts of Interest

The directors of the Company adhere to a high degree of self-discipline. When facing conference matters that are detrimental to the Company but may pose as conflicts of interests for the director and the legal entity they represent, the directors may state their opinions and answer questions but must not join the discussion and the voting. At the same time, they should not act as the proxy for other directors to exercise their voting rights.

★ In 2023, there was 1 proposal involving personal interests of 6 directors. The directors involved avoided discussions and the voting.

Director Training

To enhance the professional knowledge of the directors and implement corporate governance, the Company introduces the management teams and the company profile to the newly elected board. The Company proactively provides information on the professional curriculum to the directors, encourages them to participate in such courses, and follows the requirements of “Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEx Listed Companies”, the further educations are arranged based on the regulated hours.

★ In 2023, the total number of training hours for all directors was 93 hours.

Board of Directors Effectiveness Evaluation

External Evaluation

In November 2021, the Company entrusted the Taiwan Corporate Governance Association as an external organization to evaluate the efficiency (including performance) of the Board of Directors in 2021 (Dec. 1, 2020 to Nov. 30, 2021). In addition to review relevant documents provided by the Company for evaluation, the Association appointed three experts to the Company for an on-site visit on Jan. 21, 2022, in which the experts interviewed the Chairperson, President, Independent Directors, the Supervisor of Corporate Governance, the Supervisor of Finance & Administration and the Audit Office. The performance evaluation report of the efficiency of the Board of Directors was issued on Feb. 7, 2022. The evaluation results have been completed and reported at the board meeting on Mar. 8, 2022. The general comments and recommendations of the evaluation results are summarized as follows:

- It is recommended that the Company considers reducing one non-independent director seat and add one independent director seat for the composition of the next term of Board of Directors. It is also recommended that the Company considers setting up a non-statutory functional committee.
- It is recommended that the Company formulates an integrated "Risk Management Policy and System" that is more in line with the Company's needs.
- It is recommended that the Company optimizes the disclosure of corporate governance information on the website, sets up a corporate governance section on the official website, and regularly reviews and continuously updates it to provide more information to shareholders and stakeholders.

Internal Evaluation

Internal assessment results of the performance evaluation for the Board of Directors, the Remuneration Committee, and the Audit Committee were reported in the Board of Directors' meeting held on Feb. 29, 2024. Recommendations for improvement and reminders are compiled and reported as follows:

- Under the leadership of the current chairperson, corporate governance continued to excel.
- The Board of Directors continued to operate smoothly in implementing strong corporate governance and safeguarding the rights and interests of shareholders.

Directors' Compensation Policy

Policy and Procedure

When the directors of the Company perform duties for the Company, regardless of the Company's operating profit and loss, the Company pays the remuneration. The Board of Directors is delegated with the authorization to decide on the remuneration based on the extent of their participation in and contribution to the Company's operations, with reference to the level of industry peers so the pay is comparable to that of most companies in the same industry. In accordance with the provisions of Article 25 of the Articles of Incorporation, if the Company is profitable for the year, it shall be subject to a resolution of the Board of Directors and set aside no more than 2% for the compensation of directors.

The compensation for executing the business is reviewed by the Remuneration Committee and submitted to the Board of Directors for approval. Annual earnings distribution by the Remuneration Committee is based on the value of each director's participation and contribution to the Company, a proposal for earnings distribution will be proposed and submitted to the Board of Directors for approval.

For more information regarding our salary policy, please visit our company website.

Audit Committee

The Audit Committee consists of three members, all independent directors. The meeting is held at least once every quarter. In 2023, 4 meetings were convened. The Audit Committee duties are as follow:

- Establish or amend internal control system in compliance with Article 14-1 of the Securities and Exchange Act
- Validity assessment of the Internal control system
- Establish or amend procedures of major financial or operational actions such as acquisition or disposal of assets, engaging in derivatives trading, extension of monetary loans to others, and endorsements or guarantees for others in compliance with Article 36-1 of the Securities and Exchange Act.
- Matters involving the directors' own interests
- Significant asset or derivatives transactions
- Significant monetary loans to others, endorsements or guarantees
- Raising, issuing or private placement of equity-based securities
- Appointment and dismissal of CPAs
- Appointment and dismissal of financial supervisors
- Annual financial report signed or sealed by the chairperson, general manager and accounting supervisor, and financial report that must be reviewed by a CPA
- Business report
- Other material matters deemed by the Company or regulatory authorities

Remuneration Committee

The Remuneration Committee consists of three members, all independent directors. The meeting is held at least once every quarter. In 2023, 2 meetings were convened. The Remuneration Committee supervises the following:

- Regularly review the organization rules of the Remuneration Committee and propose recommendations on amendments.
- Establish and regularly review the policies, systems, standards, and structures of salary and remuneration.
- Establish and regularly review the performance evaluation standards for directors and managers, and annual and long-term performance targets.
- Regularly assess the attainment of the performance goals of the directors and managers of the Company and determine the details and amount of individual salary and remuneration based on the evaluation results obtained from the performance evaluation standard.
- The proportion of short-term performance bonuses issued to directors and senior managers and the payment time of partial changes of salary and remuneration.

Click for more information regarding our functional committees.

Communication with Independent Directors

1. PharmaEngine's Director of Finance & Accounting, internal audit manager , and certified accountant physically attend the board meetings so the independent directors can communicate with any one of them at any time. Independent directors can also provide suggestions at the board meeting and the suggestions are recorded in the meeting minutes.
2. Independent directors and internal audit manager hold at least one meeting per year to fully discuss over and give suggestions on our internal control system and our internal and external audit topics and keep a written record.
3. When the internal audit manager completes monthly audit report, the report will be handed to the members of the Audit Committee (independent directors) before the end of the following month for review. The result of the internal audit report is reported to the Audit Committee (independent directors) and the Board of Directors periodically. The Audit Committee (independent directors) reviews our implementation of internal control and audit and results from self-inspection. The Audit Committee also regularly reviews the financial reports and provide audit reports.
4. Internal audit manager complies with regulations and attends the Audit Committee meeting to report on matters such as the implementation of internal audit tasks, audit personnel training, and major inspection issues and improvements both internally and externally.
5. If the Audit Committee members (independent directors) have questions or assigned tasks after reading the audit report, they will contact the internal audit manager via email or telephone or any other appropriate methods.
6. The Audit Office should track the implementation progress of the improvement of internal control deficiencies and abnormal matters in the audit report monthly and prepare tracking reports on a quarterly basis and submit them to each Audit Committee member.
7. The accountant should report to the independent directors at least once per year on our finances, the overall operation, and the implementation of internal control inspections. The accountant should fully communicate with the Audit Committee members (independent directors) alone whether there are any major adjusting items or legal amendments that affect the accounting procedure. The accountant should report the review or the results of the review of the financial statements for the quarter at each quarterly Audit Committee meeting, as well as communicate matters required by relevant laws and regulations.
8. PharmaEngine's internal audit manager and accountant and Audit Committee members (independent directors) can understand our operations and audit matter through the regular audit report presented in the Audit Committee meetings, the Board of Directors meetings and by the Audit Office. Independent directors can conduct efficient communication with the internal audit manager and the accountant via various channels such as the telephone, email, and virtual meetings.

Board Oversight of Sustainability Matters

In addition to the establishment of Corporate Governance Taskforce, the appointment of the Corporate Governance Supervisor, the Board also reviews the annual sustainability report. The Corporate Governance Supervisor will report to the Board of Directors regarding sustainability and ESG matters, key issues, and ESG goals and activities for the following year at least once a year.

PharmaEngine builds a corporate culture and sound development for integrity management and provides a reference framework for good business operations. It also handles regular businesses in accordance with the principles of the listed companies' corporate governance practices and maintains good corporate governance concept in its daily operations. In addition to reduce the possibility of corporate financial crisis, it also protects the rights of investors and creditors and fosters long-term quality and competitiveness of good companies.

Corporate Governance Officer

The Company passed the resolution at the board meeting on May 2, 2019, on the appointment of **Vice President ChiHsing Chang of the Corporate Development Department** as the supervisor of corporate governance, responsible for related corporate governance businesses, safeguarding shareholders' interests and strengthening the functions of the Board of Directors. Vice President Chang has the qualification of certified public accountant and has over 20 years of experience in managing matters including financial accounting and deliberation of public companies. His main duties are:

1. Carrying out matters related to the Board of Directors and shareholders' meetings in accordance with the law and assisting PharmaEngine in complying with relevant regulations regarding the Board of Directors and shareholders' meetings.
2. Creating the minutes of board of directors and shareholders' meetings.
3. Providing the necessary information for the directors and independent directors to carry out their duties, continuous training, and keeping them informed about the latest regulatory developments related to PharmaEngine's operation to assist them in compliance with the laws and regulations.
4. Matters related to investor relations.
5. Publish material information and announcements.
6. Other matters as stipulated in the Articles of Incorporation or agreements.

Sustainability Promotion Taskforce

The Company established the “ESG Working Group” in October 2020, later the name changed to “Sustainability Promotion Taskforce” in March 2022. The Vice President of Corporate Development and Corporate Governance Supervisor serves as the convener and appoints the executive secretary and teams in charge of corporate governance, environmental sustainability, employee care, social involvement, and product service. The Taskforce is responsible for identifying sustainability issues concerning the Company’s operation and on which stakeholders focus, preparing short-term, mid-term, and long-term sustainable development plans and working directives, appropriating budget concerning respective organizations and sustainable development, planning and implementing annual plans and tracking their implementation effectiveness to make sure that the sustainable development strategy is fully consolidated as part of the daily operation of the Company.

ChiHsing Chang
Vice President/Corporate Governance Supervisor

Click for more information regarding our Sustainability Promotion Taskforce.

2023 Corporate Governance Achievements (Annual Corporate Governance Evaluation for TPEx Companies, 2021-2023)

2023 Corporate Governance Improvements

01	Established cyber security policies, launched new company website, and obtained ISO27001 Information Security certification with third-party verification.
02	Recorded questions asked by shareholders in 2023 AGM and included in the 2023 AGM Meeting Minutes.
03	Uploaded non-edited video recordings for AGM and investors' conferences (at least once a year).
04	Assessed the independence and eligibility of certified accountants regularly using Audit Quality Indicators (AQIs).
05	Uploaded the previous month's insider share-holding changes onto MOPS on the 10th of every month.
06	Disclosed the Company's GHG emissions inventory (scope 1& 2), water usage, and waste generated data for the past two years (2021 & 2022) and obtained third-party assurance.
07	Invested resources to support local cultural development

1.4 Risk Assessment and Crisis Management

Risk Identification

Risk Item	Potential Risk	Probability of Occurrence	Degree of Impact
Drug Research	The timeliness, stringency, and innovation of the R&D process do not meet the requirements for drug approval in various countries.	Medium	High
Climate Change/Accidents/ Disasters	Earthquake/fire/flood/blackout	Low	High
Cyber Security	System error	Medium	Medium
	Confidential information leakage	Low	High
	Information system hacked	Medium	High
Regulation Compliance	Infringement of the intellectual property rights of others, doubts about the safety of listed drugs	Medium	High
Finance/Taxation	Huge changes in interest rates and exchange rates	Medium	Medium
Human Resources	Talent loss/poor health of employees/occupational hazards	Low	Medium
Operation Management	Poor corporate image	Low	High
Corporate Governance	Significant changes in government regulations	Low	High
Business	Unstable supply of medicine/improper management of outsourced suppliers/counterfeit drugs	Low	High
Quality Policy	New drug quality violates GXP standards	Low	High
Adverse Drug Reaction Notification	Fail to report adverse drug reaction to authorities	Low	High
Drug Safety	Commercial drug causes adverse reaction but fail to report to authorities	Low	High

New Drug Development Risk Management

01	Evaluation and introduction of new projects
02	Implementation of project management
03	Quality management
04	Process development control
05	Pharmacology and toxicology research management
06	Clinical research management
07	Regulatory inspection and registration management
08	Project results management
09	New product development
10	Document maintenance and preservation operations

Risk Management Responsibility by Department

Department	Risk Management Responsibility
Audit Committee	Review risk management policies and their implementation.
President & CEO Office	Risk management of business decision-making, intellectual property rights, and product quality.
Audit Office	Risk management of internal control and internal audit-related matters.
Clinical & Regulatory Affairs	Risk management of research and development of clinical trials, pharmaceutical compliance, and product registration.
Corporate Development	Risk evaluation of new drugs research from competitors and new project introduction, and risk management of sales market after product launch.
Finance & Administration	Risk evaluation management of financial matters, response strategy implementation, operations, and information security evaluation.
Research & Development	Risk management of pre-clinical animal pharmacology, toxicology, pharmacokinetics and clinical trials-related research, external research and development resource management and project planning, implementing, and controlling-related matters, new drugs research and development, manufacturing, and analysis.
Marketing & Sales	Risk evaluation management of products-related supply, marketing, or sales and account-related matters.

Implementation of Risk Evaluation Criteria

The Company's management team reported the 2023 risk management (including cyber security risk management) to the Board of Directors on October 30, 2023 on topics such as risk management policy and procedure, risk management scope, risk management organization structure, and implementation of risk management measures. In 2023, in addition to the general risk management operation, the Company also implemented multiple risk management-related projects such as cyber security management and compliance with amendments of regulations and more. The Company began the process of adopting ISO27001 information security management system and successfully obtained the certification in January 2023. Moreover, the Company passed the information security management system (ISO/IEC ISO27001:2013) verification review in January 2024.

