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## About the Report

This Report is the first Environmental, Social and Governance Report ("ESG Report" or the "Report") publicly released by Anhui Huaheng Biotechnology Co., Ltd. (Stock Code: 688639.SH) ("AHB", "the Company" or "we"). The purpose of this Report is to inform our stakeholders of the Company's environmental, social and governance vision, practices and performance in 2023. The board of directors of the Company promises to oversee the content of this Report and ensure that there are no false records or misleading statements. The board of directors has reviewed and approved this Report to ensure the truthfulness, accuracy, and completeness of the contents.

### Reporting Standards

This Report is compiled in accordance with the Global Reporting Initiative (GRI) Sustainability Reporting Standard (2021), the United Nations Sustainable Development Goals (SDGs), and the China Corporate Social Responsibility Reporting Guidelines (CASS-ESG 5.0), and combined with relevant requirements, including Guidline No. 1 Normative Operation of Self-regulatory Guidelines for Listed Companies on the Science and Technology Innovation Board of Shanghai Stock Exchange, Guideline No. 2 Voluntary Information Disclosure for Self-regulatory Supervision of Companies Listed on the Science and Technology Innovation Board of Shanghai Stock Exchange, and Guidline No.9- Evaluation of Information Disclosure of Self-regulatory Guidelines for Listed Companies on the Science and Technology Innovation Board of Shanghai Stock Exchange.

### Reporting Period

This Report covers the period from 1 January 2023 to 31 December 2023, and is issued on an annual basis, aligning with the fiscal year.

### Reporting Scope

The economic and social performance indicators in this Report are consistent with the scope of our annual report; the environmental performance indicators cover three production bases, namely Changfeng Base, Bayannur Base, and Qinhuangdao Base. Considering the fact that the Chifeng Base has not yet been put into production during the reporting period, it is not included in the scope of environmental performance indicators for this reporting year.

### Data Sources

The content, data and cases disclosed in this Report are sourced from internal documents and internal original ledgers of the Company, publicly available information on websites, and third-party review reports. Some economic performance data is sourced from our 2023 Annual Report, which has been compiled, edited, and reviewed by our ESG report preparation team. Unless otherwise specified, the monetary units adopted in this Report is RMB.

### Obtain this Report

Stakeholders can access and download this Report on the official website of AHB ([www.huahengbio.com](http://www.huahengbio.com)). This Report is provided in both Chinese and English versions. In case of any ambiguity or inconsistency due to language reasons, the Chinese version shall prevail.

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## Chairwoman's Message

Dear stakeholders,

Time flies like an arrow, and the years go by like a song. The past year was one filled with both challenges and opportunities. We have consistently pursued technological innovation as our driving force, rooted in advanced manufacturing capabilities, accelerating our pace of development. Under the leadership of Xi Jinping's socialism with Chinese characteristics for a new era, we have continuously promoted the sustainable development strategy of the enterprise.

The synthetic biology industry serves as the underlying support for achieving green biomanufacturing. It has been implemented and applied in various industries such as medicine, energy, materials, chemicals, agriculture, and food, and has garnered significant attention worldwide. It is regarded as the "golden track" for the future biological industry development. China's synthetic biology industry is accelerating into the fast track under the national top-level design and strong support from various provincial and municipal policies. AHB, a high-tech with synthetic biology as the core, has always adhered to the concept of "Green Manufacturing and Low-carbon First", driven by green technology innovation and gripped green value creation. Focusing on core products such as alanine and valine, we extend synthetic biology technology into multiple domains, continuously contributing to green manufacturing, industrial development, and the achievement of carbon peaking and carbon neutrality goals.

2023 was a crucial year for us to comprehensively promote our ESG development strategy. We have established an ESG management system and thoroughly integrated ESG development into our business management. We have achieved fruitful progress in ESG work from the perspectives of environmental protection, social responsibility, and corporate governance.

Environmental friendliness is an important principle for AHB's long-term sustainable development. We adhere to the development path of "replacing non-renewable petrochemical resources with renewable biological resources and replacing traditional high-energy-consuming and high-polluting processes with green and clean biological manufacturing processes". We implement a lifecycle management system for green factories, green products, and green services, and serve various industries and sectors.

Social responsibility is our consistent commitment. "People-oriented" is the core principle for AHB's continuous development and growth. Every year, AHB attracts numerous like-minded and ambitious talents. On this healthy, safe, fair, and inclusive development platform, we grow and progress together, illuminating our personal value while creating value for the enterprise, the industry, and society at large. With strong combat effectiveness, excellent execution, and remarkable cohesion, AHB's employees continue to write new chapters in the Company's continuous development. We also remain committed to participating in public welfare and charity causes with enthusiasm and shouldering the important responsibility of promoting social development.

A sound and standardized corporate governance is a solid foundation for AHB's sustainable development. We strictly comply with the regulatory requirements of the China Securities Regulatory Commission (CSRC) and the Shanghai Stock Exchange (SSE), aiming to achieve industry-leading governance levels. We have continuously maintained industry-leading positions in internal risk management and investor relations management. In 2023, we received numerous honors, including the highest grade A rating in the SSE's information disclosure evaluation and being listed in the "Top 30 Value of The Science and Technology Innovation Board Listed Companies" by the Securities Times.

Sustainable development is the only way for enterprises to achieve long-term growth. Looking forward to the future, AHB will steadily advance the ESG development strategy, centering on customers, valuing the contributions of the committed team members, and employing innovation to power sustainable growth. We are striving unremittingly towards our vision of becoming a global leader in the industrial biotechnology sector, continuously creating value for all stakeholders!




Chairwoman of AHB


# 2023 ESG Highlights

## Economic Performance

Gross Operating Revenue RMB <b>1,938,268,117.78</b> 36.63% ↑	Operating Profit RMB <b>510,903,260.37</b> 49.37% ↑	Net Profit Attributable to Equity Holders RMB <b>449,061,466.72</b> 40.32% ↑
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Basic Earnings per Share <b>2.84</b> RMB/share 39.22% ↑	Amount of Cash Dividends RMB <b>141,339,222.00</b> 44.87% ↑
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R&D Investment  
RMB **108,824,394.48**  
38.43% ↑

## Environmental Performance


Environmental Investment RMB <b>66.13</b> million 95.52% ↑	Proportion of Recycled Water Used <b>23%</b>	Proportion of Clean Electricity Used <b>17%</b>
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Proportion of Recyclable Packaging Materials Used  
**97.5%**

## Social Performance

Number of New Intellectual Property Rights <b>62</b>	Percentage of Ethnic Minority Employees <b>7.0%</b>	Proportion of Local Procurement <b>65.4%</b>
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Proportion of Employee Trained <b>84.2%</b>	Per capita Training Hours <b>49.5</b> hrs	Proportion of Employees Undergoing Performance Appraisals and Career <b>94.3%</b>
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Charitable Donations  
RMB **2.5885** million



# About AHB

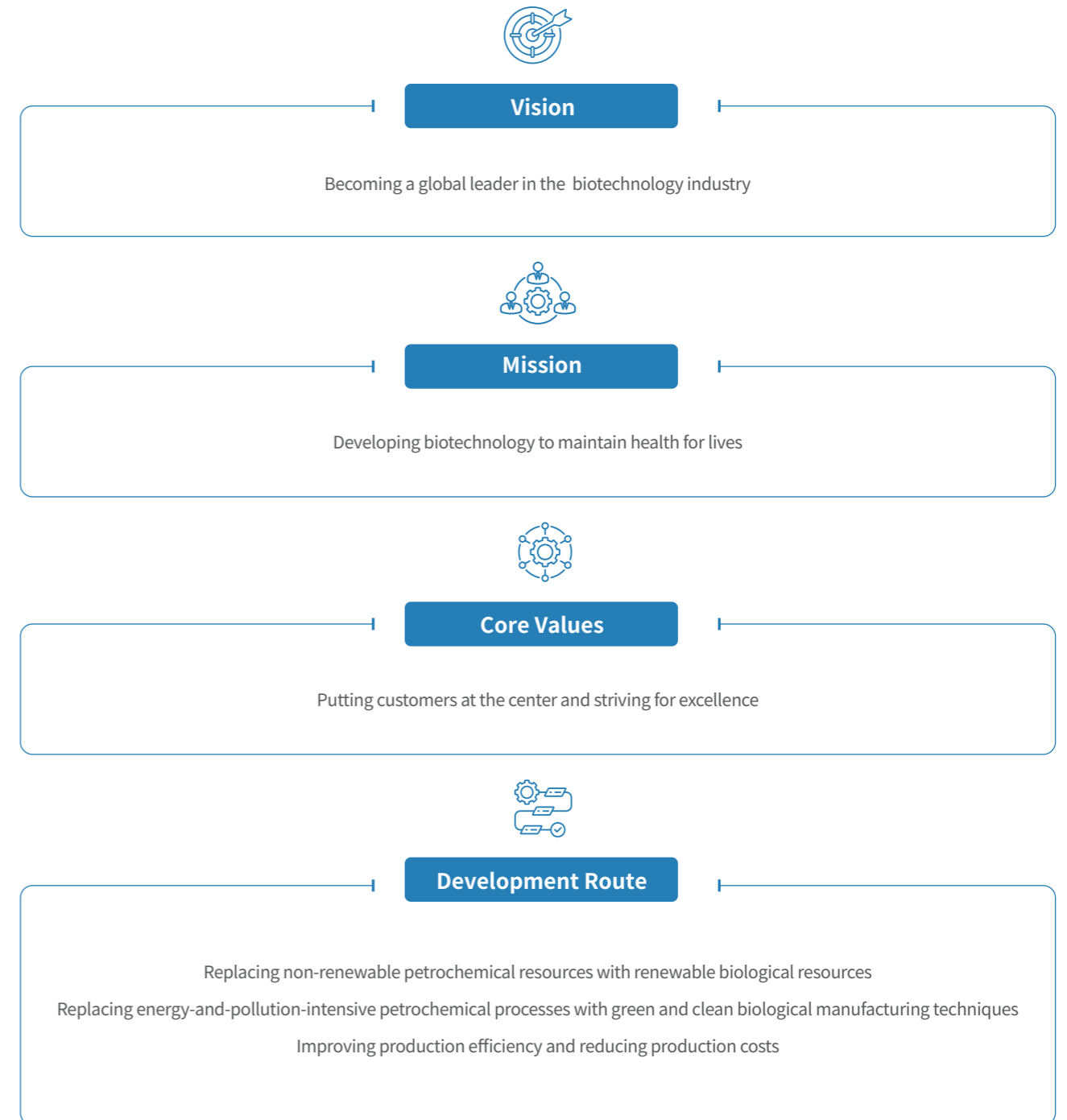
## Company Profile

Anhui Huaheng Biotechnology Co., Ltd. is a high-tech enterprise with synthetic biology as the core, focused on green technology innovation and value creation. As of now, the company's main products include a series of amino acids (L-alanine, DL-alanine, β-alanine, L-valine, etc), a series of vitamins (D-calcium pantothenate, D-panthenol, inositol), biobased new material monomers (1,3-propanediol, 1,4-succinic acid), and other products (malic acid, arbutin). These products are widely used in various fields such as intermediates, animal nutrition, personal care, functional and plant nutrition. After years of innovative development, the Company has become a global leader in manufacturing bio-based products.

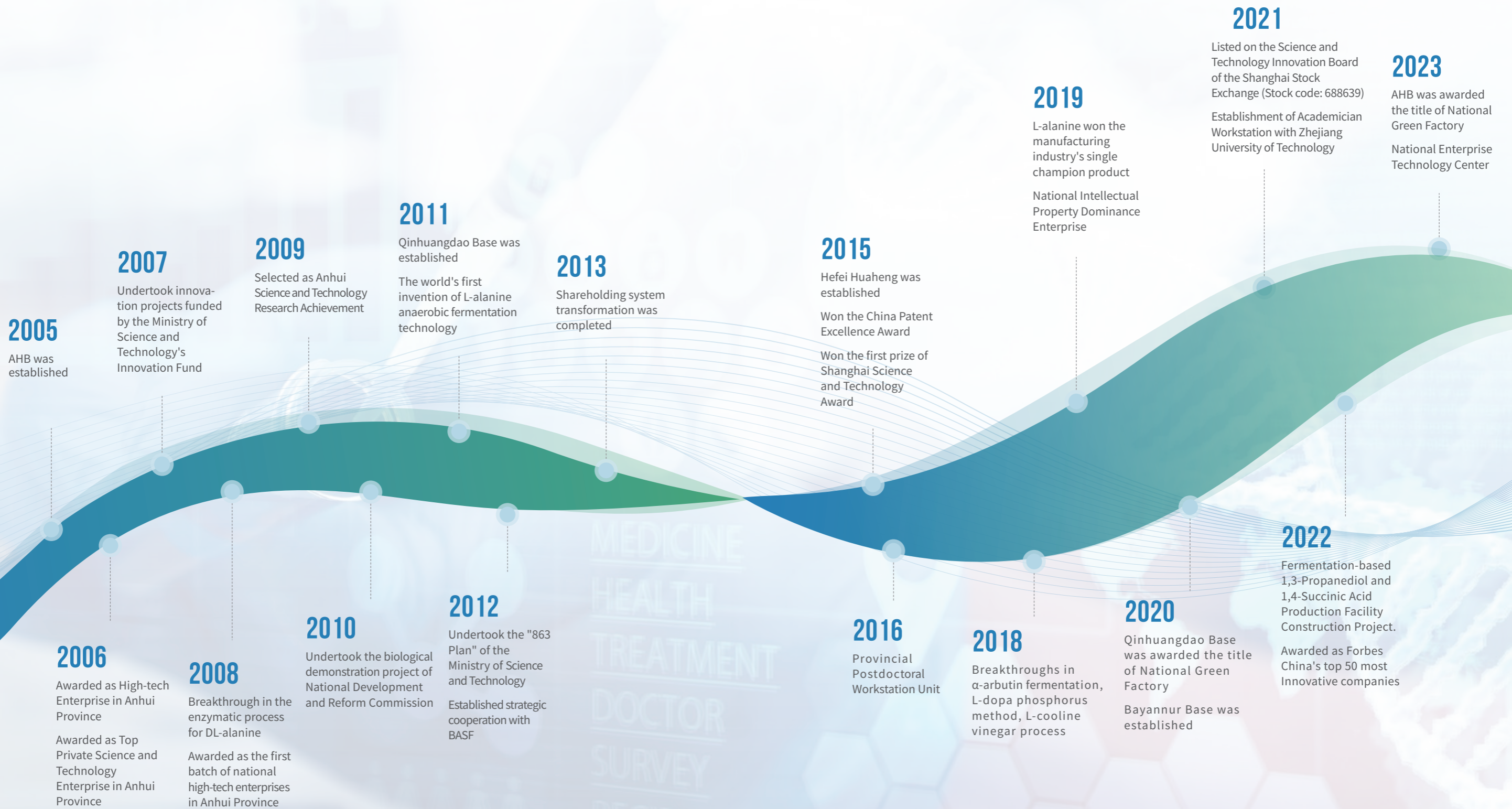
Adhering to the concept of environmental protection, AHB has developed cutting-edge technologies in synthetic biology, successfully undertaken the demonstration project for the bio-industry of China's National Development and Reform Commission (NDRC). AHB has been awarded the Championship of Single-Item Manufacturing from the Ministry of Industry and Information Technology. Currently, AHB has Huaheng Synthetic Biology Research Institute with sustainable innovation capability, and high-quality production capacities at three major bases in Changfeng, Qinhuangdao, and Bayannur, and is pushing forward the construction project of Chifeng base as planned.

### Product Matrix

Multi-category	Multiple Products	Applications
Amino Acid	L-Alanine, DL-Alanine, L-Valine, β-Alanine, L-Arginine, L-Tryptophan, L-Isoleucine	Intermediates, Animal Nutrition
Vitamin	Calcium D-Pantothenate, D-Panthenol, Inositol	Personal Care
Bio-based Material Monomers	1, 3-Propanediol, 1,4-Succinic Acid	Functional Nutrition, Plant Nutrition
Other Products	Malic Acid, α-Arbutin, β-Arbutin, Amino acid nutrient solution, Compound seasoning	Others



## Development Path



## ○ Honors and Certifications

In 2023, with the positive performance in the four dimensions of environment, labor and human rights, business ethics, and sustainable sourcing, AHB received a bronze medal in the EcoVadis rating for the first time.



### Qualifications

★ ISO 14001 Environmental Management System Certification	★ ISO 22000 Food Safety Management System Certification
★ ISO 50001 Energy Management System Certification	★ ISO 45001 Occupational Health and Safety Management System Certification
★ ISO 9001 Quality Management System Certification	★ ISO 27001 Information Security Management System Certification
★ China National Accreditation Service for Conformity Assessment (CNAS) Laboratory Accreditation Certificate	

### Awards

★ National Green Supply Chain Management Demonstration Enterprise	★ National Industrial Product Green Design Demonstration Enterprise
★ National Intellectual Property Excellence Enterprise	★ Top 10 Global Competitiveness in Science and Technology of The Science and Technology Innovation Board
★ Top 30 Value of The Science and Technology Innovation Board Listed Companies	★ Forbes China ESG Innovators
★ Grade A in Information Disclosure of SSE	★ Top 100 Innovative Enterprises in Anhui Province
★ Anhui Export Brand Enterprises	★ Anhui Provincial Patent Gold Medal (Biological fermentation method L-valine)
★ BASF Product Carbon Footprint Pioneer Award	★ Hefei Microbial Manufacturing and Food Application Technology Innovation Center
★ Hefei Manufacturing Service Enterprise	★ Recommended Green and Low Carbon Advanced Technologies and Products in Industrial Field (Bio-fermentation L-alanine)
★ Pegasus Award for Investor Relations of Listed Companies in China	★ “The most Socially Responsible Listed Company” in China's Listed Company IWOM Rankings
★ The “ESG Pioneer Award” of the Zhiyuan Prize	★ “Competitive Company of the Year” in Capital Market Value List



# Contribution to Sustainable Development

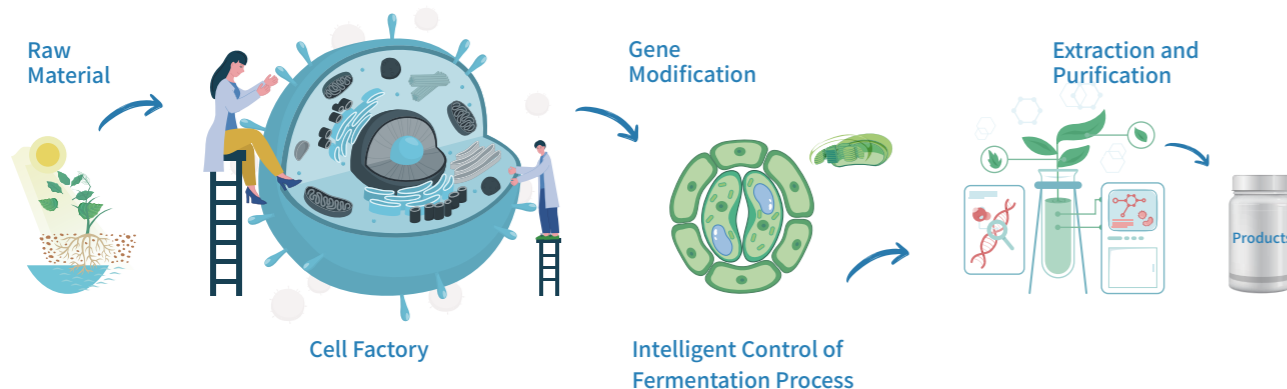
AHB is committed to providing customers with innovative bio-based products, propelling society towards a bio-economy. AHB adheres to the development path centered on "Two Replacements": "Replacing non-renewable petrochemical resources with renewable biological resources" and "Replacing energy-and-pollution-intensive petrochemical processes with green and clean biological manufacturing techniques," striving to build a modern bio-manufacturing enterprise "Driven by scientific and technological innovation, and rooted in advanced manufacturing capabilities," which aligns with the development concepts of energy conservation, emission reduction and environmental protection of "Carbon peaking" and "Carbon neutrality."

## ○ Synthetic Biology is Ushering in a New Era of Low-carbon Creation

In essence, synthetic biology is a technology that enables cells to produce substances required by human beings, breaking through the limitations of natural evolution. Centered on "artificially designing and writing genomes," this technology involves designing and constructing components or modules from an engineering perspective to meet specific needs. These components can be used to modify and optimize existing natural biological systems, or to design and synthesize entirely new, controllable artificial biological systems. Guided by engineering principles and utilizing technologies such as genome sequencing, bioengineering, chemical synthesis, and computer modeling, synthetic biology created a new model for scientific research. The technological pathways in synthetic biology enable the closed-loop recycling of carbon atoms, combining environmental benefits with cost reduction and efficiency gains. This technology can decrease reliance on non-renewable petrochemical resources and contribute to carbon peak and carbon neutrality goals by both reducing emissions and enhancing carbon sequestration.