Opportunity

The Company's commercial product, ONIVYDE®, is currently on the market in the US, Europe, and Asia and many more countries around the world. The product has been providing the Company with a stable cash flow and it is a proof the Company's "Virtual Pharmaceutical Company Business Model" and the commitment to the development of new drugs and has been given affirmations from domestic and foreign medical institutions and experts from new drug development fields. In addition, through risk analysis, the Company has captured the accurate development timing in the smart medicine industry by cooperating with international well-known AI companies to utilize AI tools in finding drug targets and improve drug precision and effectiveness. Moreover, we in-licensed new drugs in development such as PEP07 from international institutions with the sole focus on constructing a pipeline with innovative targeted therapy with precision medicines. Such commitments have been helping the Company to improve corporate governance and fulfill our corporate social responsibilities, which bring a positive impact on corporate reputation or corporate credit worthiness.

Fuyang Eco Park, Taipei

1.5 Ethical Corporate Management and Ethical Code

Ethical Corporate Management Policies

The Company has established “Ethical Corporate Management Best Practice Principles" and "Procedures for Ethical Management and Guidelines for Conduct" as a code of conduct for directors, independent directors, senior managers and all practitioners.

Compliance

The Company complies with all statutes and regulations, and does not commit any bribery, does not make political donations and political lobbying, does not engage in unfair competition, acts of antitrust and monopoly to avoid illegal activities.

★In 2023, the Company did not violate any laws and did not receive any fines or punishments due to violation of the law.

Ethical Corporate Management Training

The HR Department organized all advocacy and education related to ethical business management for all employees. In 2023, 190 persons cumulatively received 681 hours of educational training related to ethical business management issues (including courses for legal compliance and ethical business management, drug safety and health management and inspections, accounting system and internal control etc.).

Click here for more information regarding Ethical Corporate Management.

Coverage of Precautionary Measures
1. Bribe and bribery
2. Provide illegal political contributions
3. Inappropriate charitable donations or sponsorships
4. Provide or accept unreasonable gifts, hospitality or other improper benefits
5. Infringement of business secrets, trademarks, patents, copyrights and other intellectual property rights
6. Engage in unfair competition
7. Products and services to directly or indirectly damage the rights, health and safety of consumers or other stakeholders during any of the following phases: R&D, procurement, manufacturing, providing and selling

Specific Precautionary Regulations for Actual Business Controllers
1. The criteria for determination for providing or accepting improper benefits
2. The procedure of providing legal political contributions
3. The procedure and amount standards when providing appropriate charitable donations or sponsorships
4. Regulations for avoiding conflict of interest, and its declaration and processing procedures
5. Regulations for confidential and sensitive information obtained through business
6. Regulations and processing procedures for suppliers, customers, and business transactions involving misconduct actions
7. The procedures for identifying the violation of the ethical corporate management policies
8. Disciplinary punishment against violators

1.6 Anti-Corruption Policy

The Company understands the risk of corruption exists to some extent, and it may also affect the Company's business integrity. Therefore, any corruption, bribery and extortion are strictly prohibited. The Company also arranges for all current and new employees to receive anti-corruption training, using an overall comprehensive corruption and bribery risk analysis to set up effective anti-corruption and anti-bribery policies.

Bribery Risk Analysis By Department

Department	Level of Risk		
	High	Medium	Low
President & CEO Office		●	
Audit			●
Clinical & Regulatory Affairs		●	
Research & Development		●	
Corporate Development		●	
Marketing & Sales	●		
Finance & Administration		●	

★ Since the establishment of the Company, there have been no incidents of corruption or bribery. If any unlawful incident occurs, the facts will be immediately ascertained, and the relevant employees involved in the investigation will be dealt with according to law.

Measures to Prevent Corruption and Bribery

When the Company's auditors perform internal audit duties, they will conduct thorough investigations to prevent corruption and bribery. They maintain a vigilant attitude towards possible frauds, errors, omissions, waste, and conflict of interests. Any serious illegality or violation of regulations is considered, and precautions are taken. If there is any suspected or detected fraudulent situation, the auditors will promptly notify the appropriate supervisor to investigate and take measures. For related corporate governance systems, internal control systems and management practices that are more likely to have risks of corruption and bribery, they are included in annual audits. The project will focus on auditing items, and based on the annual audit plan formulated by the risk assessment management operation, the focus and frequency of audits for routine checks will be improved with reference to past findings of various units.

If there are any unlawful cases where complaints are filed, the auditors will, after careful review, report to the appropriate supervisors and the Board of Directors. The Company has done a good job in preventing the relevant fraud or corruption risk.

★The Company conducted anti-corruption training to all employees in October 2023.
★The Company did not have any incident of corruption or anti-competitive practices in 2023.

Whistleblower Mechanism

To maintain the corporate culture of ethical management, prevent unethical conduct, and appropriately address reported cases, pursuant to Article 21 of PharmaEngine's "Procedures for Ethical Management and Guidelines for Conduct," this Procedures are established for compliance.

Reporting Procedure

01	The whistleblower shall use the report case form to provide the following, detailing the facts and confirming the matter with his/her signature to report the case to PharmaEngine. 1. The whistleblower's name, national identification number or passport number, residential address, department/place of employment, and the informed party's name or other features sufficient to identify such person. 2. Unlawful behaviors violating the Ethical Corporate Management Best Practice Principles. 3. Relevant evidence and documentation.
02	All types of reported cases are compiled and handled by the Audit Office. After identifying and recording the whistleblower's identity in accordance with regulations, the reported information and content are scanned and archived before being reported to the chairperson or independent directors.
03	Upon the establishment of a reported case, depending on the nature, and if necessary, the personal information of the whistleblower may be kept confidential and then sent to relevant departments for handling. Cases related to corruption and other unclassifiable matters are handled by the Audit Office. If the reported case involves directors, or senior executives, or is related to any other significant illegal activities, it shall be sent to the independent directors.
04	After the Audit Office receives the reported case and submits it to the superior through the relevant procedures, the relevant departments will be requested to handle the matter. The relevant departments shall handle it appropriately and ask the receiving unit to review and approve the handling. Depending on the legality, reasonableness, and specificity of the handling, the receiving unit shall then decide whether to continue, re-investigate, or conclude the case.
05	The receiving unit of the reported cases shall maintain the confidentiality of the whistleblower's personal information. In case of a breach of confidentiality, penalties, or disciplinary actions shall be imposed in accordance with relevant regulations.

Whistleblower Contact Window and Channels

Tony Hong
Associate Director, Audit Office
TEL: +886-2-2515-8228 #106
E-mail: audit@pharmaengine.com

1.7 Cyber Security

Purpose and Scope

◆ **Target:**
Employees, suppliers, customers, and operation-related information software and hardware equipment

◆ **Scope:**
To ensure cyber security of the Company, related regulatory systems, applied technologies, and data security criteria are defined and included as part of the management operation system to protect the privacy of employees, suppliers, and customers and maintain information security during business contact.

Cyber Security Risk Management Framework

- The Cyber Security Risk Management Taskforce was convened and formed by the President & CEO in 2022. The Taskforce includes functional teams such as Document Management Team, Incident Response Team, Continuous Operation Team, Internal Audit Team, and Risk Assessment Team.
- The Cyber Security Risk Management Taskforce is responsible for defining the cyber security management policy and periodically reflecting upon and modifying it.
- Meetings are held periodically to discuss the implementation and target achievements to ensure the operation is effective.

Policy

- Ensures the Company's operation is ongoing and the information technology service provided by the Company can be steadily used.
- Ensures the confidentiality, integrity, and usability of the information assets in the custody of the Company and protects the privacy of staff data.
- Constructs information security risk assessment and operating plans, executes cyber security enhancement activities that abide with related regulations and laws.

Implementation

- The Company became the member of TWCERT/CC in March 2023, to effectively receive and deliver cyber security information.
- The Company has set up a Cyber Security Manager in April 2023. The manager is responsible for promoting cyber security policies and targets, coordinating resource allocation on cyber security and monitoring safety measure implementation.
- Regarding cyber security risks, the Company has discussed it with external cyber security technical experts and plans to improve the Company's cyber security management system by obtaining the ISO27001 certification. The Company obtained the ISO27001 certification in January 2023.
- The Company has completed the cyber risk assessment report and conducted related promotion and training of 114 cumulative hours with 38 participants in 2023. The Company invested in NT$1.925 million for cyber security management related issues in 2023.
- In 2023, the Company did not suffer any major losses due to major cyber security incidents.

ISO27001: 2013 Certificate

Cyber Security Specific Management Solution

Authority Management

1. Staff account
2. System privilege

Access Management

1. Internal data access
2. Log analysis

Viral Threat

1. Anti-virus defense
2. Malware detection

System Maintenance

1. Data backup
2. Remote backup
3. Disaster drill and data recovery

Cyber Security Control Measures

01	The Company has various network security equipment (such as routers, switches and firewalls, etc.) in place to control or maintain daily operation, but still cannot guarantee the Company‘s network will not be hacked.
02	The Company currently reviews and evaluates the security precautions each year and periodically changes security settings to ensure network security. To reduce the risk of confidential data leaks, the Company’s individual department has identified the key processes and confidential documents of each business and adopted corresponding measure such as adequate improvement of the related processes and enhance computer hardware and software.
03	From 2021, the Company began to plan the digital transformation and information security management, and entrusted external cyber security technical experts. The Company officially began the adoption of ISO27001 information management system in 2022 and successfully obtained the certification in January 2023. The validity period of the certificate is from January 30, 2023 to October 31, 2025.
04	Cyber security simulation implementation. The Company simulated the scenario of “company website under attack by hackers” in October 2023 and January 2024, with the cooperation of external vendors, the Company’s cyber security officer was able to use back-up storage to restore the Company’s website, ensuring functional operation in a short period of time. The simulation was aimed to help related staff to accumulate experiences in facing the ever-changing threats of cyber security.

1.8 Customer Relations

Pricing Strategy: Fair and Affordable Drug Prices

The fair and reasonable price of ONIVYDE® in Taiwan is based on the benefits for all people with comprehensive consideration of the best commonly used drugs prices in the current market, pharmacoeconomics, market competition (same indications already on the market, or clinical trials), the cost of ONIVYDE®, the "National Health Insurance Drug Dispensing and Fee Schedule" announced by the National Health Insurance Administration, and the international market prices. Afterwards, the relevant prices will be adjusted in accordance with the "Operational Procedures of National Health Insurance Drug Price Adjustment ". The current price was set on April 1st, 2024 of NT$21,109 per vial, compared to the price of NT$22,330 at the beginning of 2023, the difference is approximately 5%.

◆ ONIVYDE® price in the latest 2 years in Taiwan (with health insurance reimbursements for the patients):

Item	Before Adjustment	After Adjustment	Difference	Difference (%)	Effective Day
Per vial (NTD)	22,330	21,109	(1,221)	(5%)	April 1, 2024

Marketing Ethics: Professional and in line with International Pharmaceutical Marketing Ethics Essence

ONIVYDE® is currently the main product of the Company. It has obtained the drug license issued by Taiwan FDA and was officially launched in Taiwan in June 2016 and was included in the health insurance benefits in August 2018. In Taiwan, as of the end of 2023, more than 4,000 pancreatic cancer patients have been treated with the drug. We strictly follow the international pharmaceutical marketing ethics standards, and the Company's marketing colleagues have received internal education and training about the regulations Guide to the Ethics of Pharmaceutical Marketing.

★ In 2023, the Company had not been fined for violating the health and safety of products and services. There was no fine imposed for information and labeling of product and service, or for regulations related to marketing communication. Also, there was no complaint for infringement of customer privacy and loss of customer information.

Protect the Rights of Consumers and Medical Institutions: Drug Safety Surveillance Management

The Company conducts safety monitoring and risk control for the post-marketing drugs and formulates the "Medicament Recall Practice" and "Pharmacovigilance Standard Operating Procedures" in accordance with the "Regulations for Medicament Recall" and "Guidance for Good Pharmacovigilance Practice" issued by the central health authority (Ministry of Health and Welfare) respectively.
Its risk management is aimed at the safety of patients' medication, establishes a Pharmacovigilance Notification System, and implements the control and tracking of adverse reactions after the launch of new drugs to avoid serious adverse drug reactions. Reduce or avoid the risk of drug use through risk control methods, pay attention to and monitor the possible adverse reactions of drugs, provide relevant consumers and medical institutions with relevant drug information, and clearly inform the possible risks and adverse reactions that may occur during the medication process.

In the case of Serious Adverse Event, the Company must notify the central health authority within 15 calendar days. For other non-serious adverse events, if they are listed in the pharmacovigilance monitoring items, they should be included in the regular safety report and be reported according to the time limit. In addition, according to the drug safety information contract signed with the authorized and cooperative partner, the Company will notify the authorized and cooperative partners within the time limit.

★In 2023, there has been no recall of any drugs sold in Taiwan due to safety issues.

Protect the Rights of Consumers and Medical Institutions: Counterfeit Drug Management

- The product from the original manufacturer is directly dispatched through a locked container from end-to-end to our contracted warehouse for an incoming check to confirm the integrity of the container through a visual check and document check to prevent counterfeiting. The handling of the supply chain and distribution to the customers is also through a GMP/GDP certified contractor which is a professional distribution service provider focusing on healthcare products.