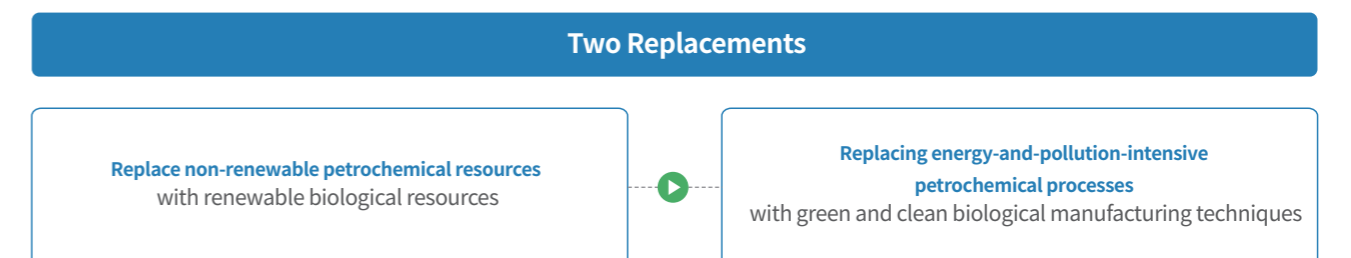
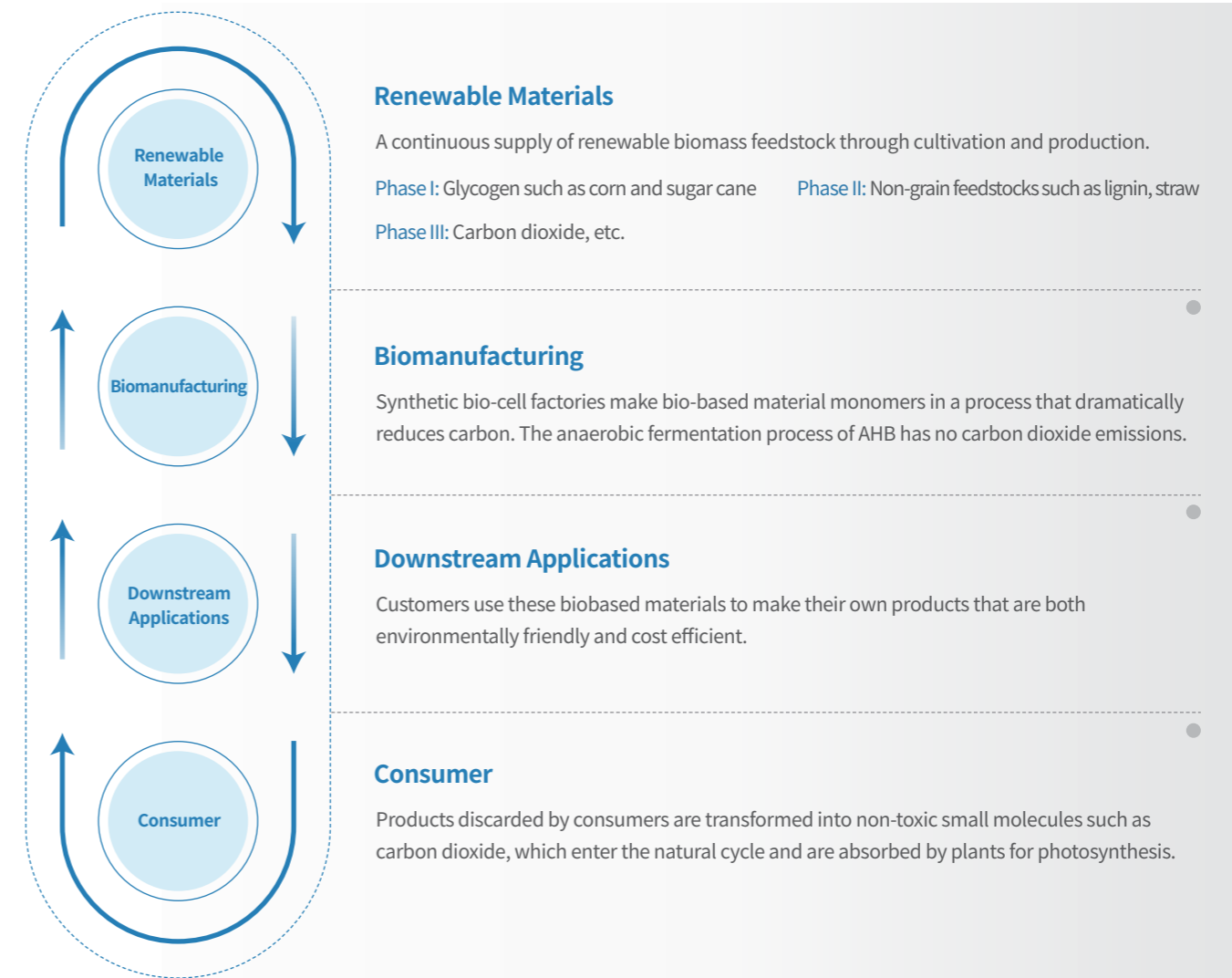
On one hand, compared with petroleum-based products, bio-based chemicals significantly reduce carbon dioxide emissions. Synthetic biology provides the technological means for the bio-manufacture of these chemicals. This innovative production method helps reduce reliance on non-renewable petrochemical resources and alleviates environmental stress, thereby facilitating low-carbon sustainable development. According to statistics from the Institute of Process Engineering, Chinese Academy of Sciences, synthetic biology manufacturing currently achieves an average energy saving and emission reduction of 30% - 50%, with potential to reach 50% - 70% in the future.

On the other hand, synthetic biology improves the natural carbon metabolic pathway and reassembles a new artificial carbon metabolic pathway, thus enhancing the carbon fixation capacity of plants and microorganisms. Synthetic biology can achieve low-carbon environmental protection and sustainable development through carbon capture, carbon recovery, carbon sequestration or zero-carbon or even negative-carbon material production.



## ○ Contribution to Circular Economy

Different from the traditional production paths that rely mainly on non-renewable resources such as oil and coal, the biomanufacturing AHB engaged can utilize renewable resources like starch and carbon dioxide as raw materials for the processing and synthesis of chemicals, pharmaceuticals, and biomaterials, meeting the needs of various application fields while reducing dependence on non-renewable resources. This approach creates a circular economy chain that spans from cultivation to synthetic production and consumer recycling.



## ○ Technology Platform

### Microbial Fermentation Platform




The traditional manufacturing method for L-alanine primarily utilizes chemical synthesis, specifically through a petrochemical route that synthesizes from petroleum-based compounds, consequently leading to environmental concerns. The engineered bacteria obtained through metabolic engineering modification enable fermentation under aerobic conditions with faster production and higher yields. However, in aerobic fermentation process, carbon source is used to generate energy and synthesize the bacterial cells, resulting in low sugar-acid conversion and energy consumption for continuous aeration.

By breaking through the barriers of anaerobic fermentation technology, AHB has established a microbial cell factory for anaerobic fermentation production of L-alanine with renewable glucose as raw material, and marked the first successful international implementation of scaled microbial anaerobic fermentation for the production of L-alanine. Compared with the traditional chemical synthesis method to produce L-alanine, the anaerobic fermentation process of AHB significantly reduces energy consumption and product costs. According to the appraisal made by China Light Industry Council, the key technology of L-alanine production by anaerobic fermentation has reached the international leading level. This project is a successful example of innovative development and green manufacturing.

AHB's fermentation method of L-valine production adopts highly efficient fermentation strains for anaerobic fermentation, and shares many commonalities with the fermentation method of L-alanine products in key technology, process flow and production equipment. In comparison, the AHB's anaerobic fermentation technology for the production of L-valine is featured by low energy consumption, relatively high glucose conversion rate and low generation of by-products, and the ability to obtain products of higher purity through direct concentration and crystallization, providing a strong competitive advantage.

Advantages of the AHB's anaerobic fermentation process include oxygen-free process, high sugar-acid conversion rate, low cost, low energy consumption and better environmental protection. The Company utilizes anaerobic fermentation technology to produce bio-based products, reducing consumption of non-renewable energy sources. Additionally, the fermentation process emits no carbon dioxide, aligning with green, low-carbon environmental principles. This approach meets the requirements for green ecological labeling of raw materials by downstream clients such as BASF. for raw materials.

### Taking L-alanine as an example, a comparison of the environmental performance of the main production methods is as follows

Production Method	Environmental Performance
Chemical Synthesis	Production in high temperature and high pressure conditions, with high cost and environmental pressure 
Aerobic Fermentation Method	Low sugar acid conversion rate, requiring a large amount of energy consumption 
Anaerobic Fermentation Method	Oxygen-free process, high sugar-acid conversion rate, low cost, low energy consumption and better environmental protection 

### Enzyme Catalysis Platform

In 2016, AHB achieved the production of β-alanine by enzymatic decarboxylation of L-aspartic acid as raw material. This process realizes the synthesis of β-alanine in one step under mild reaction conditions, while avoiding the environmental pollution caused by the use of organic solvents and by-product waste salts.

In 2018, the Company innovatively developed a process technology that uses acrylic acid as a raw material and artificial synthetic enzymes to catalyze the production of β-alanine. This new method further replaces the original β-alanine production process, achieving an upgrade and iteration of the biomanufacturing technology.

### Taking β-alanine as an example, a comparison of the environmental performance of the main production methods is as follows

Production Process	Operations	Advantage	Disadvantage
Traditional acrylonitrile ammoniation hydrolysis method	Combine acrylonitrile and ammonia solution to form ammonia β-Aminoacetonitrile, then hydrolyzed in acidic or alkaline conditions to obtain β-alanine	Low production cost	Low atomic utilization, large amount of inorganic salts produced during hydrolysis, and great difficulty in product purification
Enzyme catalysis method	Produce β-alanine by enzymatic decarboxylation of L-aspartic acid as raw material	High atomic conversion and low production cost	/
	Catalytic production of beta-alanine from acrylic acid using synthetic enzymes	High atomic conversion rate, low production cost, low environmental pollution	/

## ○ Build a Sustainable Ecology in Multiple Fields

AHB adheres to the brand concept of "Green Manufacturing, Low-carbon First" and implements this concept in the core product series. As a company adhering to the strategy of sustainable development, we are committed to building a sustainable ecosystem in multiple application fields such as intermediates, animal nutrition, personal care, functional nutrition, and plant nutrition. We adopt a model that combines independent research and development with open innovation, integrating global technological resources to provide downstream sectors with green, reliable products and innovative solutions.

**Create Low-carbon and Environmentally Friendly Materials**

Representative products: 1,3-Propanediol, 1,4-Succinic acid



The bio-based new material monomers produced by AHB serve as important raw materials for bio-based materials (e.g. PTT, PBT, PBS, bio-based nylon, bio-based polyurethane, etc.), helping the world move towards a low-carbon economy. AHB works with stakeholders to help customers reduce carbon emissions and waste and shift from consuming fossil fuels to using renewable energy.

Relying on synthetic biotechnology, AHB has established an exclusive fermentation strain to produce high-quality 100% bio-based carbon 1,3-propanediol by one-step fermentation using glucose as the raw material through an efficient metabolic pathway. It is used in many fields including textile, engineering and daily chemicals. Its synthesized PTT fiber has excellent comprehensive performance, and the yarn made by melt spinning is widely used in high-end garment fabrics and carpets, making textile and garment more low-carbon and environmentally friendly.

### Raise the Efficiency of Livestock Production

Representative products: L-valine, D-calcium pantothenate, and inositol



AHB focuses on precise nutrition solutions with L-valine as the core, helping to improve lactating sow milk production, piglet growth, feed conversion and body weight gain of broilers, thereby expanding breeding output, providing customers with customized nutrition services for animals at different growth stages, and providing practical and feasible solutions for the challenges faced by the animal feed industry. With advanced process technology, excellent product quality and green production methods, L-valine, Calcium, D-Pantothenate, and Inositol series products of AHB are contributing to the sustainable development of the animal husbandry industry and creating a better life for human beings and our future generations.

### Innovative Solutions of Families and Personal Care

Representative products: L-alanine, 1,3-propanediol, D-panthenol,  $\alpha$ -arbutin, and  $\beta$ -arbutin



Against the backdrop of the global "Clean Beauty" trend, consumer demand for "natural, gentle and effective" cosmetics continues to grow. In the field of cosmetics, synthetic biology will create new raw materials to build new products with high differentiation, high barriers and high efficiency. AHB will launch new bio-based D-panthenol,  $\beta$ -arbutin, 1,3-propanediol and other products that are gentler, more efficient and sustainable with the innovative synthetic biology ingredients featured by natural greenery and cutting-edge sci-tech achievements, which are a perfect match with the concept of clean beauty.

The AHB's product L-alanine is one of the main raw materials for the synthesis of the new green chelating agent MGDA, which is the perfect additive in creating a new generation of sustainable cleaning solutions. MGDA is renowned for its natural biodegradation, strong chelating ability, toxicological safety, and less washing residue. While solving the environmental and health problems brought by traditional chelating agents, it ensures the same cleaning effectiveness, making it the best new green chelating agents at present.

### Improve Human Nutrition and Health

Representative products: malic acid, D-calcium pantothenate, inositol,  $\beta$ -alanine, and L-arginine



AHB closely grasps market trends and technological breakthroughs, providing humans with bio-based, naturally, and high-quality nutrients. We are committed to providing green and safe products and innovative solutions for consumers' health conditions, age demographics or lifestyles. AHB will continue to explore the multifaceted applications of nutritional solutions backed by synthetic biology in the food and health sector in the future.

### Boost Soil Improvement and Plant Growth

Representative products: plant source amino acid 90 powder



AHB is committed to plant nutrition and soil improvement, contributing to the sustainable utilization of soil and taking saline-alkali soil reclamation as the most urgent task. Our products neutralize soil salinity and alkalinity through amino acids and organic acids, mitigating the extent of soil salinity and alkalinity, and enhancing the organic matter content in the soil, thereby improving the soil's microenvironment and amending its physical and chemical properties.

# ESG Development Strategy

## ○ Statement of the Board of Directors

The Board of Directors actively integrates ESG into oversight and management, including participating in decision-making on major ESG-related matters and overseeing the strategic direction of ESG, as well as ESG-related risks and opportunities. The Board of Directors will continue to improve the corporate governance structure of the Company, complete internal control system, standardize the Company's operation and ensure that the Company is on the path of sustainable development.

The Board of Directors requires management to practice environmental management policies to reduce the ecological footprint, improve resource utilization efficiency, and reduce waste emissions as a means of protecting the health of the environment and ecosystems, and to help harmonize our long-term development with society and the environment. The Board of Directors is committed to actively practicing social responsibilities, and safeguarding the legitimate rights and interests of the employees by attracting talents with an open, inclusive attitude. At the same time, we will concentrate on the main business of synthetic biology, enhance the ability of industrialization of key technologies and revitalize the vitality of the industry.

## ○ ESG Management System

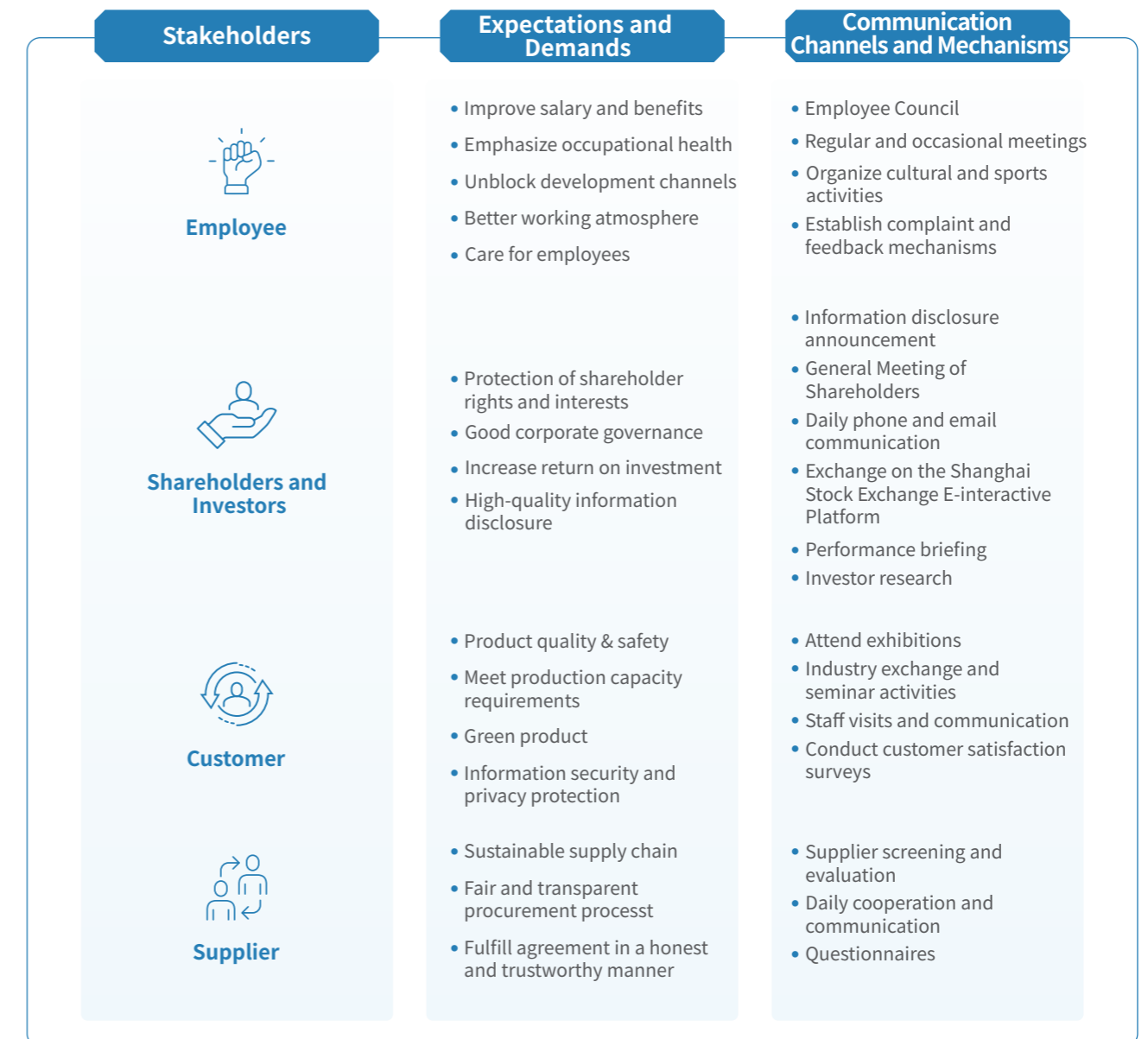
To efficiently implement our ESG initiatives, we have established a governance structure with clear hierarchy, delineating powers and responsibilities to align with strategic development needs. This ensures effective leadership in ESG issues, implementing management practices from the top-down and creating a regularized mechanism for the Board to engage in ESG governance. To ensure the effective achievement of our ESG strategic goals, we have set up an ESG leadership team and assigned dedicated personnel to follow up on ESG-related work, covering all functional departments at our headquarters as well as our four major production bases, and to report regularly to the Board of Directors on the progress and effectiveness.

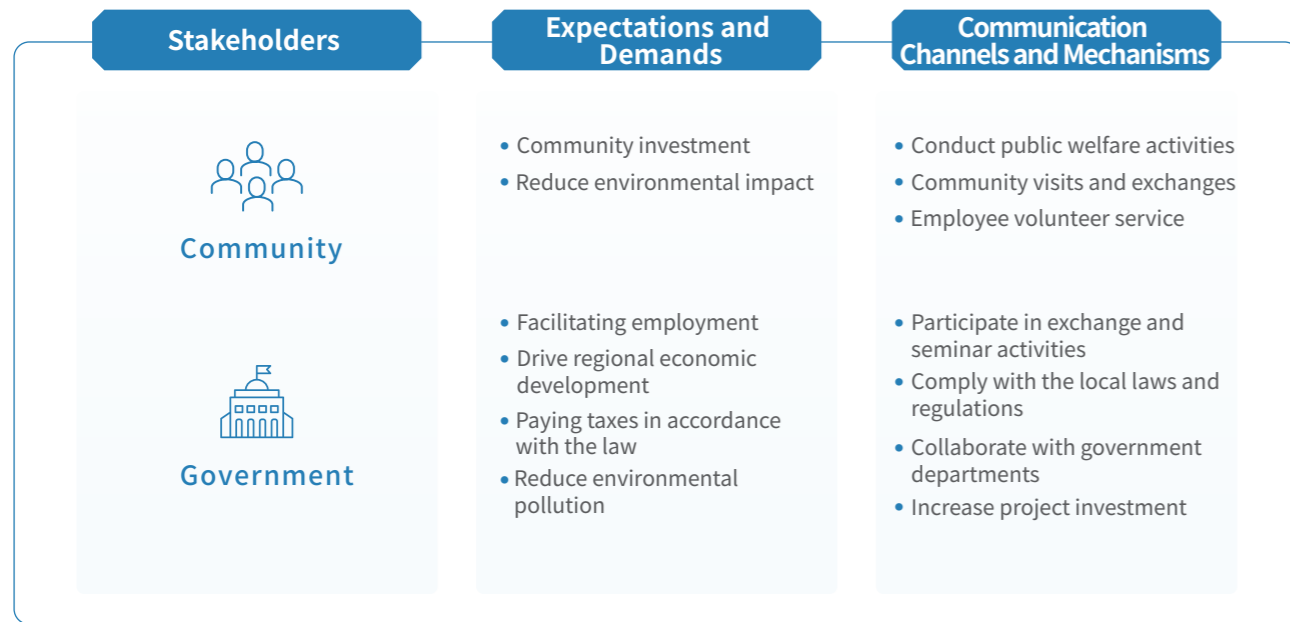
The Board of Directors maintains a vigilant oversight of the effective implementation of ESG governance policies, ensuring that our initiatives align with industry standards and best practices. This meticulous monitoring extends to internal controls, the code of ethics, and anti-corruption policies, resulting in a corporate governance framework characterized by high ethical standards, transparency, and responsibility. These efforts contribute significantly to enhancing the Company's long-term sustainability.



## ○ Stakeholder Engagement

AHB attaches great importance to communication with stakeholders such as employees, shareholders and investors, customers, suppliers, communities, and the governments. The Company continuously expands communication channels, including using interviews, questionnaires, and other forms to learn about the significant impact of company operations on their decisions, as well as how the risks involved in ESG related issues have a significant impact on the Company. We regularly review communication with stakeholders and improve the communication mechanisms in a timely manner based on feedback from stakeholders.

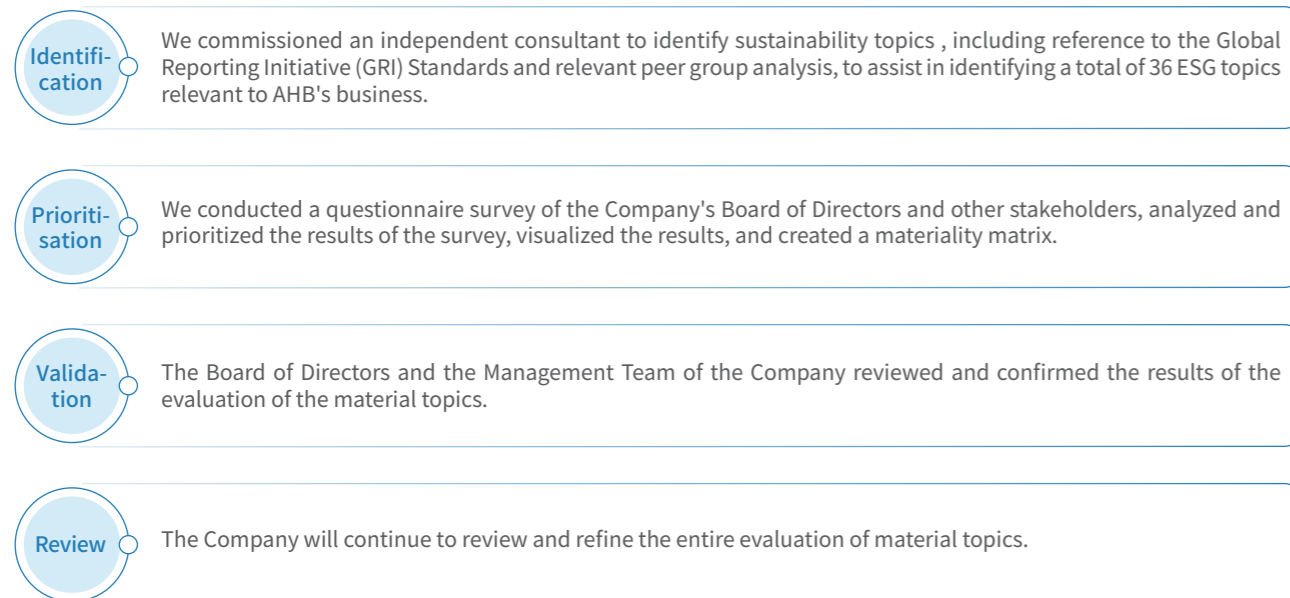




## Assessment of Material Topics

AHB follows the Global Reporting Initiative (GRI) standards and refers as the recommendations for developing material topics. During the reporting period, we conducted surveys via online questionnaires with company management, employees, and other stakeholders to assess the impact of our business operations on the environment and society. Based on the significance of these topics, we prioritized them accordingly.

We identified the material topics of AHB for the year 2023 through the process described below:














The first level of the materiality matrix is the material topics of AHB for 2023, and we have reported the corresponding management methods and performance.



Level 1	Level 2	Level 3	Level 4
04 Water management	01 Energy and resource management	03 Waste treatment and recycling	07 Biodiversity conservation
08 Clean technology opportunities	02 Emissions management	05 Greenhouse gas emissions	09 Response to climate change
11 Synthetic biotechnology and environmental protection	06 Chemical safety management	16 Employee communication	10 Environmental impact assessment of ongoing projects
14 Employee training and development	12 Talent management	17 Employee diversity and equal opportunity	23 Product accessibility and affordability
15 Employee salary and benefits	13 Employee health and safety	19 Supply chain management	35 Community welfare
22 Product quality and safety	18 Prevention of child and forced labor	20 Green procurement	36 Community relations
33 Economic performance of the Company	25 Customer satisfaction and complaint handling	21 Industry chain synergy development	
	26 Information privacy and security	24 Responsible marketing	
	27 Intellectual property protection	28 Business ethics	
	31 Compliance operation	29 Anti-corruption	
	34 Investor relations	30 Corporate governance	
		32 Risk management	

## ○ Aligning with UN SDGs

Aspect	UN Sustainable Development Goals	Our Actions
Corporate Governance	 <p>Goal 5.5 To ensure women's full and real participation in corporate decision-making and equal access to all levels of decision-making leadership</p>	<p>Establishment of the Norms on the Management of the Rights and Interests of Female Employees and Labor Protection</p> <p>Number of females in the middle and senior management of companies is 12, accounting for 27% of the total</p>
	 <p>Goal 16.5 To significantly reduce all forms of corruption and bribery</p>	<p>During the reporting period, internal anti-corruption training was conducted for 173 employees in key risky positions</p>
Operational Excellence	 <p>Goal 8.2 To achieve higher levels of economic productivity through technological upgrading and innovation</p>	<p>Breaking through technological barriers in L-alanine anaerobic fermentation process, undertaking the biological industry demonstration project of the National Development and Reform Commission</p> <p>Accumulated 398 patent applications</p> <p>Establishment of the new Chifeng Base, with plans to launch the following projects at the base: Bio-based Succinic Acid and Bio-based Product Raw Material Production Base Project, Bio-based 1,3-Propanediol Construction Project, Fermentation-based Alternating Production of Valine and Arginine Project, Inositol Construction Project</p>
	 <p>Goal 9.1 To develop high-quality, reliable, sustainable and disaster-resilient infrastructure to support the economic development and enhance human well-being</p>	
	 <p>Goal 12.a To strengthen scientific and technological capacity to introduce more sustainable patterns of production and consumption</p>	

Aspect	UN Sustainable Development Goals	Our Actions
Green Development	 <p>Goal 6.5 To conduct comprehensive water resource management</p>	<p>A new ultrafiltration membrane bioreactor (MBR) system was built to ensure the discharge of suspended effluent up to standard</p> <p>An automated control system for the sewage station is planned to be built</p> <p>Leveraging wind power and photovoltaic power to improve the structure of energy use, replace non-renewable fuels with biomass to reduce carbon emissions</p>
	 <p>Goal 7.2 To substantially increase the share of renewable energy use by 2030</p>	
	 <p>Goal 12.2 To achieve the sustainable management and efficient utilization of natural resources by 2030</p>	
	 <p>Goal 13.3 To strengthen education and publicity on climate change mitigation, adaptation, impact reduction, and early warning</p>	
Responsible Citizenship	 <p>Goal 4.4 To substantially increase the employment of the young and adults with technical and vocational skills used for employment, decent work and entrepreneurship</p>	<p>Expand employee recruitment scale, with 873 new employees joined in the year 2023</p> <p>Enhance the vocational skills training of employees, with 1,423 employees trained during the reporting period</p> <p>Develop an Anti-Discrimination Policy to ensure equal employment opportunities for all types of employees, including young and disabled employees</p>
	 <p>Goal 8.5 By 2030, all men and women, including youth and people with disabilities, will achieve full and productive employment. A decent job will be accessible for everyone and equal pay for equal work will be realized</p> <p>Goal 8.8 Protect labor rights and facility to create a safe, secure working environment for all workers, especially female immigrants and those without stable employment</p>	

# 01

## Corporate Governance



 Governance Structure

 Compliance and Risk Management

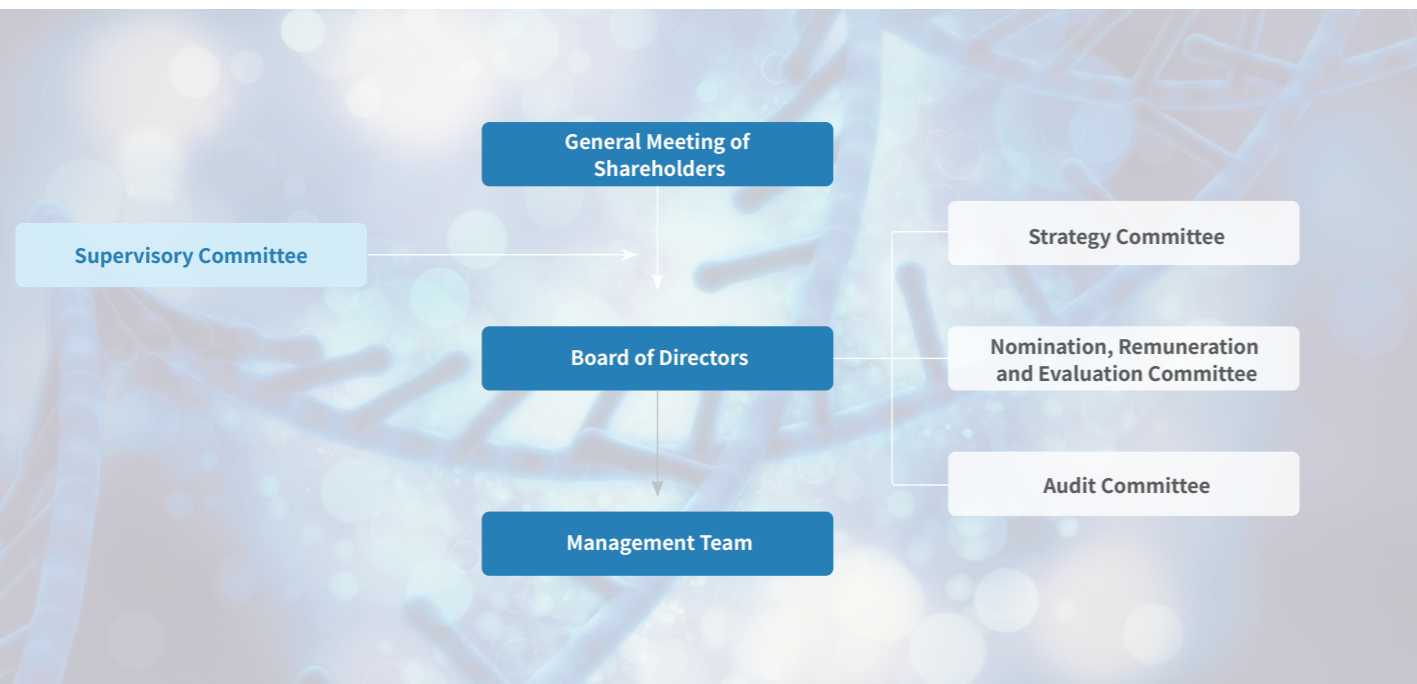
 Information Disclosure

 Protection of Investors' Rights and Interests

 Business Ethics

# Governance Structure

AHB is strictly in accordance with the *Company Law of the People's Republic of China*, the *Securities Law of the People's Republic of China*, the *Code of Governance for Listed Companies*, the *Rules Governing the Listing of Stocks on the Technology and Innovation Board of the Shanghai Stock Exchange*, and the *Self-disciplinary Supervision and Regulation Guideline for Listed Companies on the Technology and Innovation Board of the Shanghai Stock Exchange, No. 1 Normative Operation of Self-regulatory Guidelines for Listed Companies on the Science and Technology Innovation Board of Shanghai Stock Exchange*, and other laws and regulations, as well as latest requirements on corporate governance from the China Securities Regulatory Commission and the Shanghai Stock Exchange, will continue to improve the working system of the general meeting of shareholders, the board of directors, the supervisory board and the general manager, so as to build a corporate governance structure with effective checks and balances among the authority, decision-making body, supervisory body and operating management.



AHB has continuously improved the management system and formulated various corporate governance systems including Rules of Procedure of the General Meeting of Shareholders, Rules of Procedure of the Board of Directors, and Rules of Procedure of the Supervisory Committee to pave ways for standardized operation.

## Corporate Governance-related Policies

- |   |  |
|---|--|
| Rules of Procedure of the General Meeting of Shareholders | Independent Director System                          |
| Rules of Procedure of the Board of Directors              | Insider Reporting System for Significant Information |
| Rules of Procedure of the Supervisory Committee           | Fundraising Management System                        |



# Governance of AHB's General Meeting of Shareholders, Board of Directors and Supervisory Board

We continuously improve the corporate governance structure and clarify the responsibilities in order to realize the sustainable development of AHB. During the reporting period, for the General Meeting of Shareholders, the Board of Directors, the Supervisory Committee and the Management Team, each of them has well-defined power and responsibilities, performing its own duties, balancing and coordinating with each other. The Company complies with regulatory requirements in key governance aspects, including the relationships between shareholders and the general assembly, majority shareholders and the publicly listed company, directors and the board of directors, supervisors and the supervisory board, performance evaluation and incentive mechanisms, stakeholders, and information disclosure and transparency.

## General Meeting of Shareholders

The General Meeting of Shareholders is the highest decision-making body of AHB, making decisions on the appointment of directors and supervisors, refinancing, major foreign investment and connected transactions. The convening, proposal, convening, voting, and resolution of AHB's general meeting of shareholders shall be witnessed by lawyers on site, and legal opinions shall be issued in compliance with laws and regulations.

## Board of Directors

AHB's Board of Directors consists of nine members, including six non-independent directors (including one chairwoman of the board) and three independent directors. Under the Board of Directors, there are three specialized committees: Strategy Committee, Nomination, Remuneration and Evaluation Committee and Audit Committee. The Board of Directors of the Company is responsible to the General Meeting of Shareholders for deciding on the Company's business plans and investment programs, and for implementing the resolutions of the General Meeting of Shareholders. The directors of the Company shall be elected or replaced by the shareholders' meeting for a term of 3 years. The chairwoman is elected through voting by all directors of the Board of Directors, and the number of votes garnered should account for more than half of the total.

## Supervisory Committee

The Supervisory Committee of AHB consists of three members, including two shareholder representatives and one employee representative. The Supervisory Committee supervises the operation of the Company, the fulfillment of duties by the Company's directors and senior management in accordance with the law.

Key Performance

During the reporting period, the general meeting of shareholders, the Board of Directors and the Supervisory Committee were held as follows;

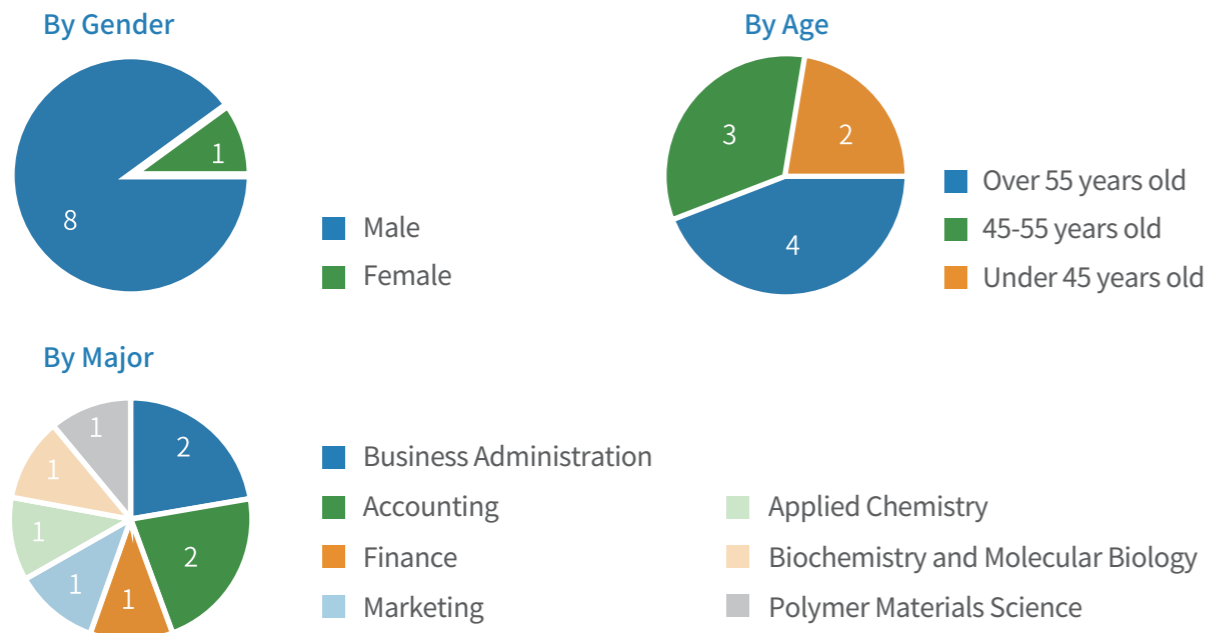
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<p><b>2</b> general meetings of shareholders A total of <b>14</b> proposals deliberated</p>	<p><b>6</b> meetings of directors A total of <b>40</b> proposals deliberated</p>	<p><b>5</b> meetings of supervisors A total of <b>26</b> proposals deliberated</p>
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## ○ Diversified Governance

AHB attaches great importance to independence at the board level, and has developed and regularly updated Working System of Independent Directors. On this basis, AHB also emphasizes the diversity of the Board of Directors. In the nomination procedure of the Board members, we will take background diversity into account, including but not limited to gender, age and specialty. All of our Board members have extensive industry experience and expertise in the fields of biochemistry and molecular biology, polymer materials science, applied chemistry, business administration, accounting and finance. We believe that the Board of Directors with diversified backgrounds can assess the risks and opportunities of a Company's business model from a wide array of perspectives, leading to more rational decision-making and more effective governance.



## Compliance and Risk Management

### ○ Risk Management System

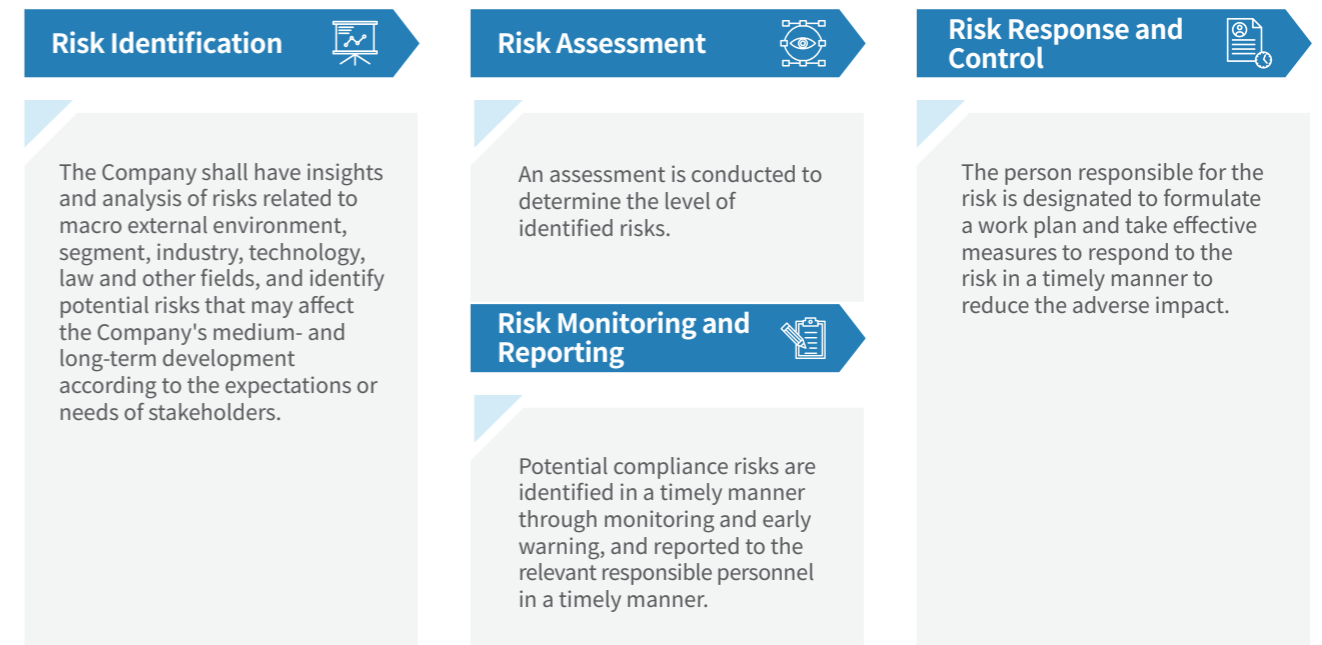
AHB has established a comprehensive risk management system, and we have formulated systems such as Control Procedures for Countermeasures against Risks and Opportunities and Management Procedures for Analysis of the Company's Internal and External Environment to regulate the process of risk management of the Company. We identify internal and external risks related to the Company's business activities, covering areas of environment, health and safety, business ethics, labor, human rights and legal compliance, through internal audit and risk assessment management. The heads of the Company's departments and the bases are required to report to the Board of Directors on a regular basis on the progress and objectives of the work and to assess the risks that may be faced in the course of the business, to assist the Board of Directors in determining the grade of each risk and implement appropriate procedures and controls to ensure compliance and effective control of identified risks. On this basis, we also incorporate risk management indicators into individual performance appraisals to ensure the effectiveness of risk management.

The Board of Directors and specialized committees are responsible for supervising and managing risks, with the Audit Committee responsible for regularly reviewing the internal control policy, audit policy and effectiveness, as well as evaluating the work performed by the external auditor.

In order to effectively manage the internal risks of the company and ensure that the company operates in a compliant manner, we have set up an Audit Committee, which is responsible for reviewing the compliance management work on a regular basis, and the Audit Department is the main body responsible for identifying and analyzing the compliance risks in the process of operation, implementing preventive and control measures against the risks, as well as following up on and dealing with internal and external feedbacks on the compliance issues.

### ○ Risk Management Procedure

AHB has established a risk management program to better identify, assess and deal with risks that may cause negative effect to the Company's sustainability objectives and operations.



### ○ Internal Control

In accordance with the regulations of the internal control standards system, AHB has established and effectively implemented comprehensive internal controls. We continually evaluate the effectiveness of these controls to ensure that operations and management are lawful and compliant, assets are secure, and financial reporting and related information are accurate and complete.

AHB rigorously adheres to the *Company Law of the People's Republic of China*, the *Securities Law of the People's Republic of China*, the *Accounting Law of the People's Republic of China*, and other relevant legal and regulatory requirements established by the China Securities Regulatory Commission and the Shanghai Stock Exchange. AHB in accordance with the Basic Norms for Enterprise Internal Control and the accompanying guidelines, timely evaluates, updates, and improves the internal control system with reference to the trend of the internal and external environment, as well as the actual development of the Company. It not only improves the efficiency of enterprise management and decision-making capabilities, but also provides guarantees for the legality and compliance of enterprise management and asset security, thus facilitating the implementation of our development strategies.

AHB's internal control covers the major aspects of operation and management. During the reporting period, we have focused on monitoring and evaluating high-risk areas such as sales revenue collection process, procurement payment process, project management process, information systems management process, production management process. There are no major defects that affect the Company's business development, nor significant omissions in the units and businesses included in the evaluation scope. The internal control mechanism of the Company is sound and reasonable, and the implementation of internal control is effective.

## Information Disclosure

In strict accordance with relevant laws and regulations such as the *Regulation Guideline for Listed Companies on the Technology and Innovation Board of the Shanghai Stock Exchange, No. 1 Normative Operation of Self-regulatory Guidelines for Listed Companies on the Science and Technology Innovation Board of Shanghai Stock Exchange*, as well as the Investor Relationship Management System and the Information Disclosure Management System, AHB discloses the Company's information on the designated media in a true, accurate, complete and timely manner to ensure that the majority of investors enjoy equal rights to information, following the principles of openness, fairness and impartiality.

AHB has prepared the Information Disclosure Management System in accordance with relevant laws and regulations and the Articles of Association of the Company, which clearly stipulates the general principles, management, responsibilities, specific procedures, confidentiality system, archive management and other matters of information disclosure of the Company. The Secretary of the Board of Directors is responsible for organizes information disclosure of the Company and the Office of the Board of Directors is responsible for daily management to ensure efficient information disclosure.

For regular announcements, temporary announcements, and other information officially released by the Company, we have set forth a standard information disclosure process in our Information Disclosure Management System and defined the information disclosure responsibilities of each department. All corporate disclosures are subject to this process. No violation of information disclosure was found during the reporting period.

With the comprehensive performance in information disclosure, corporate governance, operational performance, fulfillment of social responsibility and cooperation with regulatory work, AHB was awarded the highest rating of Grade A in information disclosure of SSE for the year 2022-2023.