- There is a specific item code assigned to each product, specific batch number will be assigned to each batch incorporating the information of the manufacturer. The above unique numbers will be entered into the SAP system of our storage/logistics service provider for identification and tracking of every procurement order, sales and shipping document, and other associated campaigns. The SAP system of the storage/logistics service provider is validated according to a GAMP 5 or equivalent standard.

- When we are aware of a potential risk of counterfeit products, we would immediately suspend the distribution of the concerning batch of the product and quarantine them in an isolated area. The related work will be completed together with the contracted vendor for domestic distribution. Meanwhile, colleagues from the vendor would also check the SAP system to identify which customers received the concerning batch of product to alert them to hold the sales and conduct quarantine. When a product recall is deemed necessary, we would initiate the activities and prepare a recall plan, and the related documents for recall would be submitted to the regulatory authority.

Protect the Rights of Consumers and Medical Institutions: Supply Chain Quality Management

- The Company does not participate in the Rx-360 International Pharmaceutical Supply Chain Consortium audit program. We have an internal procedure to regulate the evaluation of and collaboration with the entities involved in the supply chain of a commercial product. To ensure the quality of the products as well as the operations in compliance with the GMP/GDP standard, we would mutually sign a quality agreement with these critical vendors associated with the supplies of products, global shipping, warehousing, secondary packaging, and domestic shipping to our clients, and we would also create an approved vendors list accordingly. Additionally, a regular audit would also be carried out for each vendor to ensure the quality status.

★ In 2023, the Company performed the annual supplier evaluation for the 2 existing qualified suppliers. For the additional 3 GxP suppliers, the evaluation result indicated the suppliers' provided services, execution capabilities, and structures qualify related regulations and the Company's expectations, therefore, they are enlisted into the roster. In summary, there were no existing suppliers rated E (suspending procurement) or new suppliers rated inadequate that required corrective and tracking measures in the 2023 evaluation process.

Protect the Rights of Consumers and Medical Institutions: Drug Injury Relief and Complaint Channel

- The Company joined the Drug Relief Foundation System, and each year, 0.05% of the sales of the Company in the previous year is allocated as the drug damage relief to the Drug Relief Foundation. In addition, a product liability insurance of US$10 million is insured to protect patients from damages caused by drug defects or unknown adverse reactions.

- The Company has established a stakeholders' page on the website to provide relevant contact windows and complaint hotlines, which is responsible for consumer protection policies and complaints.

Clinical Trial Drug

Protecting Subjects in Clinical Trials to Ensure their Rights, Safety, and Well-being

- The Company conducts clinical trials in accordance with the "Guidelines for Good Clinical Practice (GCP)" of ICH and upholds the ethical principles of medical research in the Declaration of Helsinki to ensure the rights, safety and well-being of subjects. We set up monitoring and auditing mechanisms at each stage.
- Each participant in the human clinical trials will be fully informed and protected. In addition, the Company provides relevant insurance for the clinical trials. If there is any physical harm due to participation in the trial, there will be clinical trial insurance to compensate the subject for damage.

Quality Policy

- The Company upholds the spirit of innovation, manages new drug research and development projects, adheres to quality and focuses on total quality management.
- The Company also complies with GMP, GDP, GLP, GCP, and international regulations, and achieves new drug development research that meets the goals of safety, effectiveness, and consistent quality to enhance the development level of new drugs, promote the development of medicine and continuously improve the quality of medicines.

Notification for Adverse Drug Reaction in Clinical Trials

- For the Company's clinical trials, if there is any serious adverse reactions caused to the subjects due to the drugs, regardless of the location in Taiwan or other regions, the Company will notify Ministry of Health and Welfare or Taiwan National Adverse Drug Reaction Reporting System of Taiwan Drug Relief Foundation in accordance with the regulations.

Checkpoints for Clinical Trial Execution

- Example: A Safety Monitoring Board, SAB or an Independent data Monitoring Committee, IDMC is set up in the trial to review the trial data and confirm the safety of patients before deciding whether to continue the trial.

1.9 Investor Relations

- Shareholders' equities are greatly valued by PharmaEngine. We have a full-time service team including a spokesperson, a deputy spokesperson, an investor relations, and a stock registrar to ensure smooth communication with investors. Investor inputs are reported to the Board of Directors on a quarterly basis. The Company regularly reports to shareholders through annual shareholders' meeting on business results, annual business plans, future development strategies, and impact on industrial environment. The Company also actively responds to shareholders' suggestions. The relationship with shareholders has been amicable and there has been no disputes.

- Information disclosure is also a very important part of investor services. In recent years, the Company has invested a lot of resources to meet the principles of completeness, promptness, fairness, and transparency of information disclosure. In addition to the timely disclosure of relevant information on the Market Observation Post System (MOPS), we also set up an investor section on the Company's website to provide relevant, timely, and material information about the Company's business and governance, thereby, enhancing corporate image and safeguarding shareholders' equities.

- The new company website has been modified and launched in January 2024. The new website provides easy access to key information such as financial statements, investors' conference presentations, company press releases, and an extensive section for corporate governance information.

- In 2023, the Company participated in 4 investor conferences organized by local and foreign securities and posted 28 announcements on MOPS . In such conferences and press releases, the Company reported the latest company operations, financial business status, and R&D progress to deliver clear information and messages transparently, promptly, and correctly to all investors.

Investor Communication Channels

2.1 Major Themes and Stakeholder Communication

Procedure for the Negotiation of Major Themes

1. Thematic Collection

- External Issues
  - ➢ International covenants and regulations
  - ➢ Requirements from stakeholders
  - ➢ Guidelines for sustainability reports
- Internal Issues
  - ➢ Performance indicators by sector

2. Stakeholder Identification

- GRI Standards consideration
- Corporate Social Responsibility Policy
- Business philosophy and vision
- Short- and long-term business plans

3. Thematic Boundaries

- Asses the boundaries of consideration

4. Response and Responsibility

- Board resolutions
- Senior executive meeting resolutions
- Departmental meeting resolutions

5. Feedback and Review

- Stakeholder feedback
- Reference to benchmarking corporate practices
- Report and review at relevant meetings

6. Improvement

- Resolving improvement measures at various meetings and as a topic for the following year

External / Internal Stakeholders

- In-license or Out-license Partners
- Shareholders and Investors
- Suppliers
- Customers
- Government Agencies
- Employees
- Media
- Communities and Charity Groups
- Drug Development Partners

For more information regarding our stakeholder communication, please visit our company website.

Major Themes and Boundaries

Key Issues	SDGS	Management Policy	Border Line	
			Internal	External
Water & Plastic Usage	**SDG6** Clean Water and Sanitation **SDG7** Affordable and Clean Energy **SDG12** Responsible Consumption and Production **SDG13** Climate Action	● Reduce water usage per capita ● Promote reducing plastic usage in everyday life and on business trips	● PharmaEngine Employees	● In-license or Out-license Partners ● Suppliers ● Communities and Charity Groups
Energy & Waste Treatment		● Reduce the waste of energy resources and introduce effective energy and resource improvement equipment or policies ● Introduce circular economy to reduce waste ● Strengthen the initiatives on climate and environmental issues, and enhance awareness of colleagues and cooperative units	● PharmaEngine Employees	● In-license or Out-license Partners ● Suppliers ● Communities and Charity Groups
Health & Safety	**SDG3** Good Health and Well-Being **SDG4** Quality Education **SDG5** Gender Equality **SDG8** Decent Work and Economic Growth **SDG10** Reduced Inequalities	● Maintain a healthy and clean work environment	● PharmaEngine Employees	● In-license or Out-license Partners ● Customers ● Government Agencies
Talent Retention		● Provide monetary and non-monetary benefits ● Support internal and external training programs	● PharmaEngine Employees	● In-license or Out-license Partners ● Shareholders and Investors ● Customers
Employee Welfare		● Continue the one-day-a-week WFH initiative	● PharmaEngine Employees	● In-license or Out-license Partners ● Shareholders and Investors ● Customers ● Government Agencies
Social Engagement	**SDG3** Good Health and Well-Being **SDG8** Decent Work and Economic Growth **SDG10** Reduced Inequalities	● Enhance care for social and human rights issues, and continuously track follow up results ● Care for patients and medical institutions, and construct friendly social services	● PharmaEngine Employees	● Communities and Charity Groups
Ethics Management	**SDG8** Decent Work and Economic Growth **SDG9** Industry, Innovation and Infrastructure **SDG16** Peace, Justice and Strong Institutions **SDG17** Partnership for the Goals	● Incorporate ESG in operation policies ● Strengthen the auditing mechanism and strictly prohibit misconduct that endangers the Company ● Strengthen internal communication and operation model	● PharmaEngine Employees	● Shareholders and Investors ● Customers ● Government Agencies ● Media ● Drug Development Partners
Product Safety		● Maintain rigorous quality assurance procedures ● Enhance training on pharmacovigilance knowledge and reporting procedures	● PharmaEngine Employees	● Shareholders and Investors ● Customers ● Communities and Charity Groups ● Government Agencies
Risk Management		● Continue to enhance cyber security measures ● Use AI technology to reduce potential risks in new drug development	● PharmaEngine Employees	● Shareholders and Investors ● Customers ● Communities and Charity Groups ● Government Agencies

Stakeholder Communication

Stakeholder	Shareholders and Investors	Employees	In-license or Out-license Partners	Customers
Key Issue	• Operating and financial status • Business performance • Corporate governance • Risk management	• Welfare policy • Labor relations • Labor rights • Training • Workplace health and safety	• Operating and financial status • Business performance • Risk management • Legal compliance	• Product quality and safety • Service quality • Marketing communication • Customer rights, interests, and data privacy
Communication Channel and Frequency	• Shareholders' meeting/once a year • Investors' conferences/once a quarter • MOPS/every time • Regular announcement of financial statements (annual report)/every quarter (year) • Stock agency/every time • Information disclosed online/every time • Answer investors' questions by phone or email/every time	• Labor conferences/once a quarter • Internal website/permanent • Welfare Committee/permanent • Employee feedback line and mailbox/every time • Regular fire safety propaganda provided by the building management committee/every time • Annual health checkup/once every two years • Satisfaction survey/biennial	• E-mail/every time • Visits, meetings, and teleconferences/once a quarter	• Telephone or e-mail/every time • Unscheduled patient meetings/every event • Regular participation in medical associations/every time • Academic seminars/every time • Product information disclosed online/permanent
2023 Engagement	• Held institutional investors' conferences and roadshows 4 times • Held shareholders' meeting 1 time and board meetings 4 times	• Held labor-management meetings 4 times • Promoted "Employee Leave and Travel Subsidy Program" • Promoted "Employee Health Check Care Program" • More than 100 pieces of information about employee benefits, environmental protection, and health information were announced through the internal portal and trainings	• Held group meetings regularly	• 5 pancreatic cancer patient meetings • Product introduction in medical centers and hospitals • 2023 World Pancreatic Cancer Day activities

Stakeholder Communication

Stakeholder	Drug Development Partners	Suppliers	Communities and Charity Groups	Government Agencies	Media
Key Issue	• Sustainable procurement • Communication policy	• Product quality and safety • Sustainable procurement • Communication policy	• Charities and fundraising • Community care • Environmental management • Legal compliance	• Legal compliance • Labor relations • Participation in public policies	• Business performance • Operating and financial status • Legal compliance
Communication Channel	• Unscheduled visits and audits/twice every year • Telephone or e-mail/every time	• Unscheduled visits and audits/once a year • Telephone or e-mail/every time • Communicate with vendor via procurement staff/every time	• Contact the charities by the event organizer/every time • Contact by welfare committee members/every time • Industry-academic cooperation	• Competent authority meetings and participate in related seminars/every time	• Press release/every time • Spokesperson system/permanent • Information disclosed online/every time • Public Relations Department/permanent
2023 Engagement	• Visits and audits 2 times • Audited by email	• 3 GxP supplier capability assessments before cooperation • Audited by e-mail • Online meeting • Online audit	• Visually impaired massages • Continued to support “Do One Thing for Tamsui River” by promoting the history of Dadaocheng and water conservation • Held training for GHG inventory • Held events for ESG • Held sessions with students in 3 universities to share industry experience	• Contacted the Industrial Development Administration by phone and e-mail • Contacted DOIT by phone and e-mail • Contacted National Taxation Bureau of Taipei by phone and e-mail	• Material information and press releases were issued 28 times

2.2 Sustainability Strategy Blueprint

PE Action Plan

- Reduce water usage and CO_2 emissions
- Reduce plastic use
- 3Rs: Reduce, Reuse, Recycle

Low Carbon Company

PE Action Plan

- Enhance diversity and equality
- Promote company culture
- Strengthen social engagement
- Improve talent retention
- Continue to upkeep health and safety of employees

Sustainable Employer

PE Action Plan

- Maintain drug safety
- Safeguard ethics management
- Improve risk management
- Upkeep cyber security

PHARMA-ENGINEERS

2.3 Company Culture

In PharmaEngine, we believe each member's voice is important and an open-minded work environment is key to our sustainability. We want everyone's opinions in our company to be heard. New drug development is a long and rigorous process with a lot of uncertainties along the way. We believe it is vital that we can include different point of views during this process to move us forward as a team. We heavily and strongly believe and promote the six core values in every aspect of our daily work and company events.