## Protection of Investors' Rights and Interests

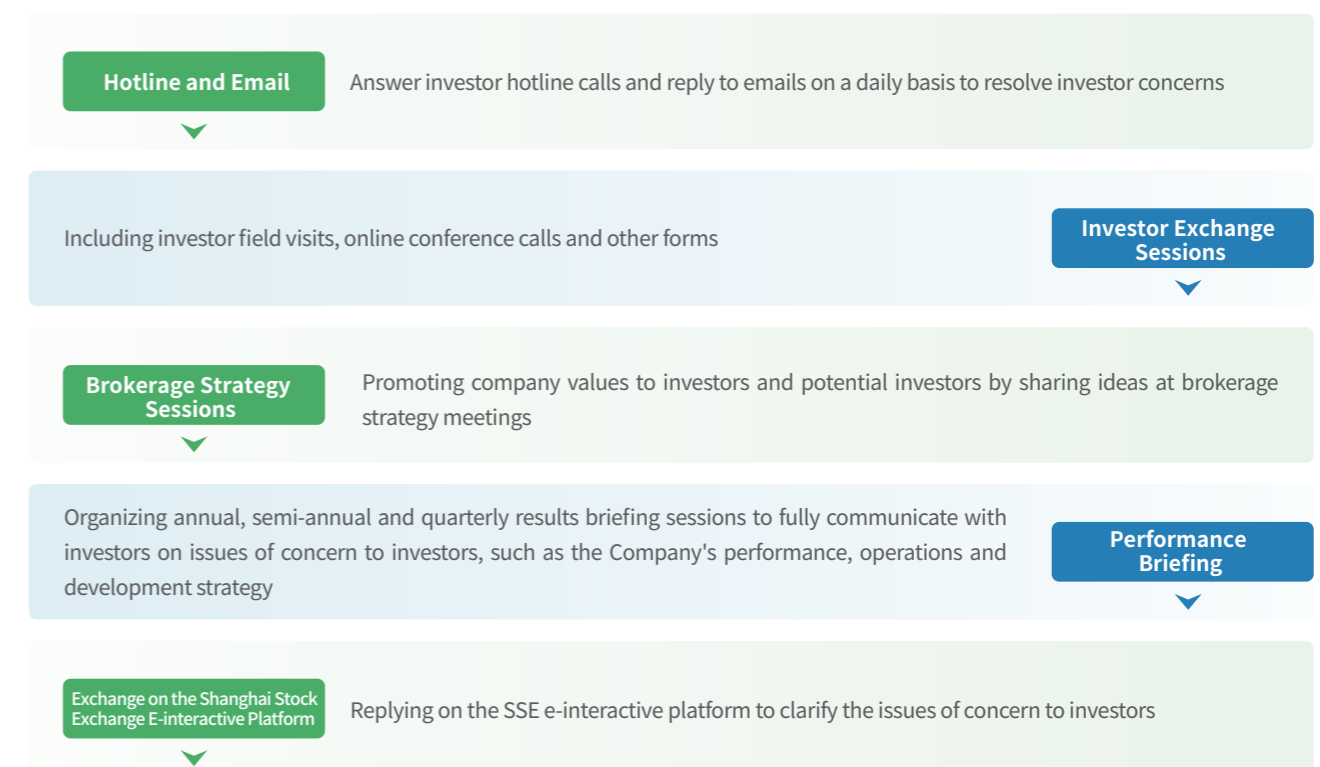
AHB keeps improving the management system and the procedure and mechanism of major decision-making of the Company by preparing various systems including Rules of Procedure of the General Meeting of Shareholders, and Management System for Insider Information and Informants, and stipulates to convene a general meeting of shareholders to consider and vote on statutory matters by online voting, to fully safeguard the rights of the shareholders.

### ○ Investor Relation Management

AHB has formulated the Investor Relationship Management System, established effective channels for communication with investors, and disseminated the Company's investment value, brand value and industrial value in an all-round manner through emails, on-site research, teleconferences, and SSE e-interactive platform, and the Company's WeChat official account and various channels, so as to deliver our strategic ideas, management concepts, and stage-by-stage operation and development results to the capital market timely and accurately within the scope of compliance.

We attach importance to the building of network communication platform and have opened an investor relations column in our official website, which provides a convenient channel for investors to learn more about AHB.

#### The primary communication channels between investors and AHB:

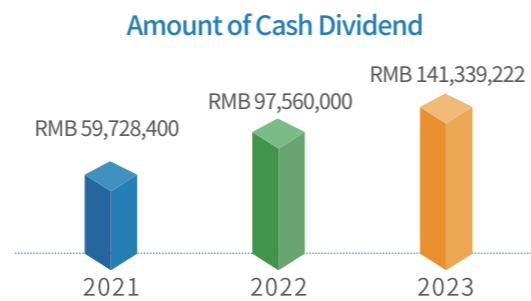


## Investor Returns

AHB attaches importance to investor returns, focuses on optimizing the investor return mechanism, and gives full consideration to the opinions of independent directors and public investors in the research, demonstration and decision-making process of profit distribution policy. To formulate a proposal on profit distribution, the Board of Directors shall, in advance, fully listen to the opinions of shareholders (especially public shareholders and small and medium-sized investors), consult the Supervisory Committee, obtain the approval of a majority of all independent directors, and submit the proposal to the general meeting of the Company for approval after it has been agreed by the Board of Directors.

AHB has also formulated the Plan for Shareholders' Dividend Return for the Next Three Years (2022-2024) based on the industry characteristics, stage of development, business model, profitability level and capital arrangement, and ensured that the decision-making procedures and mechanism of the distribution plan are complete, and that the dividend distribution standards and ratios are clear and unequivocal, in line with relevant laws and regulations and the Articles of Association, safeguarding the interests of all shareholders. We actively reward our shareholders by providing cash dividends to investors every year after going public, and the amount of dividends increases year by year.

During the reporting period, the Board of Directors resolved that the Company proposes to distribute a cash dividend of RMB 9 (inclusive of tax) for every 10 shares to all shareholders, totaling RMB 141,339,222.00 (inclusive of tax), which accounts for 31.47% of the Company's consolidated net profit attributable to shareholders of the listed company for the year of 2023, and to transfer 4.5 shares for every 10 shares to all shareholders out of the capital reserve. The profit distribution proposal is yet to be submitted to the shareholders' meeting for consideration.



## Business Ethics

Adhering to the core value of "Sincerity, Trustworthiness and Unity of Knowing and Doing", abiding by the business ethics and complying with the laws and regulations of the countries where the business is carried out is the basic principle held by AHB when carrying business activities across the globe. By formulating strict business ethics and internal supervision mechanism, we enhance the awareness of business ethics of all employees and the awareness of compliance operation of partners, and build up the capacity in management of business ethics and anti-corruption in all aspects.

## Integrity System Construction

We have established the Business Code of Conduct and Ethics of AHB, which applies to all employees of the Company, subsidiaries, and related parties. We aim to provide guidelines for business and ethical behavior for all employees of our Company, and require employees to comply with the local laws and regulations and not to engage in any illegal activities. We require all management personnel and directors to fulfill their management and supervisory responsibilities, and every one of the management layer must be aware that how important integrity and ethical behavior are to the management and compliance of the Company, making a code of conduct for day-to-day business, and promoting compliance with this Code through personal leadership and training.

We likewise require all of our business partners to adhere to the standards of business ethics and to be honest and law-abiding. During the reporting period, a total of 253 business partners signed the Commitment Letter of Code of Conduct for Business Partners of AHB, with a signing rate of new business partners of 100%. And no significant risks in terms of child labor, forced or compulsory labor, freedom of association, environmental pollution, unfair competition, corruption, etc. were found.

## Implementation Measures

### 01 Periodic review by the Audit Committee

The Company has established an Audit Committee to periodically review the implementation of the Code and provide policy guidance. This review is conducted at least quarterly.

### 02 Employee commitment and training

AHB will inform potential employees of the requirements of the Business Code of Conduct and Ethics before offering them a partnership opportunity. We provide all employees with the full text of the Business Code of Conduct and Ethics, requiring all employees to understand and study the disciplines. Employees at medium-risky and high-risky integrity positions stipulated in the Integrity Handbook and the Integrity Risk Identification and Evaluation Form are required to accept the Business Code of Conduct and Ethics, and to sign a letter of commitment.

### 03 Complaint/reporting

All employees are required to report violations. Complaints/reporting of actual or suspected violations of this Code and norms will not be considered as disloyal, but will be considered as a move to protect the reputation and integrity of the Company and employees. All employees may report to their immediate supervisor or to the Audit Department, HR Center, or Group Audit Committee.

### 04 External communication

AHB provides complaint and feedback channels for interested parties via official website.

### 05 Investigations and penalties

All complaints, reports, and feedback will be investigated by the responsible department according to the legal regulations, company articles, this guideline, and the company's relevant rules and procedures.

## ○ Anti-corruption

AHB conducts business in an honest, ethical manner and strictly adheres to the legal requirements of anti-corruption in the jurisdictions. To raise the awareness of anti-corruption compliance among all employees, AHB has developed an Integrity Handbook based on the *Business Principles for Anti-Bribery* issued by Transparency International and Social Accountability International, and has developed a good risk management strategy, with zero tolerance for any behavior that is illegal or immoral, which includes, but is not limited to, corruption, bribery, malpractice, extortion, misappropriation, and kickbacks. We organize periodic reviews to assess the risk of corruption and develop appropriate control measures.

We have introduced anti-corruption requirements in induction trainings for new employees. We prevent and control integrity risks by arranging employees in key risk positions to sign a commitment to the Code of Business Conduct and Ethics, and by attending regular integrity training.



Key Performance

We organize periodic reviews to assess the risk of corruption and develop appropriate control measures. AHB carried out anti-corruption internal training for **173** employees in key risk positions during the reporting period.

## ○ Integrity and Anti-fraud

AHB adheres to the principle of good faith and complies with the specific integrity rules applicable upon different countries and regions, the industry or the relevant organization. We require all employees to adhere to a high standard of integrity of the code of conduct, and to treat people with sincerity, honesty and integrity.

The principle of good faith applies both to the internal management and to external interactions and cooperation. Employees are prohibited from engaging in, facilitating, supporting, condoning, or otherwise participating in any fraudulent, deceptive, or dishonest activities for the purpose of gaining unjust or unlawful benefits, either directly or indirectly. They are further prohibited from engaging in any illegal activities that aim to defraud funds or personal interests, and they must not use any illegal means to harm the legitimate rights and interests of any company or individual.

Such acts include, but are not limited to:

- 01** Unlawful fraud, cheat and other deceptive business practices with AHB or our business partners that result in financial or other loss to any person or entity;
- 02** Fraud committed against any other third party.




## ○ Fair Business Conduct


AHB promises to observe the principles of fair business conduct and anti-unfair competition, and follow the local laws and regulations regarding fair competition and anti-unfair competition.


In business activities, no employees of AHB are allowed to:


- 01 Obtain the trade secrets of a third party by theft, bribery, fraud, coercion, electronic intrusion or other improper means, or disclose company information to a third party;
- 02 Disclose, use, or allow others to use commercial information that suppliers, customers, or business partners require to keep confidential;
- 03 Incite, induce, or assist others to breach their contractual obligations (including breach of confidentiality);
- 04 Maliciously disseminate and fabricate false or misleading information about competitors or their products and services, and refrain from making offensive remarks about competitors and damaging their goodwill;
- 05 Engage in any conduct that may unlawfully prevent, restrict or distort fair competition, including, but not limited to, entering into any written or oral agreement, decision or other concerted action with other parties that excludes or restricts competition;
- 06 Otherwise conspire, collude or coordinate business conduct to impair or reduce competition, including but not limited to the attempts to fix, adjust or control prices;
- 07 Divide or allocate customers, suppliers or markets;
- 08 Restrict the sale of services, products or product lines;
- 09 Coordinate bidding with competitors;
- 10 Share information, discuss or enter into formal or informal agreements with any competitor relating to competitively sensitive information such as prices, profits, costs and other similar terms;
- 11 Abuse the dominant market position and achieve, without legal procedures, a concentration of business operators that has or may have the effect of excluding or restricting competition;
- 12 Make false or exaggerated publicity in all external display or publicity channels released through the Company's website, self-media, publications, promotional materials, exhibitions, or business negotiations.


## ○ Whistle-blowing

 AHB has established a reporting channel to encourage all employees, directors, suppliers and business partners to report suspected violations of the law, code of ethics or other company policies. We encourage real-name reporting of problems, however, all complaints/reports can also be submitted confidentially and anonymously. We will handle all complaints/reports carefully and cautiously. If necessary, we will take appropriate corrective action.

 All information involving whistleblowers will be kept confidential to the extent permitted by law. No retaliation, threats, penalties or reprisals against whistleblowers are allowed. Anyone who retaliates against a complaint/whistleblower will be subject to disciplinary penalties, including termination of the employment relationship.

 We will review all reports collected, establish a log regarding all reported letters, follow up on receipt, investigation and resolution of such reports. All complaints, reports, and feedback will be investigated by the responsible departments in accordance with laws and regulations, the company's articles of association, and relevant company policies, following the prescribed procedures.

 Any employee found to be in violation of the Business Code of Conduct and Ethics will be subject to appropriate penalties depending on the facts, including termination of the employment relationship led by a variety of specific facts and circumstances.

 Complaining/reporting of actual or suspected violations will not be considered as disloyal, but will be considered as a move to protect the reputation and integrity of AHB and our employees. All employees may report to their immediate supervisor or to the Audit Department, HR Center, or Group Audit Committee.

### Reporting Channels

- 01 Directly report to the immediate supervisor
- 02 Email: [ahb@ehuaheng.com](mailto:ahb@ehuaheng.com)
- 03 Tel: 0551-65388639 (weekdays 8:30-17:30)



# 02

## Green Development



 Environmental Management System

 Resource Management

 Response to Climate Change

 Green Manufacturing

# Environmental Management System

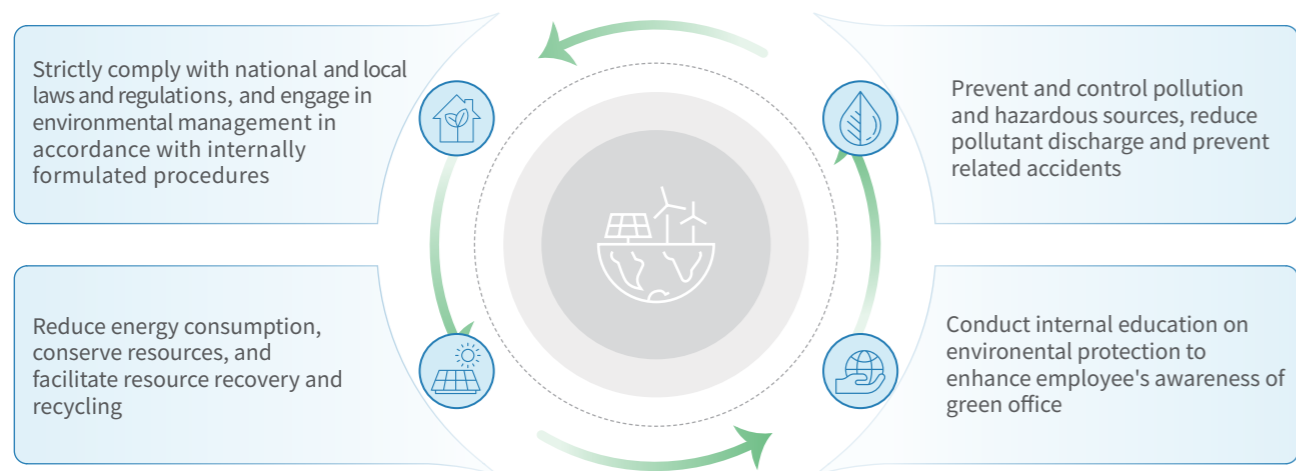
AHB is committed to building an environmental management system, implements the "14th Five Year Plan" for Green Industrial Development, strengthens environmental management and actively undertakes environmental responsibilities. We strictly abide by national environmental protection laws and regulations, and have developed a series of internal management systems in conjunction with the actual conditions of the Company, to define the environmental protection responsibilities of employees at all levels, and integrate the concept of environmental management into daily production and operation. AHB has implemented environmental management system documents including but not limited to:

Environmental Management Policies	
Wastewater Management Standard	Measures for the Implementation and Management of Energy and Resources Conservation
Water Conservation Management System	Quality/Environmental/Occupational Health and Safety/Food/Feed Safety Management Handbook
Energy Management Standard	Quality/Environment/Occupational Health and Safety/Food Safety/Feed Safety/Halal Assurance Management Procedure Document
Solid Waste Management Standard	Hazardous Waste Management System

By establishing an environmental management system, we have taken various measures into practices in an orderly way, including the submission of information, data, and materials related to environmental impact assessment, the implementation of waste and wastewater prevention and treatment, the assessment of the environmental impact of the base projects, as well as the reporting of documents involving environmental impact assessment, environmental impact assessment approvals, and environmental acceptance.

Our three production bases have obtained ISO14001 Environmental Management System Certification. We invested a total of 6,613.49 million RMB in environmental protection during the reporting period, which includes but not limited to costs for production processes, optimization and upgrading of technology and equipment, investment in monitoring systems for energy-using equipment, transportation clean-up, and optimization of power structure.

## Environmental Protection Guidelines



# Resource Management

## Water Resources

We actively promote water resource conservation and rational utilization. By establishing relevant water resource management systems, implementing total water consumption control and decomposing water consumption plans. We decompose water conservation targets and plans to each department and workshop, and promote the implementation of water conservation plans and targets with reward and punishment mechanisms to encourage our employees to be an active part in water conservation and management.

AHB uses water from the municipal water supply, consuming 1,195.35 million liters of fresh water in 2023. We are active to optimize the comprehensive water resources management, reduce and eliminate microbial and bacterial endotoxin contamination in the water production system by establishing production process water system management protocols and carrying out process modifications, so as to ensure process water quality. During the reporting period, with the goal of gradually improving water use efficiency, we used a total of 357.54 million liters of recycled water and a recycled water usage ratio of 23% through the continuous promotion of various water conservation projects, including reclaimed water reuse, condensate reuse, and fermentation recycled water reuse.

Water Resources Management Policies	
Water Conservation Management System	Quota Incentive and Penalty System for Water Conservation Management

Key Performance	Fresh water consumption	Recycled water consumption	Intensity of water consumption
	1,195.35 million liters	357.54 million liters	0.80 million liters/million RMB revenue

In the future, we will continue to seek innovative solutions to improve the water use efficiency of our equipment and ensure the quality of water use, to continuously devote to the exploration of water-saving solutions sothat we can realize our water resource goals.

**Water Resource Target**

Starting from the division of responsibilities, pipeline access, metering and metering equipment, planning and water conservation management, as well as water use inspection and assessment, we actively create a water-saving enterprise.

## ○ Packaging Materials

By making efforts to practice resource recycling, AHB adopts various ways to reduce the use of packaging materials, and carries out packaging reduction from the source through the management of packaging materials and the optimization of production process. In 2023, AHB used a total of 523 tons of packaging materials, of which recyclable packaging materials account for 97.51%.

### Initiatives to Reduce the Use of Packaging Materials



## ○ Pollutant Management

AHB continuously strengthens the control of pollutant emission in the operation and properly disposes of all kinds of emissions and solid wastes generated in the production process to ensure that the wastewater, exhaust gas, solid wastes and noise comply with the emission standards. We have established relevant policies for pollutant management and continuously improved and revised the environmental management system based on environmental laws and regulations and the actual situation of our business to guarantee that the emissions of various pollutants comply with national and local standards.

Through the Management Procedures for Identification and Evaluation of Environmental Factors, we identify, evaluate and control important environmental factors in three categories, namely, production processes, office processes and auxiliary processes, to minimize the environmental impacts and potential risks caused by company operations. The emission indicators of all waste gas, wastewater and solid pollutants, we are all controlled within the local pollutant emission limits in 2023.

Pollutant Management Policies		
Wastewater Management Standard	Solid Waste Management Standard	Hazardous Waste Management System
Wastewater Control Procedures	Solid Waste Control Procedures	Hazardous Chemical Management System
Exhaust Gas Control Procedures		



## ○ Waste Management

By dividing the waste into general waste and hazardous waste, AHB develops different treatment methods and standards for different wastes and carries out corresponding classification, transfer and disposal to ensure that the wastes are harmlessly treated and avoid impacting on the environment.

### General Waste

Our general waste mainly consists of sludge, ash and other general industrial waste, as well as domestic waste. AHB handles general waste in a strict manner, classify into centralized treatment of domestic waste and general industrial solid waste. Then they are transferred and disposed of by local environmental protection departments and qualified third parties, to conform the provisions of the Solid Waste Management Standard.

General Waste Indicator	Unit	Amount
Total discharge of general waste <sup>1</sup>	tons	18,344.44
General waste discharge intensity	tons/million RMB revenue	9.46
-Waste transferred from disposal (recycling)	tons	18,148.13
-Waste for directly disposal (incineration, with energy recovery)	tons	0.00
-Waste for directly disposal (incineration, without energy recovery)	tons	0.00
-Waste directly disposed of (landfilling)	tons	0.00
-Waste for directly disposal (other operations)	tons	173.05

<sup>1</sup>A total of 23.26 tons of general waste remained undisposed at the end of the reporting period.

### Hazardous Waste

AHB strengthens the internal management according to the Hazardous Waste Management System and Hazardous Chemical Management System to prevent the pollution of soil by hazardous waste. We entrust all hazardous wastes, such as waste engine oil, waste paint drums, laboratory waste liquids, and hazardous chemicals to qualified third parties for final disposal, and accepts the supervision of local environmental protection departments. To ensure the compliance of the base employees with relevant laws, regulations, and environmental protection department requirements for hazardous waste disposal, we provide appropriate training for the employees.



Indicators for Hazardous Waste	Unit	Amount
Total amount of hazardous waste emissions	tons	42.33
Hazardous waste discharge intensity	tons/million RMB revenue	0.02
-Waste transferred from disposal (recycling)	tons	9.28
-Waste for directly disposal (incineration, with energy recovery)	tons	0.00
-Waste for directly disposal (incineration, without energy recovery)	tons	32.69
-Waste directly disposed of (landfilling)	tons	0.36
-Waste for directly disposal (other operations)	tons	0.00

**Waste Disposal Targets**

To reduce the impact on the natural environment through rational waste disposal, material recycling and reuse.

## Wastewater Management

AHB standardizes the treatment of wastewater generated in production and operation in accordance with relevant regulations and ensures that all production bases strictly comply with the wastewater discharge laws, regulations and standards upon different locations. We have introduced wastewater treatment stations at each production base, monitor wastewater indicators by a real-time online monitoring system. At the same time, we have provided an abnormality alarm system to warn of exceeding wastewater indicators for ensuring wastewater discharge compliance. All production-related wastewater is discharged to the municipal sewage network after treatment at the wastewater treatment station.

We continue to optimize the wastewater treatment process through wastewater monitoring systems, data analysis, equipment upgrades and technological modifications, and reduce the amount of chemical dosage under the condition of ensuring that all indicators of wastewater meet the emission standards, so as to avoid secondary pollution. In addition, we continue to strengthen our water management capabilities and increase the proportion of water recycled in order to reduce wastewater discharges. During 2023, we are upgrading our wastewater stations, which includes building a new ultrafiltration membrane bioreactor (MBR) system, revamping the denitrification system, developing a plan for revamping the anaerobic end of the system, and planning for the construction of a wastewater station automated control system.