Sense of Urgency

To think outside the comfort zone using a flexible and agile mindset to face dynamic environments and challenges

Diversity

To support and promote diversity and inclusivity

Teamwork

To trust and respect each other is the foundation of our company culture and teamwork philosophy

Critical Thinking

To seek to the bottom of the truth with an open mindset and a flexible attitude

Continuous Learning & Growth

To learn as a team to maintain the innovative momentum and continuous desire for learning and development

Work & Life Balance

To help each and every one of us find our own balance between work and life

2.4 Supplier Management

Value Chain of New Drug Development

PharmaEngine is concentrating on new drugs development that has market projections, by using the Virtual Pharmaceutical Company Business Model, conducting preclinical trials, phase I, phase II and human clinical trials in phase three, lowering the cost of early period R&D and shorten the development timing, to connect the exploration stage of drug development until the completion of the product inspection and registration. Through numerous preclinical trials, the Company explores the value of new drugs and strictly follows the US FDA/ EU EMA standards throughout clinical trials from phase one to phase three, acquire certification of each country and carry out product manufacturing, marketing and external licensing.

Supplier Relations

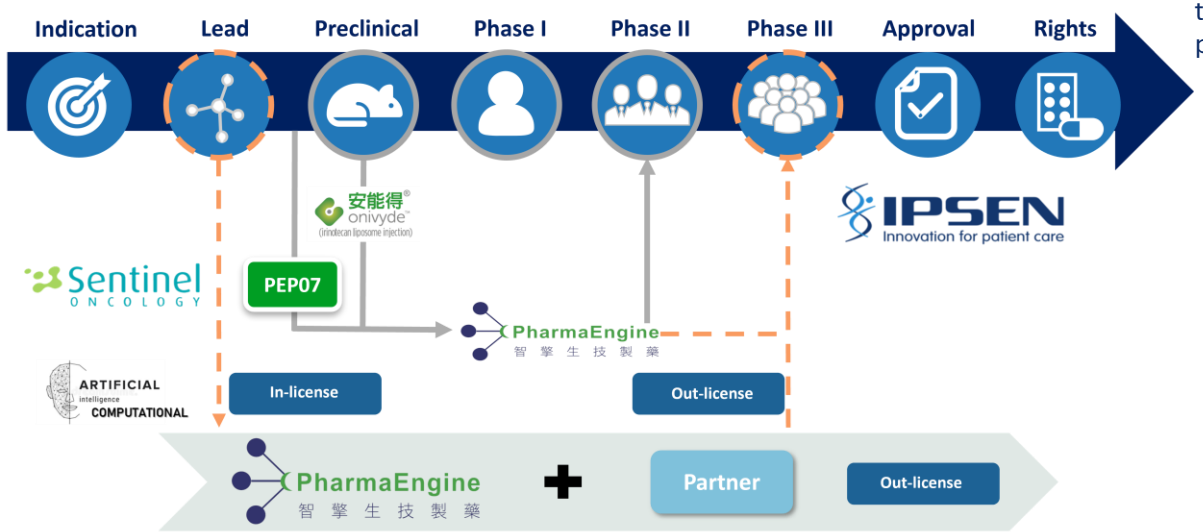
ONIVYDE®, which the Company sells in the Taiwan market now is supplied 100% by the France IPSEN. Suppliers of general purchases are local ones. In addition, depending on the needs for different research stages in the development of new drugs, domestic and international CDMOs (Contract Development and Manufacturing Organizations) and CROs (Contract Research Organizations) are authorized to conduct related trials and studies. We have been maintaining optimal interactive relationships with suppliers, CDMOs and CROs.

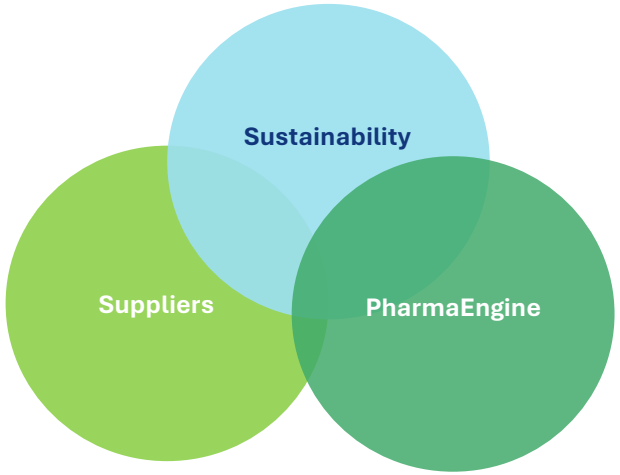
The Company, since 2022, has gradually included key suppliers, suppliers of labor service, and new suppliers in the evaluation.

Results of evaluations have revealed that all suppliers agree to work with the Company and devote themselves to improve environmental protection measures in terms of energy, waste, water and electricity, and to reduce GHG emissions. As far as society is concerned, some suppliers are aware of the possibility of their risk management impacting the operations of the Company. In 2023, the Company performed the annual supplier evaluation for the 2 existing qualified suppliers and 3 GxP evaluations on prospective suppliers. For the additional 3 GxP suppliers, the evaluation result indicated the suppliers' provided services, execution capabilities, and structures qualify related regulations and the Company's expectations, in summary, there were no existing suppliers suspending procurement or new suppliers rated inadequate that required corrective and tracking measures in the 2023 evaluation process.

Renting or Outsourcing Business and Entities that have a Significant Impact on the Organization

- Renting: The Company currently rents office in Taipei City and the lease expenses are in line with the general market price.
- Outsourcing business: The Company's sales of ONIVYDE® in the Taiwan market are produced by IPSEN . The preclinical trials and some clinical trials of the ongoing projects are entrusted to CRO companies to execute.





3.1 Human Resources Overview

Job Level, Recruitment, and Turnover %

Item		Total Number of Employees (person)				No. of Employees Beginning	No. of Employees New Recruitment	New Recruitment %	Staff Turnover	Staff Turnover %	No. of Employees Year End
		Managerial Officer	R&D Employee	Other Employees	Total						
Male	2022	4	9	6	19	17	4	21.05	2	10.52	19
	2023	4	9	5	18	19	1	5.56	2	11.11	18
Female	2022	1	7	9	17	15	6	35.29	4	23.53	17
	2023	1	7	11	19	17	4	21.05	2	10.53	19

Employee General Data

Item		Average Age	Average Job Tenure	Education Level				
				Ph.D.	Master's	College or equivalent	Senior High School	Below High School
Male	2022	46.10	7.14	5	8	6	0	0
	2023	46.84	7.45	5	8	5	0	0
Female	2022	40.61	4.43	1	8	8	0	0
	2023	40.35	4.22	1	11	7	0	0

Note 1: The data only include full time employees.
Note 2: All employees are Taiwan nationals, and their work sites are in Taiwan.
Note 3: The Company has not yet established a labor union organization, so the group agreement is not applicable.
Note 4: When the Company terminates a labor contract or an indefinite contract worker resigns, abiding by Article 16 of Labor Standards Act, the Company needs to provide advance notice regarding the contract termination date based on the tenure of the labor listed in Item 1-3.
Note 5: In 2023, the Company did not lay off any employee.

Yangmingshan National Park

Ratio of Female Employees to Total Workforce and Senior Executives

Index	Percentage (%)	2030 Target (%)
Women account for the total workforce (%)	50%	50%
Women account for senior executives (%)	20%	33%

Gender Pay Equality Index

Pay Equality Index	Gap (%)
Gap between the MEAN in Men and Women	12.21%
Gap between the MEDIAN in Men and Women	23.68%
Gap between the MEAN of Variable Bonus in Men and Women	2.66%
Gap between the MEDIAN of Variable Bonus in Men and Women	21.18%

Diversity in Workplace/Gender Equality Policy

The Company abides government decrees and protects human rights. The Company does not use child labor, nor forced labor or forced overtime and is against discrimination. The Company respects gender, nationality, race, religion, age, and association, sets up labor-management conference and complaints overseeing channel to maintain human dignity, ensures the diversity in recruitment and the fairness in compensation and promotion opportunities, and creates a harmonious peaceful workplace environment.

3.2 Talent Retention

In 2023

- **94%** R&D Employee Retention Rate
- **85%** Other Employee Retention Rate
- 2030 target of 50% total workforce consisting of female employees has been reached

Note: Other employees are non-R&D employees and managers.

Talent Selection, Cultivation, and Reward

3.3 Human Resource Training and Development

In PharmaEngine, our core values consist of diversity, continuous learning and growth, and teamwork and more. We put great emphasis on fulfilling these core values in our human resource training and development.

Corporate Education and Training System

Expatriate

Domestic

Each department or employee prepares an annual budget for education and training. Employees can choose to participate in training courses held by domestic institutions. Those who exceed the budget limit may be subsidized by the Company after the approval by the general manager on project basis.

International

In order to absorb foreign advanced professional knowledge, skills, and training talents, the Company will, depending on practical needs, assign personnel to participate in education and training courses organized by foreign institutions.

Internal

Pre-service

The course content includes company vision and operational strategy, company operating model, company organization and function, introduction of technique, status quo of domestic and international pharmaceutical industry, clinical development research, pharmaceutical regulations, document management, R&D achievements management measures, intellectual property rights, administrative accounting process, information resources, benefits and obligations, ESG, insider-trading prevention, and the main duties of each department.

Language and Others

The Company employs professional foreign teachers for in-house English classes, and regularly arranges courses of writing and daily conversations. We also hold in-house education and training in the forms of holistic lecture and seminar based on actual needs.

On-the-Job

The goal is to cultivate high-level professional and managerial talents with international perspective and all-round strategic thinking. Employees who have officially worked for more than one year may voluntarily participate in relevant training courses such as medical related research institutes, MBAs or EMBAs established by domestic and foreign university research institutions (including supplementary education institutions).

Training Implementation

2023 Courses

- ✓ China Medical University Hospital – Clinical Trial Center
- ✓ Business Negotiation Skills and the Philosophy of War
- ✓ Key Points and Considerations for First-In-Human (FIH) Clinical Trial Review
- ✓ Drug Safety Surveillance Program and Verification Practices
- ✓ Coaching Leadership
- ✓ CompTIA Security + (for IT Security Certification)
- ✓ CMC Regulatory Requirements at Each Stage of Protein Drug Development and more

Training Implementation

NT$982 thousand
Of Total Training Cost

668
Participants

1,827.5
Hours

2023 Training Statistics Based on Employee Job Type and Gender

Items		Male	Female
Average Training Time (hour)	Managerial Officers	55.1	41.0
	R&D Employees	54.6	64.4
	Other Employees	49.1	31.5

3.4 Performance Review and Career Development

The Company's annual performance and development review is mainly aimed at supporting, encouraging, and assisting employees. Employees with outstanding performance can be affirmed with salary increase or promotion. The Company further communicates with employees who perform poorly to enable them to understand and coach them to improve their work efficiency, so that all employees can adapt to their capabilities, give full play to their strengths, successfully complete the Company's overall goals, and achieve the win-win objective for the Company and the employees. All employees of the Company participate in regular performance and development reviews at the end of the fiscal year.

Performance Review

Annual Target Completion

Competency Adequacy

- **Self Evaluation:** The annual employee self-evaluation includes annual target completion and competency adequacy. In addition, the self-evaluation for employees with supervisor roles also include their leadership and management capabilities.
- **Performance Review:** Supervisors are also required to help provide improvement or training plans based on the employee's daily performance and self-evaluation if there are areas for growth and provide positive feedback and rewards on areas of excellence. The supervisors are also required to help employees on planning career development and establish goals for the following year.

Career Development

- In addition to the performance review, the Company puts great emphasis on the employees' career development. The Company has established policies on employee training so the employee can discuss with supervisors regarding the training plan and personal development goals and the desired career path, field, and profession for the following year and the future during the annual performance review. The training includes expatriate, internal, and on-the-job courses.
- PharmaEngine provides professional training and development opportunities to help the employees enhance skills and knowledge continuously. The Company emphasizes on the importance of cross-department cooperation in hope that employees can expand skills and experiences through participating in duties and projects in different areas of expertise. Employees are encouraged to obtain new skills through on-the-job training to expand their own network of professional skills.

3.5 Employee Welfare Programs

Salary Policy

The salary policy of the Company is based on the Company's overall salary in the market positioning, the results of industry salary surveys, the growth cycle of the industry in which the Company operates, and consideration of the internal fairness of the Company. The salary level of the Company is based on the level of the job, the job attributes, and the difficulty of substitution to make different market salary positioning. Since the work of R&D supervisors requires a high level of professionalism and considerable work experience, the salary levels of R&D supervisors are located at P75 in the same industry, and the remaining positions are at P50. The level of salary payment is comparable to that of most enterprises in the same industry, and not varies by employees' race, religion, gender, nationality, age, or any legally warranted status, and the current salary of all PharmaEngine employees exceeds the legal basic salary.

Retirement System

- The Company has fully settled its employees' seniority in the old system in 2014.
- Since the commencement of the Labor Pension Ordinance (hereinafter referred to as the new system) on July 1, 2005, the employees who has decided to adopt the new system or carry out the new system within the next 5 years, or new employees after the new system, the retirement pension will be calculated with the new system, that is, the provision of the pension system, the payment of its pension is categorized by scale of its monthly salary, allocated by the Company on a monthly basis with no less than 6% of the monthly salary as retirement pension, deposit at labor pension personal accounts.

Comparison of Current Standard Minimum Salary for Men and Women with the Minimum Salary in the Place of Operation

Unit: NT$

Title	Grade	Minimum Monthly Pay	Taiwan Minimum Monthly Pay (implemented on Jan. 1, 2024)
Specialist	3	33,000	27,470

Salary Statistics of Non-supervisor Full-time Employees

Unit: Person/NT$

	2023	2022	Difference
Number of Full-Time Employees	32	26	Recruited more non-supervisor full-time employees
Average Salary/Year	NT$1.696M	NT$2.061M	
Median Salary/Year	NT$1.509M	NT$2.038M	

For more information regarding our salary policy, please visit our company website.

Employee Welfare Measures

Competitive Bonus

- Annual bonus
- Dragon Boat Festival and Mid-Autumn Festival bonuses
- Employee compensation
- Performance bonus

Numerous Allowance & Subsidies

- Birthday gift
- Wedding gift
- Fertility gift and childcare allowance
- Disease & hospitalization condolence subsidy
- Disaster salvage subsidy
- Health inspection subsidy (once every two years)
- Domestic & international travel subsidy

Comprehensive Leave System

- Annual leave
- Paid family care leave
- Paid sick leave
- Maternity leave
- Maternity exam leave
- Paternity leave

Complete Insurance Plan

- Labor insurance
- Health insurance
- Group insurance

Diverse Employee Activities

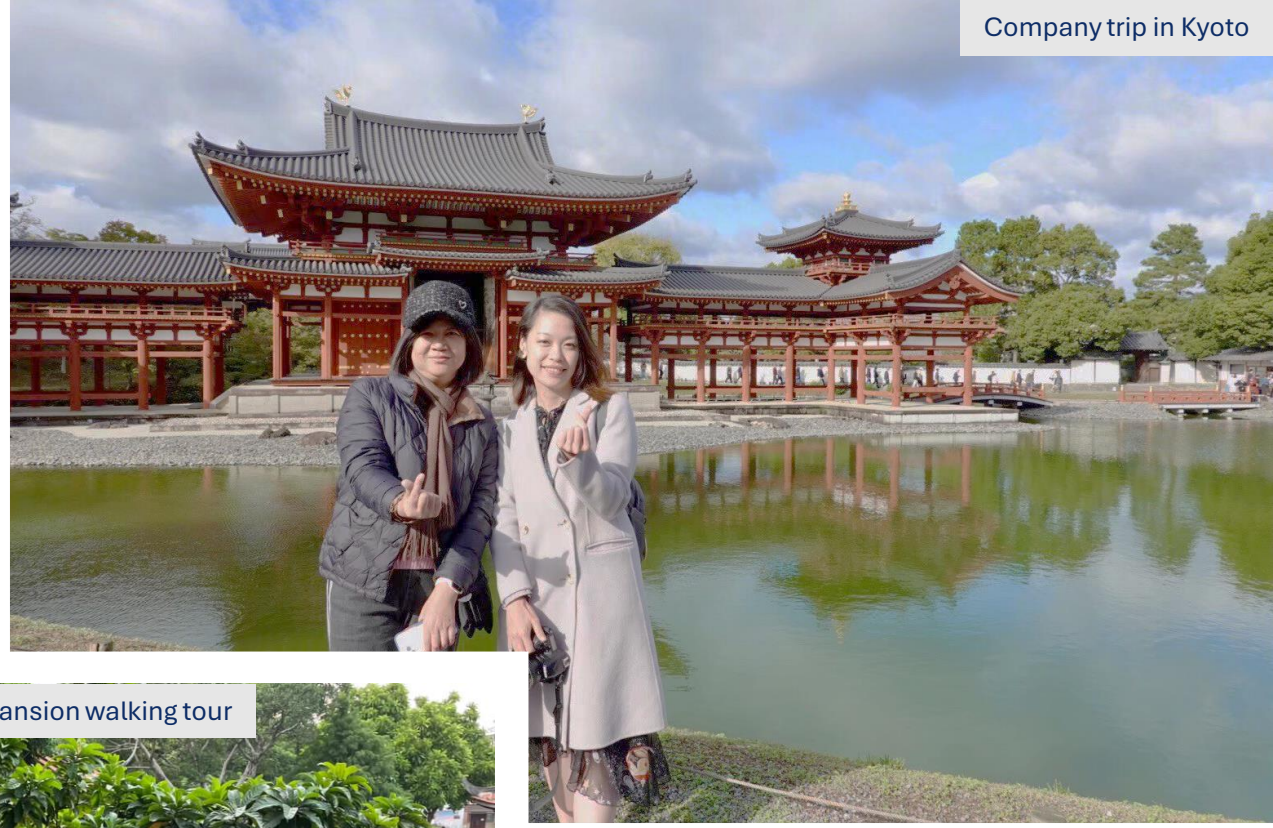
- Birthday party
- Domestic and international travel
- Family day
- New Year party
- Reading club
- Team building activities
- Athletic clubs
- Massage therapy

Employee Reinstatement Rate and Retention Rate after the Completion of Parental Leave

No employees applied for maternity or paternity leave in 2023, hence no reinstatement or retention rate after the completion of parental leave.

Chinese medicine class

Company trip in Kyoto



Lin An-Tai Historic Mansion walking tour

Birthday party

Shampoo bar class

3.6 Friendly Workplace

The Company organizes employee safety and health education training from time to time to avoid accidents caused by ignorance. In addition, the Company also strengthens related workplace environmental safety management, environmental sanitation maintenance, fire safety management, and employee health management such as flu shots to safeguard employees' personal safety.

Workplace Safety Management

- Stipulated "Employee Regulations“ to specify safety management items for employees to follow.
- Implementation of access control, employees or visitors are required to swipe access card or obtain validation.
- General health checkup allowance for every employee every two years.
- Subsidized flu shots every year.

Workspace Cleaning

- Office cleaning task: 3 times a week
- Pest disinfection task: 2 times a year
- Drinking water inspection: Once every month
- Air conditioning filter replacement: Once every 3 months

Safe Working Environment

- The building where the Company is located is has regular cleaning and disinfection operations. The building is also complying with Taipei City Fire Department to host disaster prevention propaganda and courses such as fire hazard knowledge, earthquake protocols, CPR and the Heimlich technique, and fire extinguisher use training courses. Moreover, the Company conducted a disaster prevention promotion training.
- The fire protection equipment of the building of the company office is commissioned by qualified professional inspection company to carry out system function testing annually.
- In 2023, the Company did not have fire-related accidents or incidents.

For more information regarding our workplace safety, please visit our company website.

★ In 2023, the Company has not experienced any occupational injury, occupational disease or fatal accident among its employees.
★ In 2023, the Company did not have duties with staff engaged in high risk or high incidence of specific disease.

3.7 Human Rights Protection

Human Rights Policy

- The Company set its “Human Rights Policy” and disclosed it on the corporate website in compliance with the spirit of the International Human Rights Instruments and based on the characteristics in the biotech sector and follows international human rights treaties, such as the “Universal Declaration of Human Rights”, “United Nations Global Compact”, and “International Labor Organization Convention” as well as applicable requirements under the “Labor Standards Act” of Taiwan, which covers compliance with labor laws and regulations, the freedom of association, creation of an equal and friendly workplace, reasonable utilization of working hours, creation of a healthy and safe workplace, harmonious labor-management communication, and privacy protection.
- The Company takes the “Human Rights Policy” as the highest guiding principle for human rights protection and establishes human resources related protocols based on the Policy and regulations. For example: the Company has established “Work Standards” to protect employee rights and “Attendance Management Procedures” to remind employees the importance of work and life balance.

- In 2023, the Company did not receive complaints related to human rights through formal channels.

For more information regarding our human rights policy, please visit our company website.

Labor Relations

- The Company sets up labor meetings, which are held at least once every quarter. The topics of the meeting include labor welfare, safety and health, labor health, and agreement between labor and employer. The participating members include two representatives from the employee side and two from the employer side. The labor share of the meeting is one-half.
- The Welfare Committees and the Director of Human Resources are also invited to attend the meeting.
- Any new or revised measures of the Company concerning labor relations are finalized after the two parties have fully communicated and reached an agreement. Therefore, there is no dispute and the relationship between the employer and employees is harmonious.
- In 2023, there were no labor-related disputes.

Workplace Sexual Harassment Prevention

- The Company has set the ”Harassment Prevention and Control, Complaint and Punishment Management Measures“ and has established a sexual harassment report channel to safeguard the complainant’s personal information rights.

- The Company communicated on its workplace sexual harassment prevention policies in 2023, which was attended by a headcount of 37 people in total.

- In 2023, The Company did not receive complaints related to sexual harassment.

3.8 Employee Satisfaction Survey

Employees have always been one of PharmaEngine's most important assets! We values the employees' health and work-life balance! We have always believed in the importance of employee feedback; hence, we actively collected the feedback for the base of continuous improvement. In 2023, PharmaEngine conducted the employee satisfaction survey for the first time, hoping to gain insights to what the Company needs to enhance to achieve retention goals. Details as follow:

- **Survey Year:** 2023
- **Survey Scope:** **remuneration, development, supervisors, colleagues, job, company culture, and sustainable business**
- **Coverage Rate:** **100%**
- **Result:** We cooperated with 104 Job Bank to conduct the employee satisfaction survey. The survey result put PharmaEngine in the **73rd percentile**.

- **Post-survey Improvement Plans and Practices**

➢ The employees were most satisfied with "Responsible Managers", "Social Engagement", and "Work-life Balance". PharmaEngine will continue to strengthen these three topics and set these as employee value propositions (EVPs) for our employer brand to enhance PharmaEngineers' employment experience.

➢ PharmaEngine was put in the 73rd percentile compared with peers with all aspects in the 50th percentile, showing strong employer competitiveness, however, we still hope to enhance in topics such as "Performance Management", "Reward System", and "Career Development". For remuneration, we hope to continue to refine the reward and promotion system. In personal development, we will add more activities to enhance core and leadership skills while use career discovery and evaluation tools to help each employee's career development.

➢ "Jointly create hope of life through diversified innovation and teamwork" is PharmaEngine's corporate strength. Employees' timely feedback through the employee satisfaction survey can help management understand more about the needs of employees in order to bolster engagement and move towards building a sustainable business together.

4.1 Green Operation

Greenhouse Gas

Our business model is “Virtual Pharmaceutical Company”, we operate our business in a rented office space in a building located in Taipei, Taiwan. We do not have our own production facilities or laboratories. The main direct GHG emissions (scope 1) comes from gasoline for official vehicles and the emissions of refrigerants from freezers and refrigerators in our office space. The main indirect GHG emissions (scope 2) comes from purchased electricity. The statistics of our greenhouse gas emissions for the past two years are as follow:

unit: tCO_2e

Operating Base	Scope	2022	2023
Head Office	1	≈56	≈42
	2	≈73	≈67
Total		≈129	≈109

Note: The above table is based on GHG Protocol

Management Policy

01 Procure certified computers and printers carrying the “Energy-saving Stamp”.

02 Continuous training regarding GHG emissions reduction methods.

Goal Reduce carbon dioxide emissions per capita by 5% (base year: 2022) and complete initial phase of Scope 3 carbon dioxide emissions inventory check in 2024.

Note The Company’s office is located at Taipei City, and its operations do not affect the ecological conservation and do not violate the environmental protection laws nor cause major leakages.

Water and Waste

The main source of pollution in the Company's operations is general domestic wastewater discharge and waste. In terms of the discharge of general domestic wastewater, there is no recycling and reuse. Instead, the domestic wastewater is discharged into the sewages in Taipei City, and then discharged into the sewage treatment plant. Accordingly, the corporate water reduction policy was defined. Through continued involvement in the "Do One Thing for Tamsui River" campaign, colleagues are given ideas about environmental protection in water conservation. The goal is to reduce at least 0.5% of water consumption per capita (base year: 2022).
Since 2021, the Company starts to record its total weight of waste. The total weight of the garbage and recycled items in 2021, 2022 and 2023 are 135.75kg, 111.2kg, and 201.2kg. The reason for the increase is because in 2021 and 2022, the Company adopted the remote working system for all employees. However, in 2023, this system was modified to work from home one day a week. In response to the COVID-19 epidemic in 2023, the Company encouraged colleagues to have lunch in the office instead of in restaurants. The Company sets the target of reducing its total weight of waste per capita by at 2% (base year: 2022). Two training courses for employees were conducted in 2023 to share knowledge on how to reduce plastic waste and how to make shampoo bars.

Water Consumption

Item	Unit	2022	2023
Annual Water Consumption	Ton	962.7	971.44
No. of Employees at Year End	Person	36	36
Water Consumption per Capita	Ton/Person	26.74	26.98

*The above data is collected in-house, not assured by third-party.

Waste Generated

Item	Unit	2022	2023
Annual Total Weight of Waste	KG	111.2	201.2
No. of Employees at Year End	Person	36	36
Weight of Waste per Capita	KG/Person	3.08	5.59

*The above data is collected in-house, not assured by third-party.

Domestic Waste Management Policy

01 Recyclable: Properly manage paper wastes, wastes with reuse value, and food wastes.

02 Non-recyclable: The general household wastes are centrally collected by the building and transported for disposal.

Goal Reduce at least 0.5% of water consumption per capita and at least 2% of total weight of waste each year (base year: 2022).

Note In 2023, the Company was not penalized by environmental agencies or involved in pollution disputes due to environmental pollution.