Wastewater Discharge Indicators	Unit	Amount
Total wastewater discharge <sup>2</sup>	million liters	1,342.68
Wastewater discharge intensity	million liters/million RMB revenue	0.69
Chemical aerobic discharge (COD)	tons	47.65
Total phosphorus (TP)	tons	1.35
Total nitrogen (TN)	tons	7.42
Ammonia nitrogen (NH <sub>3</sub> -N)	tons	1.03

<sup>2</sup>Total wastewater discharge = domestic-related wastewater + production-related wastewater

## Exhaust Management

AHB implements strict control procedures in waste gas emissions. To ensure that exhaust emissions comply with environmental regulations, we regularly hire third-party organizations to monitor the concentration of air emissions within the base area. By verifying emissions compliance, the third-party help us to understand emissions in a timely manner so that we can adjust and optimize production processes to reduce the environmental impact. In addition, AHB also reduces the production and emission of nitrogen oxides, sulfur oxides and particulate matter to the greatest extent by strengthening the supervision of boiler exhaust treatment facilities and adopting advanced environmental protection technologies.

Exhaust Emission - related Indicators	Unit	Amount
Nitrogen oxides (NO <sub>x</sub> )	tons	44.21
Sulfur oxides (SO <sub>x</sub> )	tons	18.61
Particulate matter (PM)	tons	3.94

## Noise Control

From the production base and the equipment to the personal protection, AHB has taken several measures and is committed to reducing the Company noisy pollution and creating a more comfortable working environment for the employees. In strict accordance with the requirements of the *Standard for Environmental Noise Emission Within Plant Boundaries of Industrial Enterprises*, we conduct regular noise detection within the specified period of time to ensure that noise emissions meet the standards.

To prevent and control noise pollution, we are actively working on equipment maintenance, optimization of production structure and installation of sound insulation facilities. Through regular equipment overhaul and maintenance, we ensure the normal production equipment operation and reduce equipment noise. We optimize the production structure with advanced production processes and technologies to reduce the overall noise during the production process.

To reduce occupational health risks, we mitigate the impact of noise in a noisy environment by providing personal protective gear such as anti-noise earplugs and organizing regular training and activities to raise employees' awareness of noise issues and promote the use of anti-noise measures.

## Chemical Safety

With the excellent independent research and development capabilities in the biosynthetic industry, AHB is constantly committed to advancing the design and optimization of the production process. In the related production experimental projects, we are deeply aware of the importance of chemical safety, and that improper handling of chemicals may threaten the safety of employees, the ecological balance of the surrounding environment, and even cause a serious blow to the economy.

To control the hazardous factors in the procurement, storage, distribution, and use of chemicals and prevent potential accidents, AHB has developed and implemented the Chemical Management Specification. This specification is intended to promote the comprehensive management of chemical procurement, storage, issuance, and use in our production sites, inspections, and tests. In the specification, special emphasis is placed on the requirements for the use of hazardous chemicals, with clear definitions on the procurement, daily management, maintenance and use of chemicals to ensure that we complies with the highest safety standards in chemicals management.

We have clarified the responsibilities of each department to better fulfill the chemical management specifications. The Material Department is responsible for chemical procurement and warehousing, the Production, Quality and Technical Departments are responsible for the management of the daily use of chemicals, while the Safety and Environment Department is responsible for the daily inspection, supervision and management. The clear definition of responsibilities ensures that every step is professionally supervised, thus ensuring chemicals are well-managed.

## Response to Climate Change

Climate change has become one of the major challenges facing all humankind. AHB deeply understands the impact of climate change on the environment, society, and economy, as well as the risks it poses to business operations. To address climate-related risks and contribute to the implementation of the national "carbon peaking and carbon neutrality goals", we have taken a series of measures to reduce carbon emissions and disclose corporate climate-related risks and opportunities in four areas of governance, strategy, risk management, metrics, and targets.

### ○ Governance

The ESG leadership group of AHB is responsible for identifying climate -related risks and incorporating them into the agenda of the Board of Directors, to ensure that the Board and the Management Team oversee the control over potential risks and opportunities brought by climate- elated risks to the Company.

### ○ Strategy

AHB has developed a climate change strategy and incorporated climate change into the business decision-making process. We focuses on climate-related risks in the supply chain and market change risks, with the aim to reduce carbon emissions, improve energy efficiency and promote the use of clean energy to mitigate and adapt to the potential impacts of climate change. In addition, we work with all stakeholders to address the challenges posed by climate change. We are also committed to developing and promoting more environmentally friendly products and advocating the recycling and reuse of resources.

### ○ Risk Management

We have been progressively assessing the risks and opportunities associated with climate change and taking action on the potential impacts.

Risks	Aspect	Potential Financial Impact	Actions Taken
<b>Physical Risks</b>			
Acute	Frequent occurrence of extreme weather events (e.g., hurricanes, floods, etc.) may impact the construction and operation of our projects to a certain extent.	Disruption of business and supply chain may lead to a decrease in our revenue.	Develop a special inspection system and contingency plan for natural disasters to cope with unforeseen weather conditions and protect business properties from the impact of climate changes.
Chronic	Chronic risks such as global warming and sea level rise may damage equipment and facilities at our bases.	Extreme weather events may increase safety risks and transportation costs for the transportation of materials.	Develop disaster recovery plans to ensure that operations can be resumed in a short period of time and that impacts are minimized.
<b>Transition Risks</b>			
Policies and Regulations	Changes in domestic and international policies related to climate change may result in additional costs for us to ensure compliance.	Potential increase in operating costs and resources required as a result of adopting new technologies due to adjustment of day-to-day operations.	Implementation of energy-saving measures and use of energy-saving and environmentally friendly equipment to reduce carbon emissions in daily operations and adapt to higher environmental requirements.
Markets	Changing consumer preferences and needs.	The market has higher demands for product projects, which may subject our Company to increased competitive pressure.	To optimize the level of production technology by adhering to our philosophy of sustainable development, in order to provide better products to meet market and consumer needs.
Technology	The updating and iteration of emerging technologies may push us to invest more in R & D and training of specialized personnel.	The process of transition towards low-carbon development (e.g., use of low-carbon energy and technology, purchase of low-carbon equipment) requires more investment of resources.	Enhance the technological upgrading of production bases and develop existing green and clean bio-manufacturing processes to replace traditional energy-and-pollution-intensive processes with green and clean biological manufacturing processes.
Reputation	If we fail to fulfill social responsibilities or take appropriate measures to manage the potential impacts of climate change, it may affect the evaluation of us by various stakeholders.	Reduced revenue due to lower market demand for goods/services.	Organize social performance training within the Company in line with sustainability philosophy, and take appropriate measures to manage the impacts of climate change in a timely manner.
<b>Opportunities</b>			
Energy Sources	From a medium- to long-term perspective, energy efficiency improvements will bring immediate cost savings to operations and contribute to limiting global carbon emissions.	Reduce operating costs to achieve cost reductions and efficiency gains.	<ul style="list-style-type: none"> <li>Take actions to optimize equipment and processes to reduce energy waste and promote employee participation in energy conservation initiatives.</li> <li>Encourage the use of green electricity.</li> </ul>
Products and Services	Innovation and the development of products and services with low carbon emissions will improve competitive positions in the marketplace, for example, customers prefer more environmental friendly service providers or products, and investors prefer to concentrate on green enterprises.	Increase the Company's revenue by meeting customer demand for low-emission products and services.	<ul style="list-style-type: none"> <li>Promote the innovation and upgrading of "synthetic biology + animal nutrition".</li> <li>Accelerate low-carbon transformation and actively participate in low-carbon development.</li> <li>Reduce packaging materials and turn to degradable material construction.</li> </ul>

## Metrics

### Energy Consumption

The three bases of AHB have all passed *ISO 50001 Energy Management System Standard Certification*. We continuously monitor and evaluate energy consumption through third-party certifications, energy audits, and internal assessments to ensure the effectiveness of energy management measures. During the reporting year, the Company's use of green electricity accounted for 17%.

A series of energy optimization projects such as biogas recovery, biogas boiler, photovoltaic power generation initiated by AHB have achieved remarkable results.

Indicators related to Energy Utilization	Units	Amount
<b>Direct energy</b>		
Lignite	tons	29,149.91
Natural gas	m <sup>3</sup>	1,216,125.18
Diesel	tons	62.32
Gasoline	tons	6.22
<b>Indirect energy</b>		
Outsourced electricity	MWh	177,025.47
Steam	GJ	119,291.99
Biomass fuel	GJ	329,073.24
Total consumption of comprehensive energy	MWh	418,823.48
Consumption intensity of comprehensive energy	MWh/million RMB revenue	216.08


### Greenhouse Gas Emissions

Greenhouse gas emissions from the Company's business operations include direct emissions from gasoline and diesel fuel combustion in vehicles and emissions from fugitive sources (including septic tanks, anaerobic treatment of wastewater, methane combustion, fire extinguishers, and air conditioning refrigerants) (Scope 1), indirect emissions from purchased electricity and steam (Scope 2), and other indirect emissions from employees' business travel (by rail and air) (Scope 3).

Greenhouse Gas Emission indicators	Units	Amount
Scope 1	tons CO <sub>2</sub> e	37,146.46
Scope 2	tons CO <sub>2</sub> e	100,958.68
Scope 3	tons CO <sub>2</sub> e	100.58
Total greenhouse gas emissions	tons CO <sub>2</sub> e	138,205.72
Greenhouse gas emission intensity	tons CO <sub>2</sub> e/million RMB revenue	71.30

We conduct regular energy consumption assessments, set energy consumption targets based on the actual situation to ensure that annual energy saving targets can be met by refined management of energy consumption use.

Energy Efficiency



Gradually improve energy efficiency, upgrade equipment and reduce unit energy consumption

### Energy Conservation and Emission Reduction Actions

Following the scientific carbon reduction method of "figuring out the strength, mapping the potential, implementing emission reduction and green transformation", AHB conducts the carbon footprint accounting and evaluation of the core products. Starting from the stage of raw material acquisition and product processing, we actively promote product emission reduction through green procurement of raw materials and biomass-fueled boilers. We also plan to expand the scope of carbon footprint verification to complete the carbon footprint ranking of all products, covering the carbon footprint accounting of the entire life cycle of all products from planting, farming, transportation, production and exhaust, so as to reduce the carbon footprint of products year by year.

AHB has established Measures for the Implementation and Management of Energy and Resources Conservation and Energy Management Standard, aiming at regulating and optimizing energy use. All bases are taking active steps to promote energy conservation and consumption reduction, helping to reduce the overall carbon footprint and promote environmental sustainability.

**Changfeng Base Energy Saving Initiatives**



- Improving the separation and concentration process to reduce steam usage;
- Replacing screw air compressors in fermentation workshops with magnetic levitation compressors, expected to save 20% electricity;
- Continuously optimizing water pump frequency control projects to further enhance energy utilization efficiency at the base;
- Implementing photovoltaic power generation and biogas boiler projects to provide clean electricity and efficiently utilize biogas resources for the production base, achieving an annual capacity of 230,000 kWh and 1,000 tons of steam;
- Replacing all diesel forklifts with electric forklifts.



**Bayannur Base Energy Saving Initiatives**

- Provide heat value for the boiler by passing the wastewater station biogas through the burner, which can save 1,100 tons of coal and 1,570 tons of steam annually through the biogas recovery and waste heat recovery projects;
- Introduce new sources of electricity and reduce the use of coal;
- Change to use energy-saving motors.



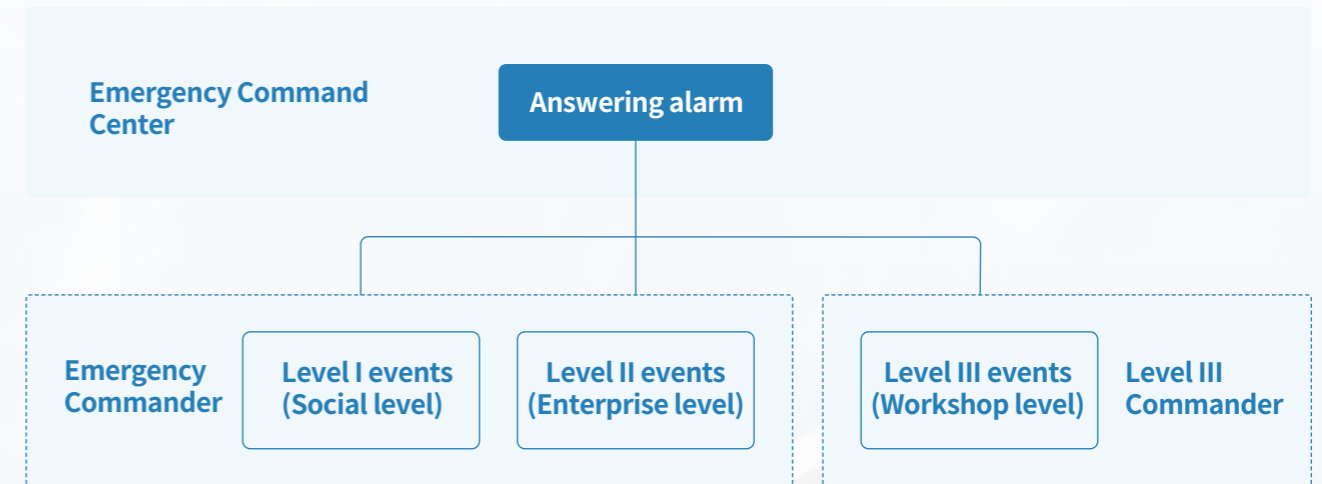
**Qinhuangdao Base Energy Saving Initiatives**

- Initiated a waste heat power generation project for amino acid production, aiming to utilize the residual heat and pressure from the three-phase biomass boiler for electricity generation and grid supply;
- Improve fuel efficiency and reduce costs through high and low differential speed circulating fluidized bed boiler combustion technology;
- Advancing a technical modification project for air compressors, which is expected to save 20% on electricity consumption based on the existing baseline.

**Environmental Emergency Management**

To comprehensively improve the level of enterprise's response to environmental emergencies and ensure the safety and stability of the environment, as required by the national *Management Measures for Emergency Response Plans for Enterprises and Institutions (Trial)* (HF [2015] No. 4) and other local environmental regulations such as the *Environmental Protection Law of the People's Republic of China* and the *Emergency Response Law of the People's Republic of China*, we have formulated Emergency Response Plan for Sudden Environmental Incidents of Anhui Huaheng Biotechnology Co., Ltd. to emphasize environmental protection. The purpose is to respond to various types of environmental emergencies, including leakage of hazardous chemicals, liquid materials, natural gas, and specific risk scenarios such as leakage of methanol storage tanks. AHB has developed special emergency response plans for a variety of possible risk scenarios.

The Emergency Response Plan for Environmental Emergencies provides clear emergency response strategies for different levels of incidents by categorizing them into Level I (social level), Level II (enterprise level) and Level III events (workshop level). To support the implementation of the Plan, AHB has built a corresponding emergency response system and set up an emergency response leading group and office to provide quick, efficient respond for rescue and aftercare work.



AHB strengthens the comprehensive emergency plans for internal environmental incidents and emergency plans for workplace safety accidents, ensuring that personnel at all levels are familiar with and execute emergency procedures. Externally, AHB emphasizes the connection between the corporate emergency response plan and the government's emergency response plan to ensure efficient synergy in case of emergency. In addition, we have established close contact with neighboring enterprises, so that our enterprise emergency plan and the neighboring enterprise emergency plan are connected, forming a more complete joint prevention and control mechanism.

To ensure the effectiveness of the plan, AHB emphasizes the emergency response capability of employees, implements full training and drill mechanisms, and sets up reward and punishment mechanisms to motivate employees to actively participate in emergency management. By simulating a variety of unexpected environmental events, we test the feasibility of the emergency plan and the resilience of our employee and improve their synergy and response speed in emergency.

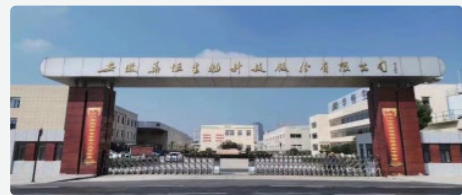
AHB continuously enhances its contingency plans for sudden environmental incidents, providing guidance for post-incident recovery and investigation efforts. Following the occurrence of such events, the Company promptly commissions professional testing organizations for emergency monitoring to ensure timely investigation into the causes of the incidents. Simultaneously, the Company initiates rapid recovery plans, formulating environmental restoration schemes to minimize adverse impacts on the environment and safeguard the safety of the enterprise and surrounding communities.

During the reporting period, we succeeded in realizing our goal of zero environmental protection accidents by continuing to improve our emergency management mechanism for environmental emergencies for environmental protection.

# Green Manufacturing

## Green Factory

We have been adhering to the principles of sustainable development and commitment to green production, aiming to minimize environmental impact and maximize resource efficiency to promote green development of the Company. The three production bases of AHB have been certified as green factories. In addition, Changfeng and Qinhuangdao bases have been honored with national green factory certification.



### ▶▶ Changfeng Base (Headquarters)

- Enzyme Engineering and Calcium Pantothenate Smart Factory
- National green factory

### Qinhuangdao Base ◀◀

- Alanine Superfactory
- Bio-based malic acid construction project
- National green factory



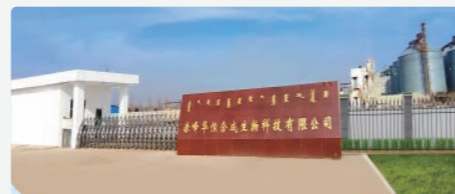
### ▶▶ Bayannur Base

- Branched-Chain Amino Acids Superfactory
- Branched-Chain Amino Acids (BCAAs), Tryptophan, and Refined Amino Acid Project



### Chifeng Base ◀◀

- Bio-based Succinic Acid and Bio-based Raw Material Production Base Project, Bio-based 1,3-Propanediol Construction Project.
- Bio-based Alternating Valine and Arginine Project and Inositol Construction Project.



During the construction of process of our upcoming Chifeng base, we have integrated green manufacturing and sustainable development projects into the full lifecycle management of the project during the design phase, aiming to reduce carbon footprint. By introducing roof-mounted solar photovoltaic power generation, water recycling system, waste heat recovery system, biogas recovery system and optimizing the production process, we effectively reduce reliance on traditional energy sources and minimized pollutant emissions. For the sake of energy saving and consumption reduction, Chifeng base has introduced a digital energy management system to monitor and analyze the energy consumption of each production link, providing energy optimization solutions for the management personnel and ensuring the efficient use of energy.



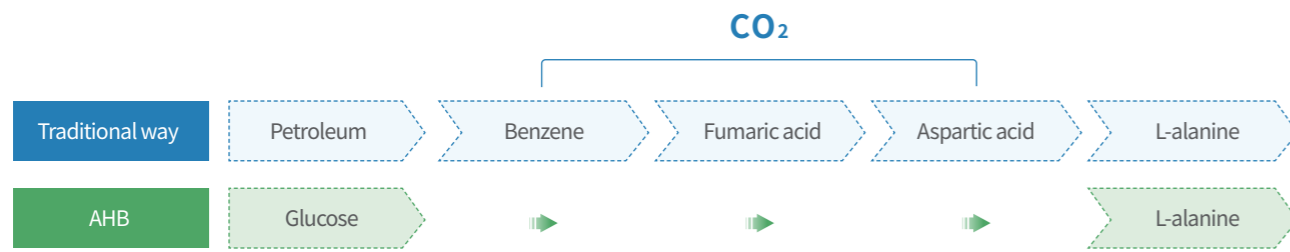
Rooftop Photovoltaic Power Generation at Changfeng Base.

## ○ Clean Technology Opportunities

AHB's anaerobic biomanufacturing technology for L-alanine has revolutionized the traditional aerobic fermentation production model for amino acids. This innovation addresses the dependency on non-renewable petrochemical raw materials and eliminates carbon dioxide emissions during the anaerobic fermentation process.

### Compared to traditional petroleum based routes

Wastewater reduced by	Energy consumption reduced by	Production cost reduced by
<b>90%</b>	<b>40%</b>	<b>50%</b>



We will work to continuously optimize our production paths in the following areas in the future to reduce environmental pollution, improve resource efficiency and reduce carbon emissions.

### Clean Fuel Substitution

- Continue to optimize the biogas recovery equipment of sewage stations, and use biogas boilers instead of traditional coal-fired boilers to reduce greenhouse gas emissions
- Optimize the piping design for the full recycling of waste heat to save energy and reduce emissions

### Energy Optimization

- Optimize the material temperature control process, use preheated materials to reduce steam use, and achieve energy savings
- Optimize the temperature and humidity control of the air conditioning in the production workshop, eliminate outdated equipment, and use the magnetic levitation air compressor and permanent magnet motor to improve energy efficiency
- Increase the share of biomass and photovoltaic energy generation

### Process Optimization

- Reduce energy consumption by using continuous chromatography process
- Adopt high and low differential speed circulating fluidized bed boiler combustion technology

### Water Recycling

- Introduce magnetic coagulation pretreatment system, ultrafiltration membrane and RO reverse osmosis membrane treatment equipment for further treatment of wastewater station effluent, to recycle water resources back to the production system and reduce the cost of production water, saving 198,000 tons of tap water per year and reducing the discharge of wastewater by 5,700 tons per day
- Optimize the production process by adopting a "zero-medicament" solution and using recycled water for fermentation formulations, greatly reducing the frequency of stopping and cleaning of the recycled water station as well as the amount of wastewater discharged
- The Company used recycling pumps to recycle the condensate water produced by the evaporator and used it for other available processes, saving 5,000 tons of tap water per year

## ○ Biodiversity

AHB firmly believes that the maintenance of genetic diversity, species diversity and ecosystem diversity is not only necessary for ecological balance, but is also the key to long-term corporate prosperity. We regularly engage third-party organizations to conduct environmental assessments and testing, adhering to national regulations from the Ministry of Ecology and Environment while actively responding to their action strategies and protection plans. This ensures the harmonious coexistence of our operations with ecosystems and compliance with ecological red line requirements.

## ○ Green Office

AHB actively promotes green and low-carbon working style, regularly organizes employees to participate in environmental protection, enriches their knowledge of environmental protection, and provides them with a low-carbon, healthy, safe and energetic working environment. Leveraging digital office platforms, we facilitate collaborative work among corporate clients and employees, promoting online video conferencing to significantly reduce carbon emissions from face-to-face meetings and minimize paper usage, thereby supporting employees' low-carbon office behaviors.