4.2 Biodiversity

PharmaEngine does not own production facilities or laboratories. However, we are aware of the importance of biodiversity for our environment and community. To raise awareness, the Company conducted three nature walks for employees, visiting Fuyang Eco Park, Yangming Mountain, and Beitou Hot Springs. We invited The Society of Wilderness to teach us about the specific species that live among us in Taipei City. In 2024, we plan to complete the initial phase of Scope 3 greenhouse gas inventory check. The perimeter will include the Product Life Cycle of our commercial product, ONIVYDE®, and the emissions occurred from employees' business travels. This is the first step for PharmaEngine to understand our impact on the environment and our relationship with nature. We will also continue to raise awareness of biodiversity by conducting more trainings for employees.

- The office site we are currently renting is not located in protected areas and areas of high biodiversity value outside. In 2023, there were no hazardous waste output as defined by the Basel Convention.

4.3 Climate Change Strategy and Action: Task Force on Climate-related Financial Disclosures (TCFD)

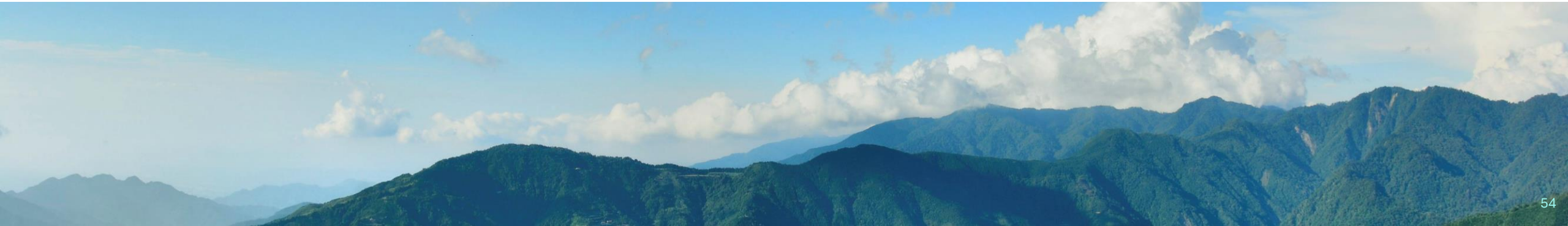
TCFD Domain	Climate Management Key Results	Developmental Goal
Governance	◆ The Board of Directors of PharmaEngine is the highest-ranking governance unit overseeing issues concerning climate change risks and opportunities and is responsible for decision-making and overseeing the climate-related issues and matters. ◆ The Sustainability Promotion Taskforce is responsible for climate change management and for preparing strategies, evaluating, supervising, and enforcing climate-related issues and matters. It reports to the Board of Directors at least once a year on ESG implementation status of the Company, reviews the effectiveness, and revises the strategic goals and the related regulatory systems.	◆ Continue to broaden and enhance the Board's and the management team's knowledge regarding low-carbon medications, climate change-related scientific issues and global initiatives, etc. ◆ The Board and the management team continues to strengthen the supervision of the Company's continuous low-carbon implementation plans.
Strategy	PharmaEngine is devoted to realizing and promoting the combination of AI-assisted research and development of new drugs and build a green supply chain to hopefully drive the environmental protection awareness in the biopharmaceutical industry and to effectively accomplish the goal to reduce greenhouse gas emissions and the provision of low-carbon products and services.	◆ Continue promoting low-carbon drugs and services ◆ Include net zero emissions as a long-term development goal for the Company
Risk Management	The Sustainability Promotion Taskforce identifies and weighs the transformational and physical risks, stipulates corresponding countermeasures and opportunities, and defines material risk/opportunity indicators and the control mechanism with the aim of achieving sustainability goals.	◆ Strengthen the engagement mechanism with customers in upstream and downstream in order to reinforce the impacts the Company has on low-carbon transformation in the biotech industry.
Metrics and Targets	◆ Define and fulfill the carbon reduction goal of corporate operations. ◆ Increase the ratio of green packaging of the Company's products. ◆ Create a new experimental model of energy conservation and carbon reduction with the purpose to provide low-carbon emission density medicines to the public.	◆ Completed Scope 1 and Scope 2 greenhouse gas inventory checks in 2023. ◆ Scheduled to complete the initial phase of Scope 3 carbon inventory check in 2024. ◆ Set greenhouse gas carbon reduction goals for the Company and periodically disclose phased results. ◆ Gradually improve existing experiment design and define the low-carbon experimental model according to the strategic planning.

Climate Change-related Risk Identification and Countermeasures

Type of Risk		Impact of Risk	Countermeasure and Potential Financial Impact
Transformational	Policy and Regulatory	Continuing climate change-related policy actions. Activate greenhouse gas emission cap control such as implementation of the carbon pricing mechanism to reduce greenhouse gas emissions and encouraging improved water consumption efficiency in the future. As the climate change-related loss continues to grow, the climate-related lawsuit risk might also increase.	◆ PharmaEngine continues to promote low-carbon drugs and services, and to enhance energy efficiency, the Company will continue to build a low-carbon experimental model according to strategic planning plus the gradual improvement of the existing experimental design and reduce environmental impacts. ◆ Based on TaiPower data, if nuclear power is replaced by renewable energy and coal is replaced by natural gas in the future, the power generation cost per kWh in Taiwan will increase by 45.45% in 2025, which, when calculated by a mean price of electricity of NT$2.6/kWh in 2018, it will increase by NT$1.182 per kWh in 2025. When calculated by the mean expenditure of about 138,925 kWh on the Company's externally purchased electricity over the past 2 years, it is estimated an additional NT$160,000 will be spent on electricity each year in the future.
	Technological	While the global economy gradually turns towards low-carbon and high-performing technological improvements and innovations, competitive advantages of the Company will be impacted. As such, the timing of when new technologies are developed and used will be the primary uncertainty in the Company's risk evaluation.	PharmaEngine evaluates the impacts of climate change-related policies and plans operations for the short-term, mid-term and long-term. It is now devoted to promoting the combination of AI-assisted research and development of new drugs and the green supply chain to hopefully improve the Company's competitive advantages applying the said new technology and drive the environmental protection awareness in the biopharmaceutical industry and to effectively accomplish the goal of reducing greenhouse gas emissions.
	Market	Climate change may impact the supply and demand structure and change the product and service mechanisms.	PharmaEngine hopes to enhance its capabilities to undertake climate change risks by becoming a low-carbon enterprise and adopting environmental protection measures and carbon emissions control to create opportunities for generating revenue and expanding market presence. Climate change, however, may impact the stability of the Company's product supply. As such, the safe inventory level may rise to result in an increase in inventory cost. The estimated cost of inventory was about NT$16 million at the end of 2023, for each 1% of increase in inventory, the cost will climb by about NT$160,000.
	Reputation	Climate change may affect our customers' or the society's view on the Company's effort in low-carbon transformation, which is closely related to the Company's image.	PharmaEngine is devoted to reinforcing its engagement mechanism with upstream and downstream customers in order to reinforce the impacts the Company has on low-carbon transformation in the biotech industry.

Climate Change-related Risk Identification and Countermeasures

Type of Risk		Impact of Risk	Countermeasure and Potential Financial Impact
Physical	Immediate	Climate change can trigger extreme weather events such as typhoons, floods, and droughts, resulting in damaged assets of the Company or disruption of the supply chain, among other immediate financial impacts.	Extreme weather events caused by climate change can result in disruption of the Company's supply chain of drug products and cause inability to ship, among other immediate financial impacts, which, when estimated by the operations of 2023, will cause revenue loss of about NT$280 million a year. In order to prevent against such incidents, PharmaEngine has already included the supply of drugs as a key operational item in its Business Continuity Plan and has defined the emergency response procedure in case of disrupted drug supply.
	Long-Term	Long-term changes of global weather and climate, such as the possible elevated sea level or long-term heat waves that may be triggered by persistent high temperatures, can drive up the operational cost.	In order to cope with the gradual shortage in resources as a result of climate change, which may drive up the operational cost for the Company, among other long-term financial impact, PharmaEngine has introduced green packaging material ideas and created a new experimental model of energy conservation and carbon reduction in production process test design, so that drugs of low-carbon emission densities may be provided to the public.



Climate Change-related Risk Identification and Countermeasures

Type of Opportunity	Description of Opportunity	Countermeasure and Potential Financial Impact
Resource Utilization Efficiency	✓ Enhance resource utilization efficiency can bring down mid-term to long-term operational costs of the Company, it can also fulfill the purpose of energy conservation and carbon reduction.	✓ Promote green consumption and focus mainly on products carrying the green "Energy-saving Stamp" electronics. ✓ The establishment or replacement of low-energy consumption equipment and set reduction goals for electricity and water usage to enhance resource utilization efficiency.
Energy Source	✓ Promote the digital management system. ✓ When adding the new equipment, follow the government's subsidy policy and apply for related energy-saving subsidies.	✓ Colleagues are encouraged to commute using public transportation or drive electric cars to work or have green plants in the office in order to bring down carbon emissions. ✓ Create the electronic quality management system to ensure the occurrence of GxP activities in respective stages and enhance the effectiveness. ✓ While making purchases for a self-owned office space, choose HVAC, illumination, and water-saving equipment qualified for energy-saving subsidies or consider the construction of self-owned equipment powered by solar or water recycling systems and apply for government-related subsidies.
Products and Services	✓ Promote low-carbon products and services in response to climate change.	✓ Introduce the green packaging material for the Company product when designing the production process testing. ✓ Create a new experimental model of energy conservation and carbon reduction in order to provide drugs of low-carbon emission densities to the public.
Market	✓ International society continues to value environmental protection awareness and care for lives on Earth while searching for new business opportunities.	✓ AI is applied to the research and development of new drugs in order to find targets more precisely and reduce unnecessary animal experiments. ✓ Reduce unnecessary animal experiments in honor of animal ethics and to fulfill the 3R essence for laboratory animals.
Resilience	✓ Enhance the ability to adapt to climate change in order to accurately manage climate change-related risks and keep track of opportunities.	✓ The Sustainability Promotion Taskforce gathers respective teams for the identification of climate change-related risks and opportunities and stipulation of climate change risk management strategies in order to reinforce the Company's ability to cope with these risks.

5.1 Social Engagements

Health Education Seminars Held in Collaboration with Medical Institutions

Knowledge is power and can bring hope. Knowing challenges can make facing challenges easier. The heart of the seminars is for professionals to share knowledge with the patients and for patients to share experiences to each other. Together, we are stronger. PharmaEngine believes by bringing patients, families and experts together, we can create a hopeful and warm support network for those in need. In 2023, we hosted 5 seminars across Taiwan hoping to raise awareness of pancreatic cancer and help build a support network, so no one needs to fight the disease alone. We Race With You!

Seminars in 2023:

Date	Location	# of Participants
Aug. 25, 2023	Far Eastern Memorial Hospital	8
Sep. 2, 2023	Kaohsiung Medical University Chung-Ho Memorial Hospital	51
Sep. 23, 2023	Kaohsiung Chang Gung Memorial Hospital	32
Nov. 4, 2023	Taichung Veterans General Hospital	35
Nov. 22, 2023	Taipei Veterans General	39

Taipei Veterans General

Far Eastern Memorial Hospital

Sustainability Activities – Reduce Plastic Seminar and Shampoo Bar Class

In 2023, PharmaEngineers learned more information about the importance of environmental protection and sustainability. On Oct. 2, 2023, we invited a lecturer from The Society of Wilderness to teach PharmaEngineers the impacts of plastic use and how to reduce plastic use in our daily lives. We learned the different types of plastics for different usage and some plastics will not perish completely for 500 years or more. These type of waste requires accurate categorization to be recycled properly. We learned a few methods on how to reduce plastic use:

1. Bring your own tumbler when purchasing coffee or bubble tea.
2. Use reusable water bottles.
3. Use soap and shampoo bars instead of bottled products.
4. Reuse plastic bags by cleaning.
5. Use glass bottles as containers.
6. Eat in restaurants instead of buy take-outs.

On Dec. 7, 2023, we hosted a class to make shampoo bars. This helps us to reduce the use of plastic bottles. One shampoo bar can last 50 days for daily use and can serve as a full-body soap. The ingredients are natural and it's gentle on the hair. Each participant learned how to make shampoo bars so we can all make them at home.

5.2 Participation of Public Associations and External Initiatives

Taiwan

- Taiwan Clinical Research Association (TCRA): The Company is an association member and a member of the Supervisory Board. Apart from regularly participating in monthly meetings organized by the Association, we also shares our experiences with others in the Association. The goal is to further implement R&D of clinical trials of new drugs in Taiwan and connect Taiwan with the international development for global testing.
- BioTaiwan: The Company is a member, and besides regularly attending its exhibits, forums, and training, the Company also receives the latest daily updates in the biotech industry and occasionally participates in industry seminars to jointly work toward the development of Taiwan's biotech industry.

Overseas

The Company has participated in the annual seminars organized by the American Society of Clinical Oncology (ASCO), European Society For Medical Oncology (ESMO) and American Association for Cancer Research (AACR) Symposium and published our briefing and clinical trial data. By participating in these international conferences, not only the Company can conduct academic exchanges with professionals and share important medical information, but our international recognition can also be enhanced.

External Initiatives

The Company has been actively publishing clinical trial results in international medical associations or well-known journals since 2011, allowing physicians and scholars with the focus on pancreatic cancer around the world to continue to obtain the latest research progress of ONIVYDE®. We have also published poster for our pipeline product, PEP07, in the 6th Annual DDR Inhibitors Summit 2023.