Resource Conservation	<ul style="list-style-type: none"> <li>• Practice "clean plate campaign"</li> <li>• Offer no disposable tableware</li> <li>• Use water-saving faucets</li> </ul>
Energy Conservation	<ul style="list-style-type: none"> <li>• Use solar air-conditioning for office buildings</li> <li>• Intelligently regulate the temperature of the office area</li> <li>• Use energy efficient LED lighting fixtures</li> </ul>
Green Travel	<ul style="list-style-type: none"> <li>• Provide shuttle buses to transport employees to and from work, reducing employee travel carbon emissions</li> </ul>



# 03 Product Innovation and Responsibility



 Product Management

 Product Innovation and Sustainability

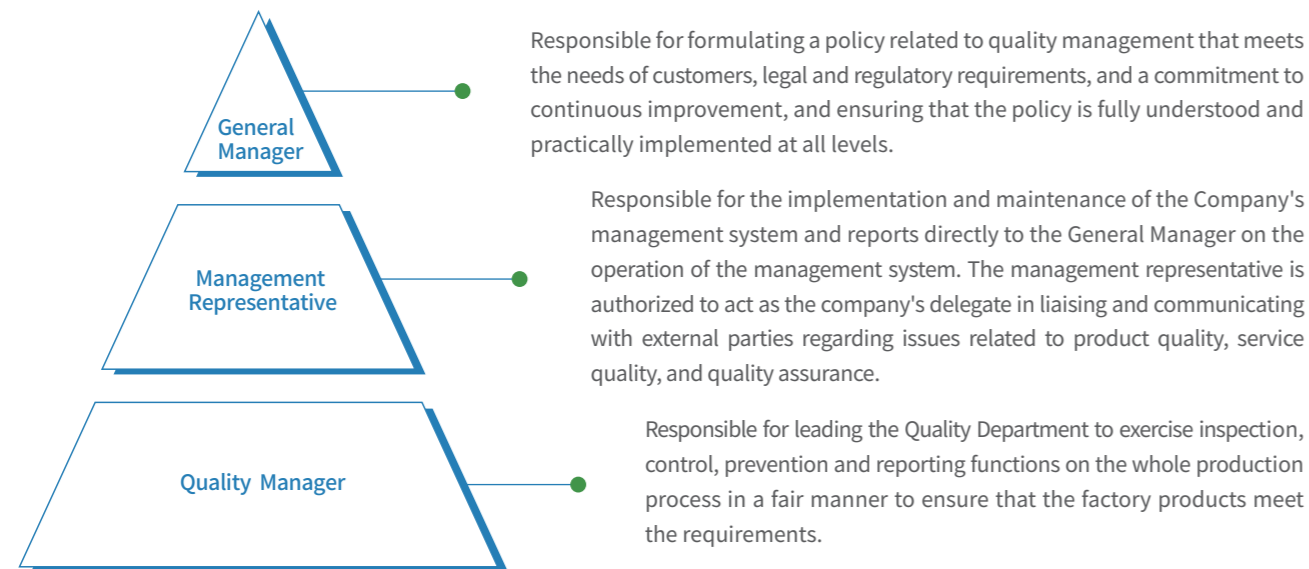
 Customer Service

 Information Security Management

# Product Management

## Management Structure

As a leading innovative research and synthetic biotechnology company, AHB regards product quality as the lifeline. We have established a sound product management structure, built a normalized, standardized management team, defined the responsibility for product quality management, emphasized the product management principles of transparency, accountability and continuous improvement, and committed to bringing long-term value to shareholders, employees, customers and all stakeholders in society.



Based on domestic and international quality management documents and legal and regulatory requirements (including but not limited to the following) as well as the actual conditions of the Company, AHB has established quality, food, and feed safety management systems and compiled management manuals with specific management regulations and requirements.

### Domestic Standards

- GB/T 19001-2016 *Quality Management System*
- GB/T 24001-2016 *Environmental Management System Requirements and Usage Guide*
- GB/T 45001-2020 *Occupational Health and Safety Management System Requirements and Usage Guide*
- ISO 22000:2018 *Food Safety Management System Requirements*



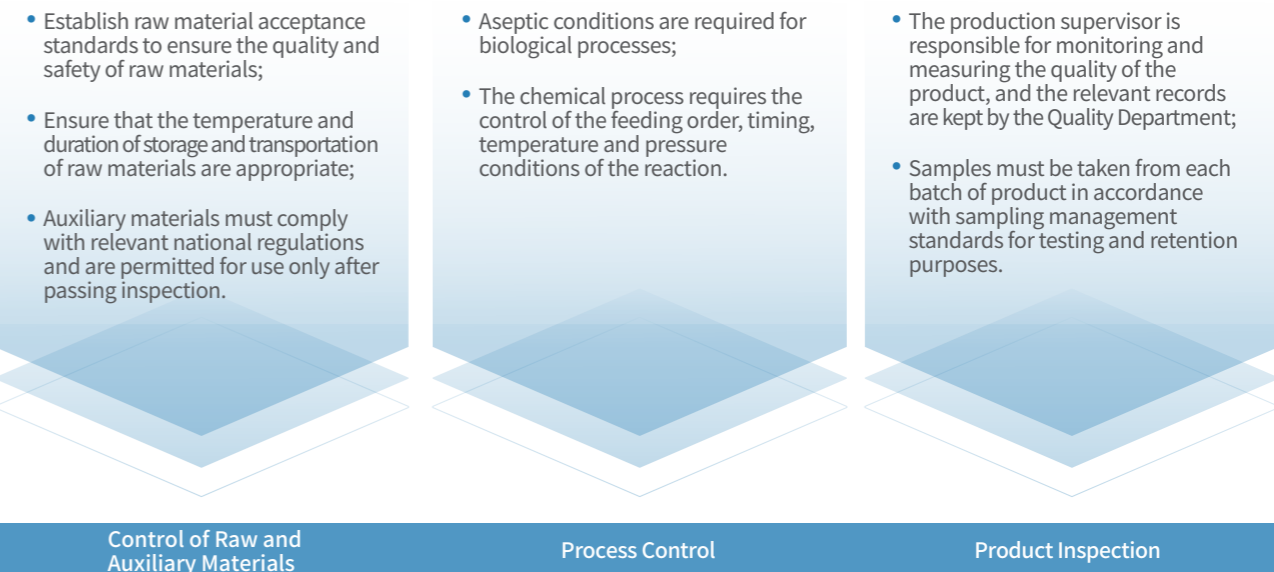
### International Standards

- BRC Global Standard for Food Safety Version 9.0*
- FAMI-QS European Feed Additives and Pre-Mixtures Quality System Version 6.0*
- EFFCI GMP European Cosmetic Ingredients Good Manufacturing Practices*
- KOSHER Certification*
- HAS 23000 Halal Certification (MUI)*
- COSMOS Standard Version 4.0 Natural Organic Certification*



## Quality Control Procedures

To ensure product quality, we strictly supervise and control the process flow. From the raw and auxiliary materials to the production process and finally to the product inspection, the relevant personnel must comply with the corresponding production operating instructions, equipment operation and maintenance procedures. Before production starts, the equipment operators should check the technical condition of the product equipment in accordance with the Equipment and Facility Control Procedures to ensure that the current technical condition of the equipment meets production requirements. The supervisor of the production plant must conduct a comprehensive inspection during the production process, and must monitor and measure semi-finished products and finished products according to the Product Monitoring and Measurement Control Procedures to ensure that the production results meet the standards. For possible substandard products, we have also set up a thorough process whereby the supervisor of the production plant will handle the relevant products in accordance with the Non-conformance Control Procedure.





## Product Quality Training

To ensure product quality and build a more efficient, professional product quality control team, we actively conduct quality management training. During the reporting period, we mainly held quality management training for quality managers, physical and chemical testers, microbiology testers and other quality inspection employees, with an average training time of more than 22 hours per capita, covering the management and use of a variety of specialized instruments, product impurity detection, foreign material management, and inspection methods. During training, assessments are conducted to rigorously question the relevant content, and the results of these assessments, along with details of the training content, are documented in the "Training Implementation and Effectiveness Evaluation Record."

## Product Certification

AHB has passed the quality and food safety management system certification; our products have received several prestigious certifications, including the Jewish "KOSHER," Islamic "HALAL," European "BRC," and the feed-specific "FAMI-QS" certification. Some of the products have been awarded the certificates of *National Industrial Products Production Certification*, *High-tech Products* and *National Key New Products*. The quality of our products has also been recognized by other international organizations, including *CNAS Laboratory Certification*, *ISO9001 Quality Management System Certification*, *REACH Certification*, *COSMOS Natural Organic Certification*.



## Product Risk Management

As a well-established synthetic biotechnology company, we have developed comprehensive management procedures for possible product risks. Starting from the product design process, AHB identifies and evaluates the potential risks to product quality and health and safety, and classifies the risks according to the identified levels, and then develops corresponding countermeasures to ensure that the risks are reduced to an acceptable level.

We disclose the final results in the form of Risk Management Report to ensure transparency and credibility of product quality control. To meet the needs of every customer and effectively identify market and product risks, we engage in comprehensive communication across all levels of personnel. We establish and maintain multidimensional contacts with our customers to nurture these relationships. Additionally, we focus on the research and development of specific products and enhance training in product knowledge for relevant personnel.

**Direct Quality Risk**

- Product quality issues can lead to risks such as returns, scrapping, and rework

- During the use of a product, if it causes damage to a customer's other property rights or personal rights, the company must bear civil liability for compensation.
- During the transportation of products, issues can arise from logistics, improper storage conditions, or damaged packaging.

**Indirect Quality Risk**

We attach great importance to allergen management by implementing the Allergen Control Management Procedure to achieve comprehensive management and control of allergens throughout the entire process. This helps prevent cross-contamination of allergens, effectively assesses and maintains the safety of our products, and ensures the health and safety of both consumers and employees. And we also implement responsibilities related to allergen management to ensure effective management.



The food safety team correctly evaluates the effectiveness of allergen management based on the detection report of allergen content in company products, customer complaints, feedback from relevant departments, internal and external information. According to the allergen content testing reports of company products, customer complaints, feedback from relevant departments, and both internal and external information, the effectiveness of allergen management is accurately assessed. The responsible personnel are required to maintain written records and timely update the monitoring system to ensure ongoing compliance and effectiveness.

## Product Recall Process

AHB is committed to providing safe, healthy, and high-quality products. In response to potential direct quality risks that cannot be completely eradicated, we strictly follow the Product Withdrawal/Recall Management Standard to ensure that our recall-related regulations and processes are in line with the national regulations and practical needs, and that the health and safety of our customers are put in the first place.


When batches of non-conformity are found in delivered products (including the existence of safety hazards), AHB will assign different personnel or departments to promote the product recall/withdrawal procedures in accordance with the specifications, to ensure the prompt and complete control of the relevant products. When the product is recalled, we will further record and prepare it in accordance with the Product Withdrawal/Recall Record Form, and treat the withdrawn/recalled products as nonconforming products in accordance with the Non-conforming (Potential Unsafe) Product Control Procedures. Despite no actual product withdrawal/recall, AHB conducts a simulated withdrawal/recall once a year, and keeps a record of the simulated withdrawal/recall of the product to rehearse, evaluate, and verify the timeliness of the withdrawal/recall procedure. In 2023, we were not involved in product recalls or customer health and safety incidents.



## Product Innovation and Sustainability

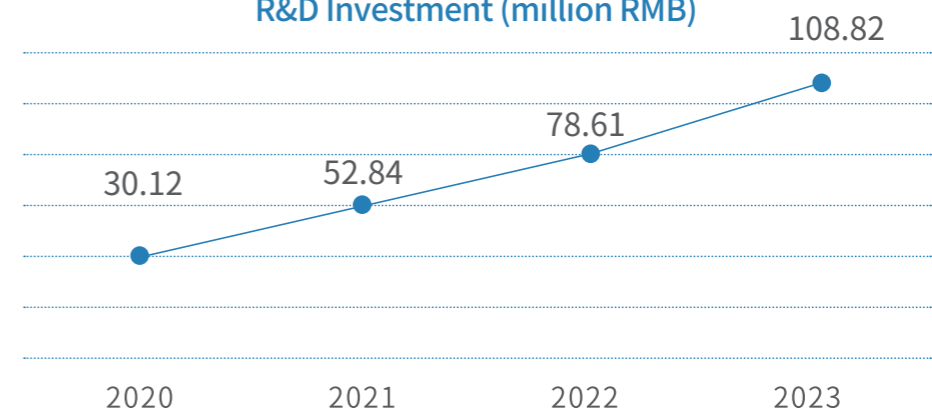
### Research and Development

AHB has built a comprehensive synthetic biology industry chain research and development system that covers top-level planning and design to actual industry implementation. The institute and four industrialization bases together constitute the core of AHB's global "innovation ecosystem". Taking market demand as the driving core, AHB develops new products in a targeted manner based on the result of in-depth analysis of market demand, potential market exploration, assessment of technology implementation possibilities, review of strategic suitability and evaluation of technical standards. Besides, AHB has established a comprehensive research and development system to support product innovation and sustainable production operations. Adhering to the concept of environmental protection and green development, we are committed to developing cutting-edge synthetic biology technologies.



In 2023, AHB invested RMB **108,824,394.48** in research and development.

R&D Investment (million RMB)



We have established a dedicated research institute in Hefei., dedicated to scientific exploration and technological innovation. Our R&D team comprises over 200 members, serving as the pillar of industrialization of AHB in microbial cell-factories development construction, lab and pilot scale-up, industrial production and technology innovation management and other all-round technologies.

### Open R&D Ecosystem

Relying on the strength of Huaheng Synthetic Biotechnology Research Institute in Hefei, we have established cooperative relationships with domestic and foreign universities and research institutes, such as Tian Gong Institute of the Chinese Academy of Sciences, the Institute of Microbiology of the Chinese Academy of Sciences, Beijing University of Chemical Technology, and Zhejiang University of Technology. These collaborations enable us to bring together outstanding talents in the field of synthetic biology and related downstream applications to create an open R&D ecosystem that facilitates interdisciplinary collaboration and knowledge sharing to drive innovation.

We also value close communication with the industry and maintain close cooperation with corporate partners to gain a deeper insights of market demand and industry trends, and incorporate them into our research and product development. We are committed to pursuing technological and product innovations and developing biotechnology products and solutions with potential to make positive contributions to human health and environmental protection.



### Cooperation with Research Institutes

Continue to establish cooperation with well-known institutions at home and abroad, such as cooperating with Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences and the Institute of Microbiology of the Chinese Academy of Sciences to complete various industrial projects, achieving a huge leap in transforming science and technology into economic benefits and social values.

### Cooperation with Universities

Cooperate with well-known universities and colleges to accelerate the transformation of scientific and technological achievements and personnel training, such as the establishment of academician workstation with academician Yuguo Zheng of Zhejiang University of Technology.

### Cooperation with Enterprises

Collaborate with outstanding enterprises in the industry to boost innovation and improvement in all areas of the synthetic biology industry chain.

### Cooperation with Customers

Create a number of innovative projects for core customers to continue to promote product innovation, industrial upgrading, cooperational upgrading, such as jointly discussing biobased product development and project technology collaboration with BASF, for a sustainable development of "new chemistry".

## Intellectual Property Protection

AHB has established the Intellectual Property Center, aiming to protect our innovation achievements and manage the intellectual property rights to safeguard our legitimate rights and interests. And the Company's intellectual property department is responsible for training on patent layout and infringement risk identification and response and has formed a close protection mechanism with the research institute, production bases, and sales divisions. AHB has established an intellectual property learning system to provide employees with training on patent applications, trademark registration, and patent laws and regulations, to enhance their sensitivity to intellectual property rights and ensure the company's compliant operations. The following is a summary of the intellectual property information of AHB for 2023:

	Newly Received in 2023		Total Number	
	Number of applications	Number of grants	Number of applications	Number of grants
Invention Patents	42	16	230	68
Utility Model Patents	9	11	77	69
Other	21	35	91	73
Total	72	62	398	210

In 2023, the Company successfully passed the re-certification for the GB/T29490-2013 Intellectual Property Management System and was honored with the title of National Intellectual Property Demonstration Enterprise and the Anhui Province Patent Gold Award. These accolades recognize our efforts in intellectual property management and mark the beginning of a new phase in strengthening intellectual patent protection. Looking ahead, we will actively pursue the ISO56005 Innovation Management System Certification, integrating intellectual property management activities throughout the entire innovation process. We will focus on team building, attracting more talent through various channels to inject new vitality into the Company's innovative research and sustainable development.



In order to ensure the legitimate rights and interests of R&D achievements and products, we carried out the following practices during the reporting period:

- Patent Application and Trademark Application**
  - Set KPIs, actively apply for patents, analyze and apply patent information
  - Apply for trademark registration to serve market needs and ensure the effective application of trademarks
- Protection of Technology Route Trademark Application**
  - Focus on planning technology paths during R&D and taking measures to protect intellectual property rights
  - Require relevant personnel to sign a confidentiality agreement
  - Conduct technology searches and FTO analysis to assess the risk and probability of infringement to ensure that subsequent products do not infringe on others' IP rights.
  - Promote relevant analysis before and after the event to reduce IP risks
- Risk Control**
  - Conduct whole-process IP risk planning to avoid potential risks
  - Control risks by purchasing patent hedging, infringement analysis by third-party organizations, or other methods
- Control of Cooperative R&D**
  - Focus on the risk of duplication of R&D in cooperation with institutions and academic professors and work with partners to control risks
  - Check the availability of publicly published articles in the collaborative R&D process to balance the need for intellectual property protection and collaborative research
- Patent Layout**
  - Implement a patent strategy across the entire business chain, covering the entire process from the development of microbial strains to product production

## ○ Technology Innovation

Synthetic biotechnology, involving a cross-cutting field that utilizes biological principles and engineering technologies, is the design and synthetic re-engineering of life through genome sequencing, bioengineering, chemical synthesis, and computer simulation, and is centered on the "artificial designing and writing genomes" to enable cells to produce substances needed by human beings. AHB integrates the full set of metabolic pathways of target compounds into microbial chassis for producing diversified chemical products through designing artificial enzymes, expanding endogenous metabolic pathways and the extension of heterologous expression. In top-level design and development, we have possessed multi-pipeline engineered strain R&D capability, realized industrial strain construction, and have built the technological closed loop from microbial cell factory construction to digital fermentation, and realized technological innovation and even revolutionary changes in many areas.

As a leading synthetic biotechnology enterprise in China, AHB always focuses on innovative research and development, and takes technological innovation as the core to promote the development of the enterprise and the industry. We have set up a national R&D center and two R&D laboratories. In the next three to five years, we will continue to invest a large amount in research and development, including the introduction of advanced and efficient production equipment and energy-saving and environmentally friendly production processes, to stand at the forefront of technological innovation.



## ○ Technological Transformation

### Innovative Synthetic Biotechnology Platform

Innovation is the driving force behind AHB's continuous advancement. The Company keeps pace with cutting-edge technological trends and maintains ongoing development of new technologies, processes, and products, resulting in a series of core technology clusters. Through sustained technological research, AHB successfully overcame the technical bottlenecks of anaerobic fermentation in 2011 and developed a high-yield L-alanine producing strains using a zero-carbon emission anaerobic fermentation method.

### World-leading Enabling Technologies

Due to its cost-effectiveness, energy efficiency, and environmental sustainability, the anaerobic fermentation technology possesses significant advantages in terms of industrialization and large-scale production. The industrialization of L-alanine-producing strains has been a resounding success, making our L-alanine the world's first amino acid product to be commercially produced using anaerobic fermentation technology. Since achieving industrialization in 2012, our anaerobically fermented L-alanine product has garnered widespread recognition in both domestic and international markets, with exports to numerous countries and regions. It has consistently maintained its position as the market leader, capturing the largest market share worldwide for a decade straight.

The success of L-alanine anaerobic fermentation technology provides an important foundation and reference for the development of anaerobic fermentation technology of other bio-based products. On this basis of the existing platform technology of L-alanine production by anaerobic fermentation, AHB plans to expand the range of bio-based products produced by anaerobic fermentation, such as L-valine, in order to enrich the types of bio-based products.

Currently, we have explored the environmental parameters suitable for the metabolism of L-valine fermentation strains and developed a post-extraction process featuring streamlined steps, highly-efficient in removing impurities, and recyclable, which is used in the production of L-valine. We have replicated the industrialized production process of L-alanine in the production of L-valine, and achieved synergistic development among products utilizing our established technological strengths and production experience in intelligent fermentation control, strain creation, and product isolation and purification.

With the support of the latest technology, the research and development cycle for L-valine products has been reduced to approximately six months. As of 2023, our Company's L-valine products have achieved a leading position in the market.

During the development process of  $\beta$ -alanine production technology, our Company overcame the high purification difficulties associated with traditional processes. We innovatively developed a new technological process by using cost-effective and readily available acrylic acid as the starting material and synthetic enzymes as catalysts to produce  $\beta$ -alanine, thereby replacing the existing production techniques. This advancement upgraded and iterated the biomanufacturing process. The technology involves the targeted addition of ammonia to acrylic acid to form  $\beta$ -alanine, enhancing atomic utilization and effectively reducing production costs. The process operates under mild reaction conditions and synthesizes  $\beta$ -alanine in a single step, avoiding environmental pollution from organic solvents and by-product salts. This method boasts high efficiency and conversion rates, significantly shortening the production pathway.

## Customer Service

### ○ Customer Satisfaction and Complaint Handling

AHB conducts an annual customer satisfaction survey, gaining a deeper understanding of their needs, expectations, and satisfaction with the quality of its products and services. These feedbacks are crucial for our continuous improvement, helping us identify issues and seek opportunities for innovation to further enhance customer satisfaction. We regularly review and revise the Management Guidelines for Customer Satisfaction Surveys to ensure that the process and methods of the survey are continuously improved and adapted to changes in the market and customer needs, so as to provide satisfying products and services.

In response to internal quality losses and external customer complaints, we have established the Customer Complaint Management Standard, to clearly define the criteria and process for handling complaints. We have identified the priority of defects by reviewing the list of improvement topics and developed an implementation plan for improvement paths. When the salesman receives a customer complaint, the online complaint process will be automatically initiated, and the Quality Department, together with the main department, will analyze the cause of the complaint, through the analysis of equipment failure, material abnormality, production process control abnormality, environmental abnormality, and personnel operation problems, and then formulate the corresponding solutions and preventive measures for the different causes. The customer's complaint handling cycle is required to be closed for no more than one month. Afterwards, the responsible department shall prepare the Customer Complaint Feedback Report for internal reference and preservation, aiming at preventing similar complaints, improving our products and services, and safeguarding our reputation.

To understand the customer's product application scenarios, AHB updates the customer's goods requirement profile on a monthly basis and uses QC (Quality Control) management practices to analyze process quality data to improve product quality. We will continue to promote research and development on technical issues leveraging the QC pillar, and gain a deeper understanding of customer application scenarios and other needs to guide production process adjustments and quality standard control. With the implementation of the above measures, we continuously optimize our customer service system, improve the quality of its products and services, and are committed to meeting the expectations of customers, ensuring that customer satisfaction is continuously enhanced.

### ○ Responsible Marketing

AHB is committed to ensuring the transparency and quality of information about its products and services. We have established the Product Labeling and Traceability Management Specification, which clearly stipulates the types of product labels, methods of use and management responsibilities. At each stage of production, we clearly record product and service information, including product name, production date, production lot number, quantity, and operator, to enable product quality traceability when necessary.