Publications in International Medical Associations or Well-known Journals

Year	Contents
2011	◆ PEP02 met the primary endpoints in phase II studies in gastric cancer and pancreatic cancer; results were presented as an oral presentation at the 2011 Gastrointestinal Cancers Symposium of the American Society of Clinical Oncology (ASCO). ◆ Presented "Phase II study of PEP02 for patients with gemcitabine-refractory metastatic pancreatic cancer" as poster presentation at 2011 ASCO Annual Meeting.
2013	◆ Published studies of nanoliposomal irinotecan (PEP02, MM-398) in gastric cancer in Annals of Oncology. ◆ Published studies of nanoliposomal irinotecan (PEP02, MM-398) in late-stage pancreatic cancer in British Journal of Cancer.
2014	◆ Global phase III (NAPOLI-1) full data of MM-398 (PEP02) for metastasis pancreatic cancer study was presented orally at ESMO World Congress on Gastrointestinal Cancer.
2015	◆ Presented expanded analysis of Phase III MM-398 NAPOLI-1 study at the 2015 ASCO GI, substantiated the positive results of MM-398 in combination with 5-FU/LV. ◆ Published the ONIVYDE® phase III NAPOLI-1 study data in The Lancet.
2019	◆ PharmaEngine's partners Ipsen and Servier announced positive initial results for ONIVYDE® as a second-line treatment for phase II/III small cell lung cancer, and announced that the trial had entered phase II patient enrollment.
2021	◆ PharmaEngine released the data of Phase II clinical studies of ONIVYDE® combination therapy in squamous cell carcinoma of the head and neck and the esophagus that has failed prior platinum-based chemotherapy or concurrent chemoradiotherapy in 2021 ASCO symposium (2021 ASCO).
2022	◆ PharmaEngine released the preliminary data of Phase I clinical studies of ONIVYDE® in combination with LONSURF® in treating multiple solid tumors in ASCO-GI 2022.
2023	◆ PharmaEngine's partners Ipsen published Phase III clinical study data of ONIVYDE® regimen (NALIRIFOX) for 1L PDAC in ASCO-GI 2023 ◆ Published post for PEP07 preliminary data for the treatment of AML and MCL at 6th Annual DDR Inhibitors Summit 2023

For more information regarding our publications, please visit our company website.

5.3 Industry-university Alliance

Since 2021, PharmaEngine has launched the "Share Industry-Related Experience Program" for senior students in pharmaceutical-related universities in Taiwan. The program includes courses such as Preclinical Development, From Lab to the Real World: Challenges, Introduction to Drug and Cancer Clinical Trials, Marketing, Sales and Brand Management, Valuation of New Drug, and Regulatory Essentials & Introduction of Patent Linkage, etc. The goal is to allow students to understand the internal operations and the actual work of a biotech company.

In 2023, PharmaEngine cooperated with three universities: Chang Gung University, National Cheng Kung University, and Kaohsiung Medical University to share industry experiences with students in related fields. Over 100 students participated.

The Company looks forward to cooperating with more universities to build a strong relationship with the academic community and allow students to jumpstart their planning for a career in the biotech industry.

Kaohsiung Medical University

Chang Gung University

5.4 Influence on Cultural Inheritance

When friends from another country come to visit Taipei, how many of us can explain the geographical characters, culture, history, or traditions in Taipei City? Many of us would require help from search engines!

In 2023, PharmaEngine focused on helping employees understand more local "Taipei" culture, we conducted several activities. We visited Dadaocheng and learned from the local guide about the history of the colonial-style two-story western buildings and the height of the tea and fabric trade in Taipei in the late 1900s. We also learned about the Chinese herbal medicines and their benefits.

Dadaocheng (大稻埕)

Lin An-Tai Historic Mansion
(林安泰古厝)

Chinese Medicine Class

Beitou Hot Spring Museum

PharmaEngineers also visited Lin An-Tai Historic Mansion (Southern Fujian style courtyard house) to learn about the unique artistic thoughts behind the details of a Taiwanese traditional housing. Furthermore, we visited Beitou Hot Spring Museum and learned the building itself was once a public bathhouse constructed by the Japanese government during the Japanese colonial period of Taiwan from 1895-1945, and the unique hot spring culture the began more than 100 years ago. Many PharmaEngineers noted that by engaging in these activities have helped them to view these familiar scenes with new insights and be truly immersed in the beauty of traditional Taiwanese culture. Many PharmaEngineers also hope to share these experiences with families.

In the future, PharmaEngine will continue to encourage employee and their families to visit museums, plays, and exhibits to support and learn more about our local culture. By nurturing in culture, PharmaEngineers can return to work with a fulfilled mindset to continue the fight against cancer.

Appendix 1: GRI Index

GRI Guideline Titles	Disclosed Item Number	Disclosed Item Title	Status	Section Index
GRI 2: General Disclosures 2021				
The organization and its reporting practices				
2-1	Organization details	1.1 Company Profile	V	5
2-2	Entities include in the organization's sustainability reporting	About the Report	V	3
2-3	Reporting period, frequency and contact point	About the Report	V	3
2-4	Restatements of information	About the Report	V	3
2-5	External assurance	About the Report	V	3
Activities and workers				
2-6	Activities, value chain and other business relationships	2.4 Supplier Management	V	36
2-7	Employees	3.1 Human Resources Overview	V	37
2-8	Workers who are not employees	We did not have workers who are not employees in 2023.		
Governance				
2-9	Governance structure and composition	1.3 Corporate Governance and Board of Directors	V	9
2-10	Nomination and selection of the highest governance body	1.3 Corporate Governance and Board of Directors	V	9
2-11	Chair of the highest governance body	1.3 Corporate Governance and Board of Directors	V	9
2-12	Role of the highest governance body in overseeing the management of impacts	1.3 Corporate Governance and Board of Directors	V	9
2-13	Delegation or responsibility for managing impacts	1.3 Corporate Governance and Board of Directors	V	9
2-14	Role of the highest governance body in sustainability reporting	1.3 Corporate Governance and Board of Directors	V	9
2-15	Conflicts of interest	1.3 Corporate Governance and Board of Directors	V	9
2-16	Communication of critical concerns	1.3 Corporate Governance and Board of Directors	V	9
2-17	Collective knowledge of the highest governance body	1.3 Corporate Governance and Board of Directors	V	9

GRI Guideline Titles	Disclosed Item Number	Disclosed Item Title	Status	Section Index
2-18	Evaluation of the performance of the highest governance body	1.3 Corporate Governance and Board of Directors	V	9
2-19	Remuneration policies	1.3 Corporate Governance and Board of Directors	V	9
2-20	Process to determine remuneration	1.3 Corporate Governance and Board of Directors	V	9
2-21	Annual total compensation ratio	1.3 Corporate Governance and Board of Directors	V	9
Strategy, policies and practices				
2-22	Statement on sustainable development strategy	Message from the President & CEO	V	4
2-23	Policy commitments	PharmaEngine Company Website: Sustainability	V	Link
2-24	Embedding policy commitments	PharmaEngine Company Website: Sustainability	V	Link
2-25	Processes to remediate negative impacts	1.5 Ethical Corporate Management and Ethical Code	V	21
2-26	Mechanisms for seeking advice and raising concerns	1.5 Ethical Corporate Management and Ethical Code	V	21
2-27	Compliance with laws and regulations	1.5 Ethical Corporate Management and Ethical Code	V	21
2-28	Membership associations	5.2 Participation of Public Associations and External Initiatives	V	58
Stakeholder engagement				
2-29	Approach to stakeholder engagement	2.1 Major Themes and Stakeholder Communication	V	30
2-30	Collective bargaining agreements	3.7 Human Rights Protection	V	47
GRI 201: Economic Performance 2016				
201-1	Direct economic value generated and distributed	1.2 Economic Performance	V	8
201-2	Financial implications and other risks and opportunities due to climate change	4.3 Climate Change Strategy and Action	V	52
201-3	Defined benefit plan obligations and other retirement plans	3.5 Employee Welfare Program	V	43
201-4	Financial assistance received from government	1.2 Economic Performance	V	8
GRI 202: Market Presence 2016				
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	3.5 Employee Welfare Program	V	46
202-2	Proportion of senior management hired from the local community	3.1 Human Resources Overview	V	37

GRI Guideline Titles	Disclosed Item Number	Disclosed Item Title	Status	Section Index
GRI 203: Indirect Economic Impacts 2016				
203-1	Infrastructure investments and services supported	The Company didn't perform relevant inspections during the year, it is not applicable.		
203-2	Significant indirect economic impacts	The Company didn't perform relevant inspections during the year, it is not applicable.		
GRI 204: Procurement Practices 2016				
204-1	Proportion of spending on local suppliers	2.4 Supplier Management	V	36
GRI 205: Anti-corruption 2016				
205-1	Operations assessed for risks related to corruption	1.6 Anti-corruption Policy	V	22
205-2	Communication and training about anti-corruption policies and procedures	1.5 Ethical Corporate Management and Ethical Code	V	21
205-3	Confirmed incidents of corruption and actions taken	1.6 Anti-corruption Policy	V	22
GRI 206: Anti-competitive Behavior 2016				
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	1.5 Ethical Corporate Management and Ethical Code	V	21
GRI 207: Tax 2019				
207-1	Approach to tax	1.2 Economic Performance	V	8
207-2	Tax governance, control, and risk management	1.2 Economic Performance	V	8
207-3	Stakeholder engagement and management of concerns related to tax	2.1 Major Themes and Stakeholder Communication	V	30
207-4	Country-by-country reporting	1.2 Economic Performance	V	8
GRI 301: Materials 2016				
301-1	Materials used by weight or volume	The Company has no manufacturing facilities, it is not applicable.		
301-2	Recycled input materials used	The Company has no manufacturing facilities, it is not applicable.		
301-3	Reclaimed products and their packaging materials	No such incident occurred during the year.		

GRI Guideline Titles	Disclosed Item Number	Disclosed Item Title	Status	Section Index
GRI 302: Energy 2016				
302-1	Energy consumption within the organization	4.1 Green Operation	V	49
302-2	Energy consumption outside of the organization	The Company didn't perform relevant inspections during the year, it is not applicable.		
302-3	Energy intensity	The Company didn't perform relevant inspections during the year, it is not applicable.		
302-4	Reduction of energy consumption	4.3 Climate Change Strategy and Action	V	52
302-5	Reductions in energy requirements of products and services	4.3 Climate Change Strategy and Action	V	52
GRI 303: Water and Effluents 2018				
303-1	Interactions with water as a shared resource	4.1 Green Operation	V	49
303-2	Management of water discharge-related impacts	4.1 Green Operation	V	49
303-3	Water withdrawal	4.1 Green Operation	V	49
303-4	Water discharge	4.1 Green Operation	V	49
303-5	Water consumption	4.1 Green Operation	V	49
GRI 304: Biodiversity 2016				
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside	4.2 Biodiversity	V	51
304-2	Significant impacts of activities, products and services on biodiversity	4.2 Biodiversity	V	51
304-3	Habitats protected or restored	4.2 Biodiversity	V	51
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	4.2 Biodiversity	V	51

GRI Guideline Titles	Disclosed Item Number	Disclosed Item Title	Status	Section Index
GRI 305: Emissions 2016				
305-1	Direct (Scope 1) GHG emissions	4.1 Green Operation	V	49
305-2	Energy indirect (Scope 2) GHG emissions	4.1 Green Operation	V	49
305-3	Other indirect (Scope 3) GHG emissions	The Company didn't perform relevant inspections during the year, it is not applicable.		
305-4	GHG emissions intensity	The Company didn't perform relevant inspections during the year, it is not applicable.		
305-5	Reduction of GHG emissions	4.1 Green Operation	V	49
305-6	Emissions of ozone-depleting substances (ODS)	The Company didn't perform relevant inspections during the year, it is not applicable.		
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	The Company didn't perform relevant inspections during the year, it is not applicable.		
GRI 306: Waste 2020				
306-1	Waste generation and significant waste-related impacts	4.1 Green Operation	V	49
306-2	Management of significant waste-related impacts	4.1 Green Operation	V	49
306-3	Waste generated	4.1 Green Operation	V	49
306-4	Waste diverted from disposal	4.1 Green Operation	V	49
306-5	Waste directed to disposal	4.1 Green Operation	V	49
GRI 308: Supplier Environment Assessment 2016				
308-1	New suppliers that were screened using environmental criteria	2.4 Supplier Management	V	36
308-2	Negative environmental impacts in the supply chain and actions taken	2.4 Supplier Management	V	36
GRI 401: Employment 2016				
401-1	New employee hires and employee turnover	3.1 Human Resources Overview	V	37
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	3.5 Employee Welfare Program	V	43
401-3	Parental leave	3.5 Employee Welfare Program	V	43

GRI Guideline Titles	Disclosed Item Number	Disclosed Item Title	Status	Section Index
GRI 402: Labor/Management Relations 2016				
402-1	Minimum notice periods regarding operational changes	3.1 Human Resources Overview	V	37
GRI 403: Occupational Health and Safety 2018				
403-1	Occupational health and safety management system	3.6 Friendly Workplace	V	46
403-2	Hazard identification, risk assessment, and incident investigation	3.6 Friendly Workplace	V	46
403-3	Occupational health services	3.6 Friendly Workplace	V	46
403-4	Worker participation, consultation, and communication on occupational health and safety	3.6 Friendly Workplace	V	46
403-5	Worker training on occupational health and safety	3.6 Friendly Workplace	V	46
403-6	Promotion of worker health	3.6 Friendly Workplace	V	46
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	3.6 Friendly Workplace	V	46
403-8	Workers covered by an occupational health and safety management system	3.6 Friendly Workplace	V	46
403-9	Work-related injuries	3.6 Friendly Workplace	V	46
403-10	Work-related ill health	3.6 Friendly Workplace	V	46
GRI 404: Training and Education 2016				
404-1	Average hours of training per year per employee	3.3 Human Resource Training and Development	V	40
404-2	Programs for upgrading employee skills and transition assistance programs	3.4 Performance Review and Career Development	V	42
404-3	Percentage of employees receiving regular performance and career development	3.4 Performance Review and Career Development	V	42
GRI 405: Diversity and Equal Opportunity 2016				
405-1	Diversity of governance bodies and employees	3.1 Human Resources Overview	V	37
405-2	Ratio of basic salary and remuneration of women to men	3.1 Human Resources Overview	V	37
GRI 406: Non-discrimination				
406-1	Incidents of discrimination and corrective actions taken	3.7 Human Rights Protection	V	47

GRI Guideline Titles	Disclosed Item Number	Disclosed Item Title	Status	Section Index
GRI 407: Freedom of Association and Collective Bargaining 2016				
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	No such incident occurred during the year.		
GRI 408: Child Labor 2016				
408-1	Operations and suppliers at significant risk for incidents of child labor	3.7 Human Rights Protection	V	47
GRI 409: Forced of Compulsory Labor 2016				
409-1	Operations and suppliers at significant risk of incidents of forced or compulsory labor	No such incident occurred during the year.		
GRI 410: Security Practices 2016				
410-1	Security personnel trained in human rights policies or procedures	3.7 Human Rights Protection	V	47
GRI 411: Rights of Indigenous Peoples 2016				
411-1	Incidents of violations involving rights of indigenous peoples	No such incident occurred during the year.		
GRI 413: Local Communities 2016				
413-1	Operations with local community engagement, impact assessments, and development programs	No such incident occurred during the year.		
413-2	Operations with significant actual and potential negative impacts on local communities	No such incident occurred during the year.		
GRI 414: Supplier Social Assessment 2016				
414-1	New suppliers that were screened using social criteria	2.4 Supplier Management	V	36
414-2	Negative social impacts in the supply chain and actions taken	No such incident occurred during the year.		
GRI 415: Public Policy 2016				
415-1	Political contributions	No such incident occurred during the year.		
GRI 416: Customer Health and Safety 2016				
416-1	Assessment of the health and safety impacts of product and service categories	1.8 Customer Relations	V	26
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	1.8 Customer Relations	V	26

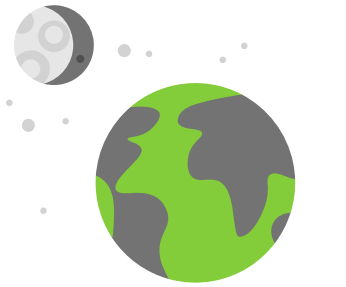
GRI Guideline Titles	Disclosed Item Number	Disclosed Item Title	Status	Section Index
GRI 417: Marketing and Labelling 2016				
417-1	Requirements for product and service information and labelling	1.8 Customer Relations	V	26
417-2	Incidents of non-compliance concerning product and service information and labelling	1.8 Customer Relations	V	26
417-3	Incidents of non-compliance concerning marketing communications	1.8 Customer Relations	V	26
GRI 418: Customer Privacy 2016				
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	No such incident occurred during the year.		

Appendix 2: SASB

Code	Accounting Metric	Nature	Referenced Chapter/Disclosure	Page
Topic: Safety of Clinical Trial Participants				
HC-BP-210a.1	Discussion, by region, of management process for ensuring quality and patient safety during clinical trials	qualitative	1.8 Customer Relations	26
HC-BP-210a.2	Number of inspections related to clinical trial management and pharmacovigilance that resulted in: (1) entity voluntary remediation or (2) regulatory or administrative actions taken against the entity	quantitative	No such information is available during the year.	
HC-BP-210a.3	Total amount of monetary losses as a result of legal proceedings associated with clinical trials in developing countries	quantitative	The Company conducts human clinical trials in Taiwan only and there was no monetary losses as a result of legal proceedings associated with clinical trials in any country during the year.	
Topic: Access to Medicines				
HC-BP-240a.1	Description of actions and initiatives to promote access to health care products for priority diseases and in priority countries as defined by the Access to Medicine Index	qualitative	The Company currently has no such drug.	
HC-BP-240a.2	List of products on the WHO List of Prequalified Medicinal Products as part of its Prequalification of Medicines Programme (PQP)	qualitative	The Company currently has no such drug.	
Topic: Affordability & Pricing				
HC-BP-240b.2	Percentage change in: (1) weighted average list price and (2) weighted average net price across the product portfolio compared to previous reporting period	quantitative	1.8 Customer Relations	26
HC-BP-240b.3	Percentage change in: (1) list price and (2) net price of product with largest increase compared to previous reporting period	quantitative	1.8 Customer Relations	26
Topic: Drug Safety				
HC-BP-250a.1	Products listed in public medical product safety or adverse event alert databases	qualitative	1.8 Customer Relations	26

Code	Accounting Metric	Nature	Referenced Chapter/Disclosure	Page
HC-BP-250a.2	Number of fatalities associated with products	quantitative	No such incident occurred during the year.	
HC-BP-250a.3	(1) Number of recalls issued, (2) total units recalled	quantitative	No such incident occurred during the year.	
HC-BP-250a.4	Total amount of product accepted for take back, reuse, or disposal	quantitative	No such incident occurred during the year.	
HC-BP-250a.5	Number of enforcement actions taken in response to violations of good manufacturing practices (GMP) or equivalent standards, by type	quantitative	No such incident occurred during the year.	
Topic: Counterfeit Drugs				
HC-BP-260a.1	Description of methods and technologies used to maintain traceability of products throughout the supply chain and prevent counterfeiting	qualitative	1.8 Customer Relations	26
HC-BP-260a.2	Discussion of process for alerting customers and business partners of potential or known risks associated with counterfeit products	quantitative	1.8 Customer Relations	26
HC-BP-260a.3	Number of actions that led to raids, seizure, arrests, or filing of criminal charges related to counterfeit products	quantitative	No such incident occurred during the year.	
Topic: Ethical Marketing				
HC-BP-270a.1	Total amount of monetary losses as a result of legal proceedings associated with false marketing claims	quantitative	No such incident occurred during the year.	
HC-BP-270a.2	Description of code of ethics governing promotion of off-label use of products	qualitative	1.8 Customer Relations	26
Topic: Employee Recruitment, Development & Retention				
HC-BP-330a.1	Discussion of talent recruitment and retention efforts for scientists and research and development staff	qualitative	3.1 Human Resources Overview	37
HC-BP-330a.2	(1) Voluntary and (2) involuntary turnover rate for: (a) executives/senior managers, (b) mid-level managers, (c) professionals, and (d) all others	quantitative	3.1 Human Resources Overview	37

Code	Accounting Metric	Nature	Referenced Chapter/Disclosure	Page
Topic: Supply Chain Management				
HC-BP-430a.1	Percentage of (1) entity's facilities and (2) Tier I suppliers' facilities participating in the Rx-360 International Pharmaceutical Supply Chain Consortium audit programme or equivalent third-party audit programmes for integrity of supply chain and ingredients	quantitative	1.8 Customer Relations	26
Topic: Business Ethics				
HC-BP-510a.1	Total amount of monetary losses as a result of legal proceedings associated with corruption and bribery	quantitative	No such incident occurred during the year.	
HC-BP-510a.2	Description of code of ethics governing interactions with health care professionals	qualitative	1.8 Customer Relations	26
Activity Metrics				
HC-BP-000.A	Number of patients treated	quantitative	1.8 Customer Relations	26
HC-BP-000.B	Number of drugs (1) in portfolio and (2) in research and development (Phases 1-3)	quantitative	1.1 Company Profile	5



Appendix 3: Summary of Assured Items

<table>
<tr><th>Assured Items</th><th>Applicable Criteria</th><th>Page</th></tr>
<tr><td>In 2023, the Company has conducted cyber security related promotion and training for 114 hours, which was participated by at least 38 people, including managers and employees.</td><td>The total number of hours of education and training completed in 2023 according to the Company’s S.O.P. and the definition of cyber security.</td><td>24</td></tr>
<tr><td>In 2023, 190 persons cumulatively received 681 hours of educational training related to ethical business management issues (including courses for legal compliance for ethical business management, drug safety and health management and inspections, accounting system and internal control etc.).</td><td>The total number of hours of education and training completed in 2023 according to the Company’s S.O.P. and the definition of ethical business management.</td><td>21</td></tr>
<tr><td>In 2023, the Company has executed 3 GxP supplier assessments.</td><td>In 2023, the total number of suppliers audited according to the Company's S.O.P..</td><td>36</td></tr>
<tr><td>The Training situation based on employee job type and gender statistics in 2023.
<table>
<tr><th colspan="2">Items</th><th>Male</th><th>Female</th></tr>
<tr><td rowspan="3">Average Training Time (hour)</td><td>Managerial Officers</td><td>55.1</td><td>41.0</td></tr>
<tr><td>R&D Employees</td><td>54.6</td><td>64.4</td></tr>
<tr><td>Other Employees</td><td>49.1</td><td>31.5</td></tr>
</table></td><td>The total number of hours of education and training completed in 2023 in accordance with the Company’s S.O.P., classified by employee position and gender.</td><td>41</td></tr>
<tr><td>The retention rate of R&D employees was 94%.</td><td>The proportion of incumbent R&D personnel employed in 2023 to the employed R&D personnel at the end of 2022.</td><td>39</td></tr>
</table>

Appendix 4: Independent Limited Assurance Report (Translation)

Independent Limited Assurance Report

To PharmaEngine, Inc.

We have been engaged by PharmaEngine, Inc. ("Company") to perform assurance procedures in respect of the key performance indicators identified by the Company and reported in the 2023 Sustainability Report (hereinafter referred to as the "Identified Key Performance Indicators") and have issued a limited assurance report based on the result of our work performed.

Subject Matter Information and Applicable Criteria

The subject matter information is the Identified Key Performance Indicators of the Company. The Identified Key Performance Indicators and the respective applicable criteria are stated in the "Summary of Assured Items" on page 73 of the Sustainability Report. The scope of the aforementioned Identified Key Performance Indicators is set out in the "Scope and Boundary" on page 3 of the Sustainability Report.

Management's Responsibility

The Management of the Company is responsible for the preparation of the Identified Key Performance Indicators disclosed in the Sustainability Report in accordance with the respective applicable criteria. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation of the Identified Key Performance Indicators that are free from material misstatement, whether due to fraud or error.

Inherent Limitations

Certain subject matter information assured involves non-financial data which is subject to more inherent limitations than financial data. Qualitative interpretations of the relevance, materiality and the accuracy of data are more dependent on individual assumptions and judgments.

Compliance of Independence and Quality Management Requirement

We are independent of the Company in accordance with the Norm of Professional Ethics for Certified Public Accountant of the Republic of China, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Our firm applies the Standard on Quality Management 1, "Quality Management for Public Accounting Firms" of the Republic of China, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Identified Key Performance Indicators based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with the Standard on Assurance Engagements 3000, "Assurance Engagements other than Audits or Reviews of Historical Financial Information" of the Republic of China. This standard requires that we plan and perform this engagement to obtain limited assurance about whether the Identified Key Performance Indicators are free from material misstatement.

Appendix 4: Independent Limited Assurance Report (Translation)

Under the requirements of the aforementioned standards, our limited assurance engagement involves assessing the suitability in the circumstances of the Company's use of the criteria as the basis for the preparation of the Identified Key Performance Indicators, assessing the risks of material misstatement of the Identified Key Performance Indicators whether due to fraud or error, responding to the assessed risks as necessary in the circumstances and evaluating the overall presentation of the Identified Key Performance Indicators. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, and agreeing or reconciling with underlying records.

Given the circumstances of the engagement, in performing the procedures listed above, we:

- Made inquiries of the persons responsible for the Identified Key Performance Indicators to obtain an understanding of the processes, and the relevant internal controls relating to the preparation of the aforementioned information to identify the areas where there may be risks of material misstatement; and
- Based on the above understanding and the areas identified, performed analytical procedures on the Identified Key Performance Indicators and performed substantive testing on a selective basis, including inquiries, observation, inspection, and reperformance to obtain evidence for limited assurance.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about whether the Company's Identified Key Performance Indicators have been prepared, in all material respects, in accordance with the respective applicable criteria.

We also do not provide any assurance on the Sustainability Report as a whole or on the design or operating effectiveness of the relevant internal controls. Furthermore, our assurance does not extend to information disclosed in the Sustainability Report for the period ended December 31, 2020 or prior periods.

Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Identified Key Performance Indicators in the Sustainability Report are not prepared, in all material respects, in accordance with the applicable criteria.

Other Matter

The Management of the Company is responsible for maintaining the Company's website. We have no responsibility to re-perform any procedures regarding the Identified Key Performance Indicators after the date of our assurance report, even if the Identified Key Performance Indicators or the applicable criteria have been subsequently modified.

Yu, Shu-Fen
For and on behalf of PricewaterhouseCoopers, Taiwan
July 25, 2024

PharmaEngine, Inc.
2023 Sustainability Report

PharmaEngine
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