In addition, we manage the labeling of products and services in detail to ensure that the labeling is clear, consistent and in compliance with relevant regulations and standards. All finished packages are printed with product name and number. The packages are also printed with the precautions to be taken in the use of the product, the seal of inspection, and the halal certification mark. We regularly conduct QA (Quality Assurance) inspections. to discuss non-conformance, identify interim corrective actions and preventive actions, carry out continued rectification and follow-up activities, and track the completion effectiveness of the action.

## Information Security Management

Information security is one of the major challenges faced by AHB, with potential threats including data breaches, cyberattacks, and technical vulnerabilities. These threats may lead to the leakage of sensitive information, system paralysis, and even data theft, causing significant losses to both the Company and customers. To address these challenges, we have implemented a strict information security management system covering more than 20 requirements, covering information classification, intellectual property protection, access control systems, information security risk assessment, protection of trade secrets, compliance with information security laws and regulations, backup of important information, business continuity management, response to information security incidents, access control and monitoring of information systems, and security configuration of network equipment.



We classify corporate information into different levels, including top secret commercial information, confidential commercial information, secret commercial information, and sensitive information, to better protect our security. The tiered management mode helps our information security and technical service teams to develop targeted security strategies based on different protection needs. In addition, all three bases we own have passed the *ISO27001 Information Security Management System Certification*, demonstrating our commitment and determination to protect information security.

In addition to institutional requirements, we raise the level of our employees' awareness of copyright protection and information security through training and education to ensure that they know the basic principles of information security and their application in practice. We have conducted 4 information security related trainings, covering 1420 employees in 27 departments, over the past year.



# 04 Responsible Supply Chain



 Supply Chain Management

 Sustainable Supply Chain

 Digital Intelligence Supply Chain

# Supply Chain Management

Supply chain management is an important link for enterprises to achieve stable operation and sustainable development. AHB has always adhered to the concept of sustainable development, promising to purchase products and services in a responsible manner and always committed to working together with suppliers to achieve sustainable development.

## Management Method

AHB has established a comprehensive supplier management system to identify the environmental and social risks in the supply chain. This system includes contract-based, standardized, and regularized management mechanisms covering product delivery timelines, quality control, and technological confidentiality, fully safeguarding the legal rights and interests of suppliers. AHB formulates and revises documents related to supply chain management, based on standards pertaining to quality, business ethics, environment, and human rights. These efforts strengthen the supplier assessment system and create a well-developed procurement system.

AHB continuously enhances supplier management standards, encouraging suppliers to engage in more responsible purchasing practices. Simultaneously, the Company intensifies supervision and evaluation of suppliers to effectively prevent various procurement risks and promote the long-term healthy development of the supply chain.

AHB has established a complete set of supplier access and evaluation mechanism. We regularly evaluate the performance of suppliers, and set up a rectification and elimination mechanism for the suppliers who do not meet the requirements, allowing suppliers to have the opportunity to grow with us while ensuring that suppliers meet the qualification requirements. The evaluation of performance will be used as an important basis for supplier qualification review and other work to further standardize supplier behavior and achieve closed-loop management of suppliers.



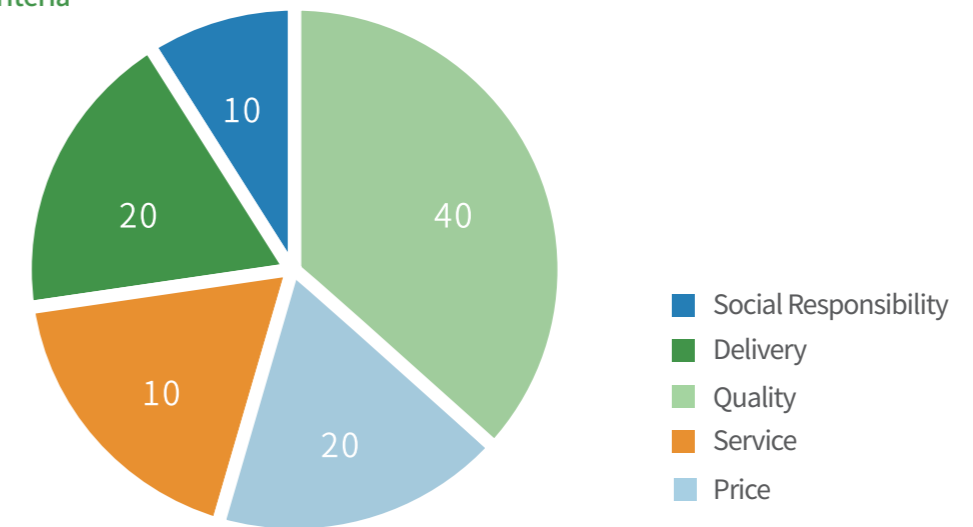
## Supplier Access

The Company has developed guidelines and explanatory documents concerning the selection of suppliers and standards for supplier behavior. New suppliers are managed through system documents such as the Supplier Basic Information Survey, Supplier Due Diligence Questionnaire, and Supplier On-site Audit Checklist. Due diligence is conducted on essential credentials including business licenses, production permits, system certifications, third-party external inspection reports, and REACH registration details. The Company also investigates issues related to business ethics, environmental standards, labor, and human rights as specified in the respective guidelines. This comprehensive approach ensures the thorough assessment of suppliers to confirm their compliance with the Company's procurement requirements.

## Supplier Evaluation

AHB employs a tiered management approach, establishing a specialized supplier review panel that conducts annual evaluations of all A and B category raw material suppliers, as well as other suppliers of key equipment and spare parts, who have cooperated with the Company for over a year. The evaluation criteria include quality, service, and social responsibility, among others. Based on the total score achieved, suppliers are then classified into different grades.

Supplier Scoring Criteria



Grade Classification	Evaluation Result	Total Score	Corresponding Measures based on Evaluation Results
A	Excellent supplier	≥ 90	Regarded as a major supplier, increase the procurement volume
B	Qualified supplier	90 > Total score ≥ 80	As a replenishment or alternative supplier
C	Suppliers Pending Rectification	80 > Total score ≥ 60	Counsel them to complete corrective actions, reduce or suspend procurement
/	Unqualified supplier	< 60	Eliminated, removed from the list of qualified suppliers

Based on the supplier level and material level categorized by the supplier's annual evaluation results, the annual audit frequency of raw material suppliers will be formulated. The Vendor Review Team may jointly evaluate and develop an Annual Vendor Audit Schedule based on the audit frequency table. When there are abnormalities in suppliers, temporary special audits can be conducted after communication and determination by the Supplier Evaluation Team, which can help us respond quickly, adjust procurement strategies and optimize the supply chain structure.

During the reporting period, AHB scored major raw and auxiliary materials suppliers, and the proportion of raw and auxiliary materials suppliers with a total score of over 80 points reached 96%.

## Supplier Capability Development

To oversee the development of supplier capability levels, the Company conducts periodic on-site audits of suppliers, which include assessments of quality, management systems, environment, labor and human rights, and business ethics. These audits address issues related to product quality, safety, and social responsibility.

During the reporting period, we conducted on-site audits of **31** suppliers, including **13** raw material suppliers and **18** equipment spare parts suppliers, covering the most important raw material categories for production such as industrial-grade and food-grade materials.

Upon auditing, no significant risks were identified in areas such as child labor, forced or compulsory labor, freedom of association, environmental pollution, unfair competition, or corruption. Additionally, the Company has identified areas of weakness among suppliers and proposed corrective actions, continuously monitoring the progress of these improvements.

The Company periodically conducts supplier capability development training for A and B category material suppliers, covering aspects in quality, business ethics, environmental practices, labor, and human rights. The Company continuously tracks the subsequent capability development and performance of suppliers. The results from these trainings and ongoing performance assessments are used as reference dimensions in the annual supplier review process.

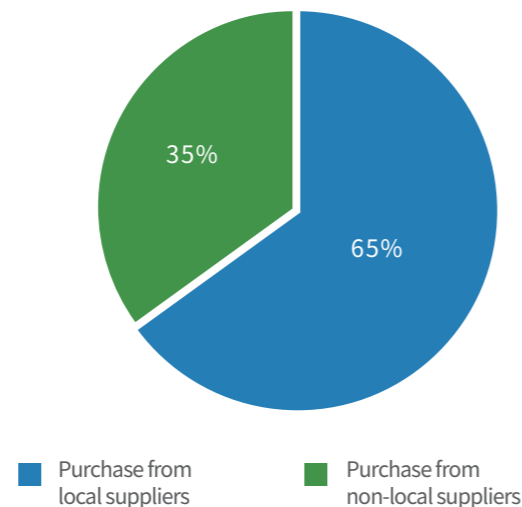
There were **224** suppliers participating in improvement actions or capability development during the reporting period.

## Responsible Purchasing

We believe that by adopting responsible purchasing practices, AHB will create more positive social, environmental, and economic impacts. We select environmentally friendly suppliers and products, adhering to principles that uphold human rights, labor rights, and social equity. We ensure that workers within our supply chain are treated fairly and work in safe environments. We do not engage with suppliers who employ child labor or forced labor.

AHB has established open bidding procedures to ensure the fairness and transparency of the procurement process, and strictly complies with applicable laws and regulations and industry guidelines. We establish honest and cooperative relationships with our suppliers and require them to fulfill their corresponding ethical, legal and environmental responsibilities.

Proportion of Local Purchases



AHB attaches importance to conducting procurement from local production bases. During the reporting period, the total amount of our local procurement amounted to RMB **519.06** million, accounting for **65%** of the total amount of annual procurement. We had a total of **650** suppliers.

## Sustainable Supply Chain

AHB attaches great importance to maintaining the sustainability of supply chain and encourages the suppliers to establish a social responsibility assurance system with high standards to drive continuous improvement of business ethics, environment and labor human rights. To enhance supplier awareness of social responsibilities, the procurement department of the company incorporates obligations related to social responsibilities into the "Purchasing Contract" through contractual terms. Suppliers are required to designate a customer management representative, empowered with the authority to monitor social responsibilities and independent from external organizational interference. This representative is responsible for overseeing the normal operation of social responsibility entities; managing organizations related to social responsibilities, proposing improvement plans for issues, and organizing the implementation; addressing concerns raised by the Company, and responding in writing about the progress and status of improvements as per the Company's requirements.

The Company imposes strict requirements on the raw materials used by suppliers. Suppliers should ensure that the parts and raw materials supplied are in line with the AHB's environmental protection requirements stipulated in the procurement documents; we encourage suppliers to adopt environmentally friendly reusable or recyclable packaging materials as far as possible, and encourage suppliers to carry out REACH registration.

To ensure suppliers actively fulfill their ESG responsibilities, the Company enhanced the process for onboarding new suppliers by adding a Supplier Due Diligence Questionnaire to the existing Supplier Basic Information Survey in 2023, aiming to gather more comprehensive information about the suppliers. Beyond the existing dimensions of operational status, qualifications, intellectual property, and after-sales service, three new dimensions were added: labor and human rights, environmental protection, and business ethics which bring the total to 15 categories covering 80 questions. Also, regarding the questionnaire survey on social responsibility, the procurement center conducts a review through open channels and on-site audit processes, and puts forward rectification suggestions. While evaluating new suppliers more comprehensively, we encourage them to establish a social responsibility assurance system with high requirements, promoting the development of social responsibility capabilities among upstream suppliers.





Requirements related to supplier social responsibility

Labor and Human Rights	
Compliance with laws and regulations of production sites	Prohibition of child labor
Compensation and welfare regulations	Prohibition of harassment or abuse of labor
Working hours regulations	Prohibition of discrimination
Freedom of association and collective negotiating rights	Health and safety
Prohibition of forced labor	

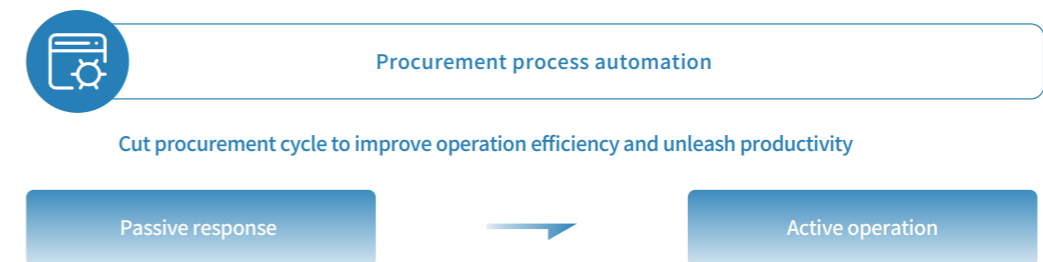
Environmental Protection	Business Ethics
Environmental management requirements	Anti-unfair competition
Energy	Anti-bribery
Water resources and wastewater	Compliance with international trade laws
Air pollution and emissions	Anti-drugs
Greenhouse gas management	Anti-money laundering
Hazardous chemicals management	
Waste management	
Response plans and training for environmental leakage	

On November 8, 2023, the Ministry of Industry and Information Technology of the People's Republic of China announced the list of green manufacturers in 2023. AHB, recognized for the practices and achievements in the field of green biomanufacturing, was successfully named a *National-level Green Supply Chain Management Demonstration Enterprise*, continuing to lead the industry on the way of sustainable development.



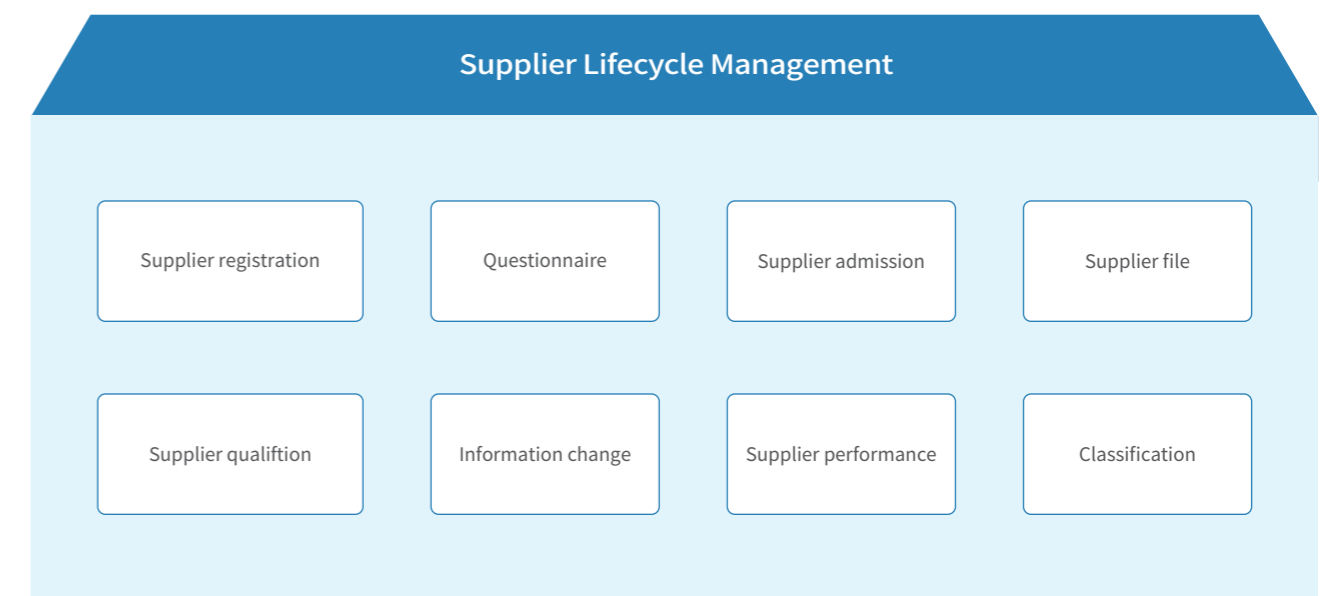
## Digital Intelligence Supply Chain

AHB promotes digital transformation, deeply integrates digital value, and comprehensively empowers supply chain management. We launched SRM (Supplier Relationship Management System) in 2023, leveraging digital technology to provide full empowerment for supply chain management.



Driven by the power of digitalization, AHB is committed to establishing equal, fair, and mutually beneficial cooperation with suppliers. By leveraging the strength of automation and information technology, we managed to build a one-stop procurement platform, standardize the procurement process, cut the procurement cycle, optimize the procurement efficiency, reduce the procurement cost, to comprehensively optimize all the steps of the supply chain management process. In this way, we saved the communication cost when docking with suppliers, and established a digitized, intelligent, and highly efficient supply chain.

## Supply Chain Management System Architecture of AHB



# 05 Responsible Employer



 Employee Rights and Interests

 Talent Cultivation

 Occupational Health and Safety

# Employee Rights and Interests

Talents are the most valuable resources of AHB. We insist on people-oriented, learn from the experience and mechanism of international first-class enterprises, and formulate talent introduction and cultivation mechanism by combining with AHB's own situation. Adhering to principles of equal employment and legal compliance, the Company employs democratic and meticulous management practices to create a fair development platform for employees, truly embodying the ideals of meritocracy and optimal utilization of talent.

## Law-based Employment

AHB enters into labor contracts with its employees in strict accordance with the relevant provisions of the *Labor Law of the People's Republic of China*, implements contractual management covering all employees, resolutely opposes employment discrimination, prohibits child labor, and treats every employee equally. Employment, treatment or promotion of employees shall not be affected by their social status such as ethnicity, race, nationality, gender, religion, age, sexual orientation, political affiliation or marital status. AHB maintains principles of creating positions based on needs and selecting individuals based on positions, ensuring that all internal staff have equal and fair opportunities for rotation and promotion.

Employee Management Policies		
Standard for Entry, Separation and Signing of Labor Contracts	Standard for Recruitment Management	Standard for the Management of Qualification Level Certification
Standard for the Management of Working Hours	Anti-discrimination Policy	Standard for the Management of Remuneration
Provisions against Child Labor	Standard for Layoff Management	Standard for the Management of Female Employees' Rights and Labor Protection

Internal Recruitment

**Internal recommendation system:** We encourage internal staff to actively recommend candidates according to the job recruitment needs, open up recruitment channels. Successful recommenders receive varying rewards based on the recruited individual's position level. Additionally, the Company adopts a "relative avoidance" policy to ensure fairness and impartiality in hiring; recommenders may not participate in the interview process, and department heads must not have a direct managerial relationship with the recommended individuals.

**Social recruitment:** We introduced senior talents through online recruitment websites, job fairs, headhunters and other diversified forms.

**Campus recruitment:** Specialized campus recruitment is carried out from August every year to absorb excellent graduates of all kinds of majors to join the Company, so as to continuously inject new strength for the sustainable development of the Company.

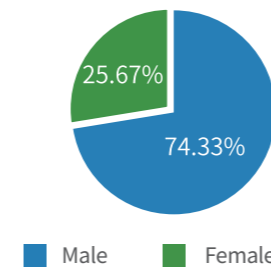
External Recruitment

To improve the quality of recruitment work, AHB has set up "Talent Interviewer", and continues to strengthen the interviewer's professionalism and capacity building, and continuously optimize its human resources activities.

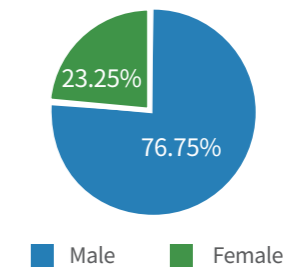
## Diversity in Employee Structure

The Company actively promotes equality and diversity among employees, strongly supporting the personal development and decision-making participation of female staff, firmly eliminating age discrimination, and widely welcoming new talents to genuinely create an equal platform for career development. As of the end of the reporting period, the total number of employees stands at 1,691, with 873 new employees joining within the year.

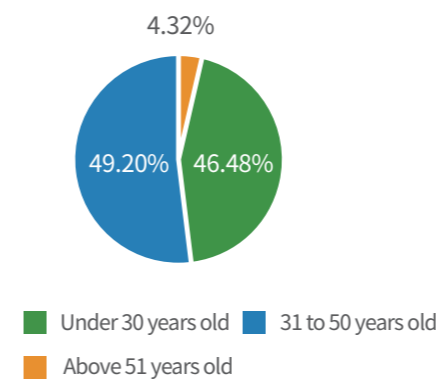
Gender structure of employees



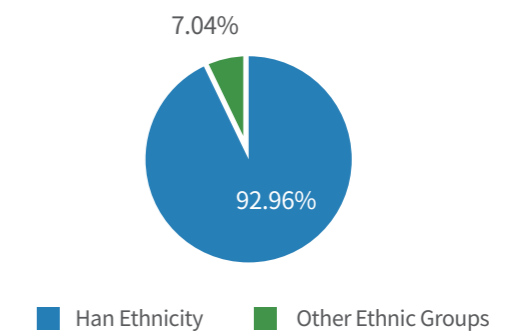
Gender structure of new employees



Age structure of employees



Ethnic composition of employees



We firmly eliminates age discrimination and does not set a threshold of over 30 years old when introducing young talents. At the end of 2023, employees aged 30 and above account for 53.52% of the Company's workforce.

AHB adheres to the principle of "job positions are set up out of work needs, and personnel recruitment is based on job positions" in headquarters and bases, to effectively drive the employment in the region. We strictly abide by the *Anti-discrimination Policy* and the *Standard for the Management of Female Employees' Rights and Labor Protection*, and resolutely eliminate discrimination and injustice for various reasons, fully respect the ethnic customs of the employees, and actively create a working atmosphere of "Diversity, Equality and Inclusion". Up to the end of the reporting period, there are 119 ethnic minority employees among the full-time employees, accounting for 7%, involving 6 ethnic groups, namely, Man, Mongolian, Hui, Buyi, Dong and Tu.

## ○ Rational Employment

AHB is committed to reasonable employment practices, with approvals and records from relevant government departments, implementing standard working hours, comprehensive working hours, and flexible working hours systems to prevent employee fatigue and overload. The office functional personnel are subject to the standard working hours system. Due to production needs, the departments of production, engineering, safety and environmental protection, quality are subject to the comprehensive working hours system, while the marketing department, procurement department and senior management are subject to the irregular working hours system.

### Working Hours Management

#### Standard working hours system

In strict accordance with the *Regulations of the State Council on Working hours of Employees*, employees in our company work 8 hours a day, and 40 hours a week. The working hours of employees can not be extended by any unit or individual without authorization.

#### Comprehensive working hours system

During the period of comprehensive calculation, the total actual working time  $\leq$  total legal standard working time, and the actual working time of a holiday(or week) can exceed 8 hours (or 40 hours). The excess shall be deemed as an extension of working hours, and the overtime remuneration shall be paid in strict accordance with relevant provisions of the *Labor Law of the People's Republic of China*. The average number of hours of extended working hours  $\leq$  36 hours per month.

#### Irregular working hours system

A working hours system that cannot be measured by standard working hours and requires flexible operations is adopted when work time is uncertain. A voluntary overtime system is in place, and compulsory overtime is strictly prohibited, as is any form of punishment or disciplinary action against employees who refuse overtime. If it is necessary to arrange employees to change shifts, we shall ensure that employees have a rest of at least 12 hours before they are arranged to work.

## ○ Compensation and Benefits

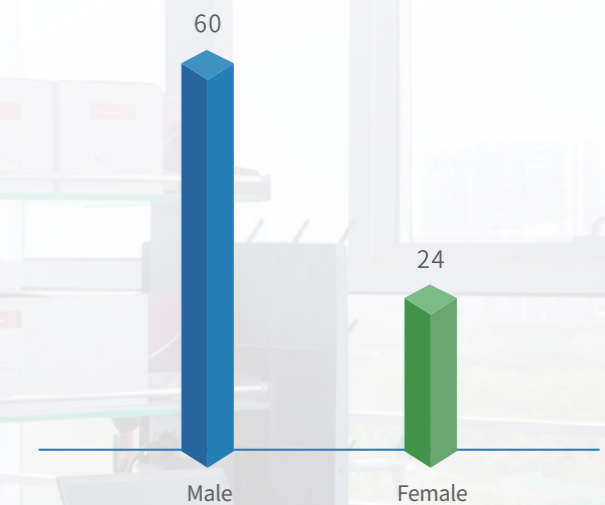
AHB has been committed to creating a platform for fair development for employees, stimulating employees' subjective initiative through competitive compensation and fair performance appraisal. In addition, AHB has built smooth promotion channels for employees. That is to take work performance as the main basis for employees promotion, and select outstanding personnel based on work ability, business capabilities and professionalism, so as to make the best use of talents.

AHB has established a performance appraisal system, set up key appraisal indicators for employees in different departments according to the annual business policies and objectives. It is distributed monthly and annual bonuses to employees according to the appraisal results, which will serve as the basis for employees' promotion and salary adjustment. Performance appraisal is also an effective mechanism for regular communication and joint improvement between the AHB and our employees. At the end of the appraisal cycle, the employee's direct supervisor and superior leader will provide guidance to the employee through performance interviews, and point out the problems and improvement points at work for assisting in employee's improvement. If the employee disagrees with the assessment result of the direct supervisor, employee can appeal to the superior leader of the direct supervisor and the human resources department to ensure accuracy of the performance evaluation result.

In addition to the statutory holidays required by the state, employees are also entitled to paid annual leave, marriage leave, sick leave, family visit leave, funeral leave, parental leave and personal leave. Female employees are entitled to maternity leave and breastfeeding leave according to law. On the basis of maternity leave required by the state, AHB extends the maternity leave for 60 days and provide male employees 30 days of paternity leave.

We have clarified the implementation of parental leave policy in the Employee Handbook, providing male and female employees with the same parental leave benefits. Employees are entitled to ten days of parental leave per year until their children reach the age of six years old to support their balance between work and personal life. This greatly enhances the health of employees and families, productivity and loyalty of employees, as well as the overall performance and reputation of the company. While protecting employee rights, it also enhances employee happiness. During the reporting period, a total of 251 employees were entitled to parental leave, with a total of 84 taking parental leave, accounting for 33%, of which 60 were male (all returned to work) and 24 were female (22 returned to work), with a reinstatement rate of 97.62%.

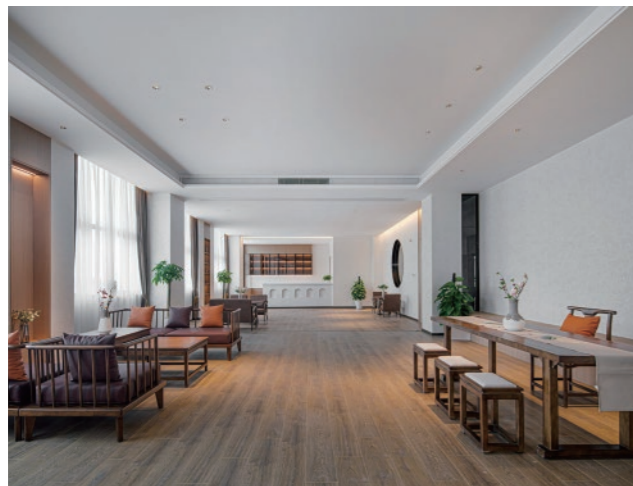
Number of Employees on Parental Leave



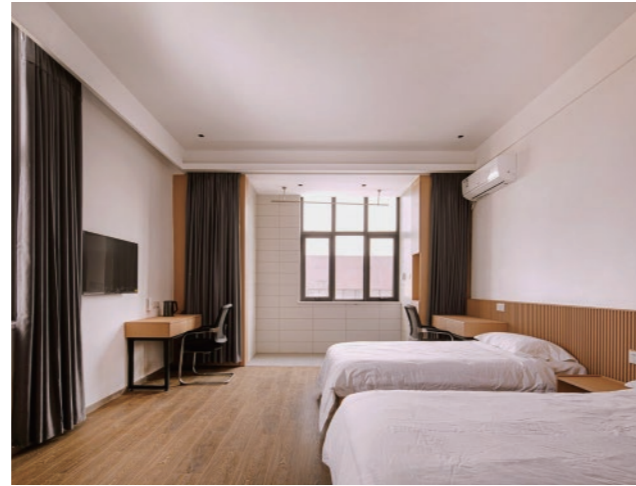
AHB applies for social security and housing provident fund for employees in accordance with national regulations, and provides employees with various benefits such as free working meals, health examination, accommodation, holiday and birthday benefits, high-temperature subsidies, afternoon tea, etc. AHB is equipped with gyms and rest areas to facilitate employees to relax after work.



Gym



Rest Area



Staff Dormitory

In 2023, AHB provided gifts, condolences and diversified activities to employees on holidays, making them feel the warmth of the AHB family. For example, on the occasion of Women's Day, exclusive gifts were well prepared for female employees and various activities were carried out. During the Teacher's Day, we prepared a thanksgiving gift for outstanding teachers in the Company, and held a thank-you ceremony to express respect and gratitude to teachers. During the Mid-Autumn Festival, we presented gifts to hardworking employees.

## ○ Labor Practice and Human Rights

In strict accordance with relevant provisions of the *Labor Law of the People's Republic of China*, AHB has formulated internal management policies such as the Recruitment Management Specifications, the Salary Management Specifications, the Entry, Resignation and Labor Contract Signing Specifications, the Working Hours Management Specifications, the Training Management Specifications, the Female Employee Rights and Labor Protection Management Specifications, the Qualification Level Certification Management Specifications, the Layoff Management Specifications, the Anti-discrimination Policy and the Regulations on Prohibiting Child Labor, all of which have been strictly followed by AHB to fully protect legitimate rights and interests of employees.

We eliminate all acts of forced labor, and strictly prohibit the payment of deposit or pledge of ID card when employees are employed. At the same time, discrimination to ethnicity, social class, language, religious belief, physical disability, gender, sexual orientation, trade union membership, political affiliation or age is strictly prohibited in matters related to employment, salary, training opportunities, promotion, dismissal or retirement. All employees who join AHB, we sign labor contracts in accordance with the law and pay for social security.



Key Performance

In 2023, the rate of labor contract signing is **100%** and the coverage rate for the payment of social insurance is **100%**

AHB's security services are provided by a third party, and the proportion of security personnel who have received formal training in terms of human rights policies, specific procedures and security applications has reached 100%.

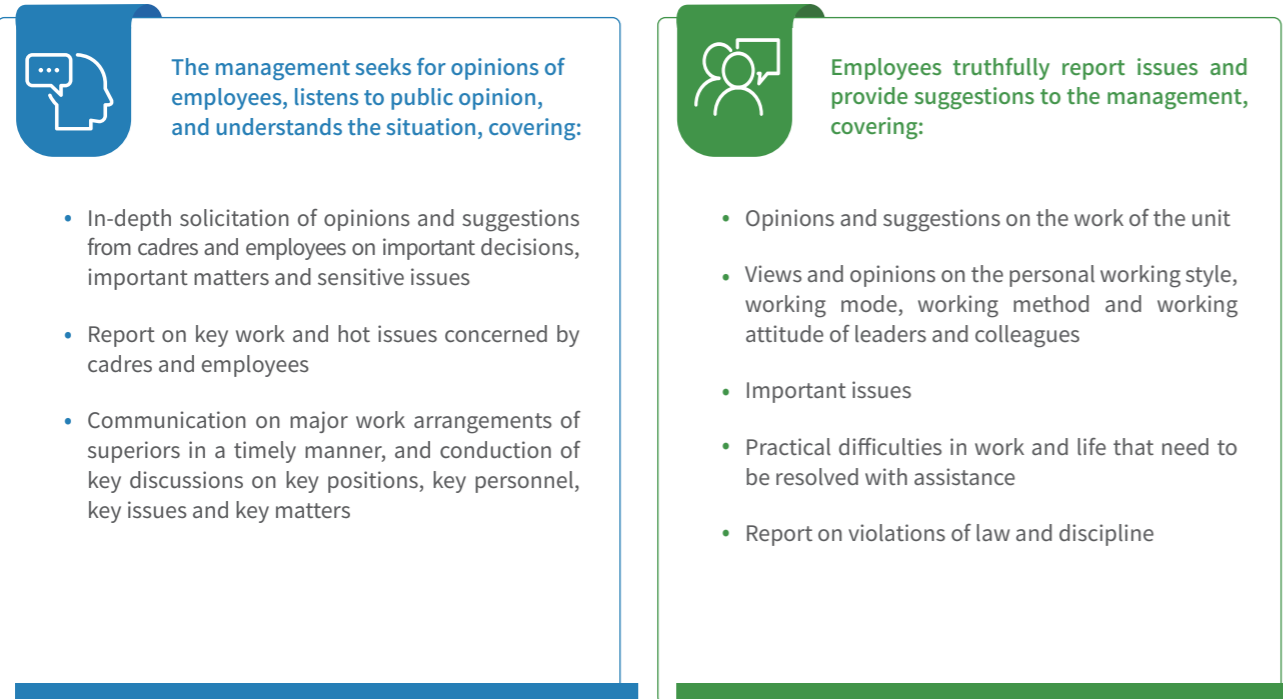
AHB respects the human rights of all employees and other stakeholders, and does not condone any form of discrimination, harassment or retaliation in the workplace. In response to the potential human rights impact in business operations, we have added a survey to labor and human rights to the Supplier Due Diligence Checklist to avoid significant risks in our supply chain. During the reporting period, we did not find any operating sites and suppliers with significant risks of forced or compulsory labor incidents.

## ○ Democratic Management

To assist in refining the Company's rules and ensuring the legal and fair protection of employee rights, the Company has established a labor union. Serving as a bridge between the employees and the management, the union facilitates the Company's understanding of employee needs and aids in the formulation of more reasonable human resources policies.

AHB has established union committees. In accordance with the "Regulations on the Election of Grassroots Organizations of AHB Union," the appointment of union committee members and the union chairman has been made. The Company has developed the "Enterprise Collective Negotiation System of AHB," "Democratic Management System of AHB," and "Dialogue Mechanism for Employee Representatives and Collective Negotiations," aiming to uphold democracy and respect public opinion, fully promoting democracy and respecting public opinion, solving practical problems and reasonable needs of employees through active communication and dialogue, and promoting harmonious development of the enterprise.

### Two-way Communication Mechanism for Democratic Dialogue



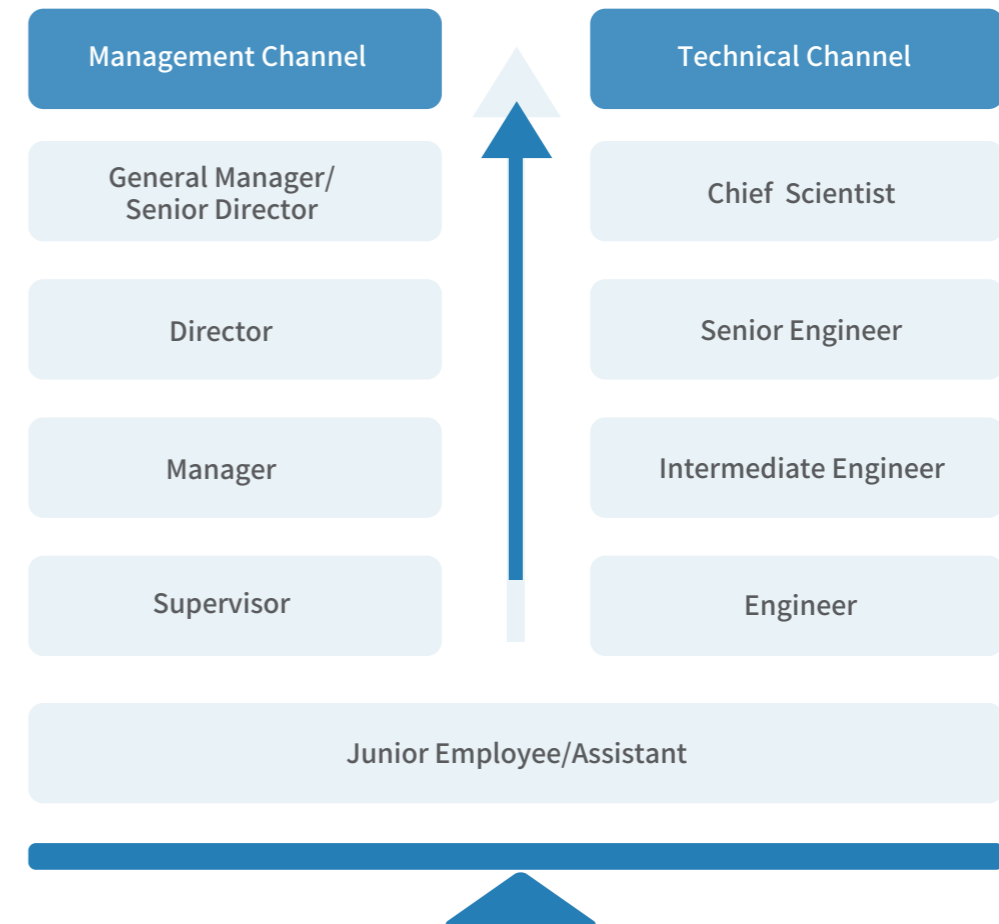
### Mechanism for Handling Employee Complaints and Comments



## Talent Cultivation

Employee's growth is the fundamental driving force to push the enterprise forward. AHB always focuses on talent cultivation. It has put forward five-year development plan, implemented "4221" talent strategy, established dual-channel talent development path and qualification system to meet our development needs for human resources, and also built a ladder of growth for employees.

### Dual-channel Talent Development Path



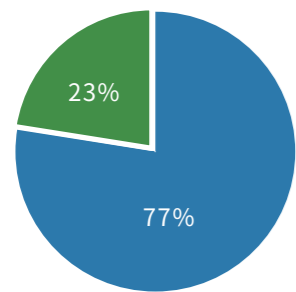
## Employee Training

The Company actively constructs a training management system, broadening development pathways and formulating a Training Management Standard. We improve the skills and professional knowledge level of employees through internal and external training to optimize the employee growth and development system, and continuously empower our talent resource reserve.

In 2023, AHB provided training to a total of 1,423 employees, with the proportion of trained employees reaching 76%<sup>3</sup>, and the total number of hours of training reaching 70,425 hours, with the average hours of training per year per employee reaching 49.5 hours.

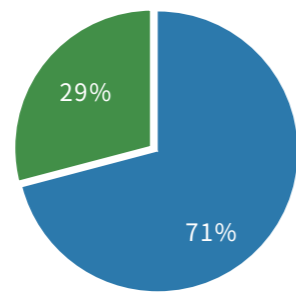
### By gender:

Total training hours of employees



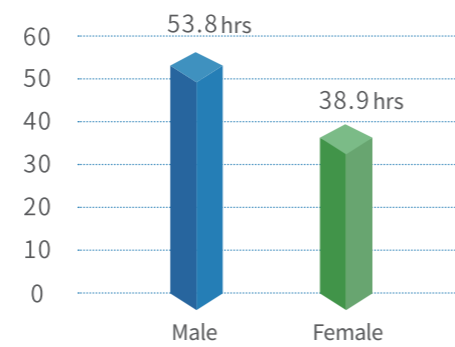
Male Female

Total number of trained employees



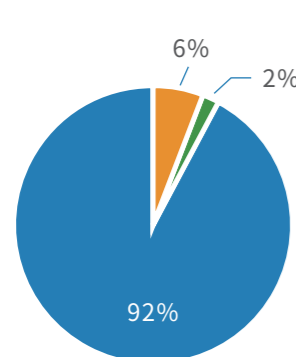
Male Female

Per capita training hours



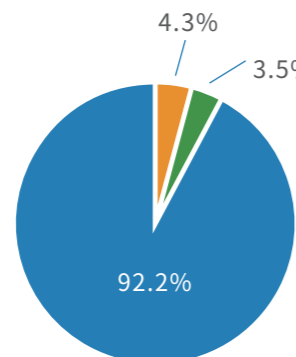
### By position:

Total training hours of employees



Management Team  
Middle and Senior Professionals  
Junior Professionals

Total number of trained employees



Management Team  
Middle and Senior Professionals  
Junior Professionals

Per capita training hours

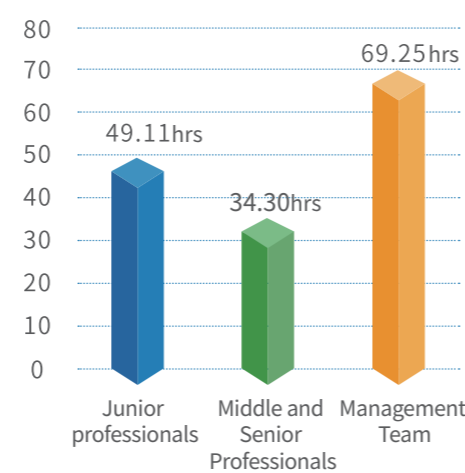
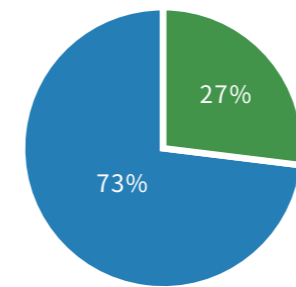


Figure: Team Leader Training at Bayannur Base

### Performance and Career Development Appraisal

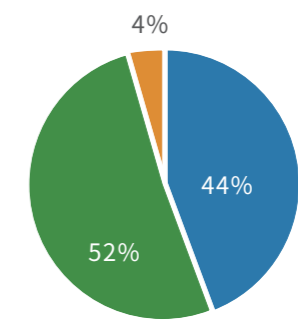
The Company conducts regular assessments of employee performance and career development to motivate employees to realize their potential, enhance work efficiency and quality, and promote teamwork and overall efficiency. Additionally, these assessments offer employees improved training and development opportunities. During the reporting period, a total of 1,595 people received performance and career development appraisals, with specific data as follows:

By gender



Male Female

By age



Under 30 years old  
31 to 50 years old  
Above 51 years old



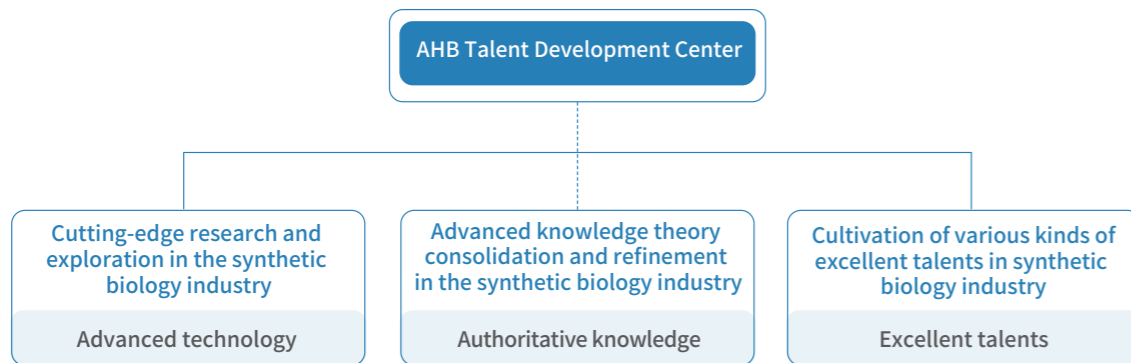
Annual training expenditure: RMB **1,108,720**  
Number of people trained: **1,423** persons

Average hours of training per year per employee: **49.5** hrs  
Number of people receiving regular performance and career development appraisals: **1,595** persons

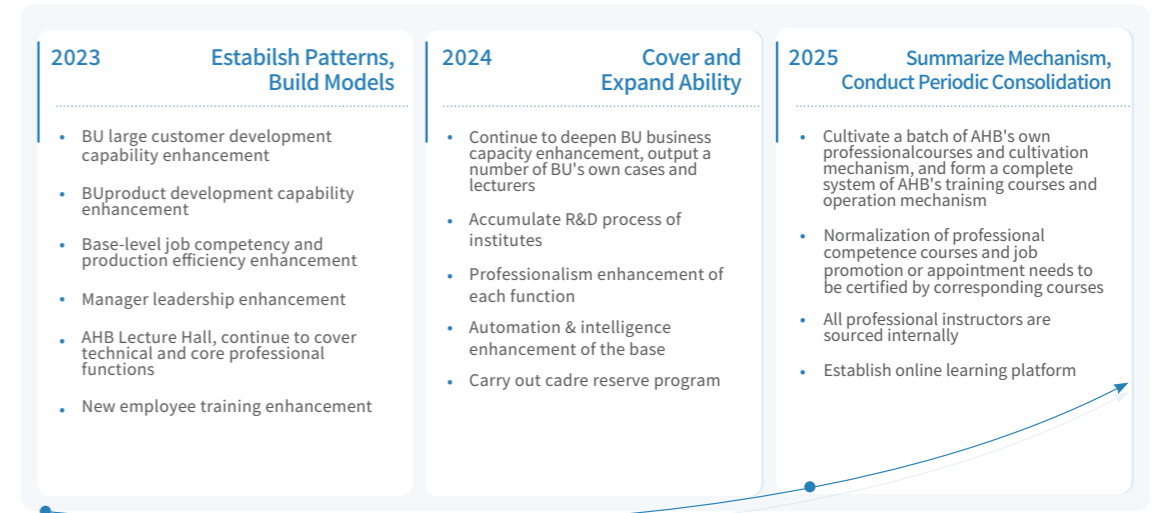
<sup>3</sup>The equation for calculating the training ratio is "total number of people trained during the reporting period / total number of employees at the end of the reporting period."

**Case | Build AHB talent development center and create talent cultivation channel**

AHB always cares the growth and development of employees, and aims at building world leading technology and talent advantages. Focusing on internal professional improvement, we has established AHB Talent Development Center which is a research and learning integrated college institution to explore the most advanced technology, learn and grow the most authoritative knowledge, and cultivate the most outstanding talents through case teaching and theoretical practice education. AHB Talent Development Center cultivates business talent, production talent, professional talent and management talent, and builds innovative talent training base with high standard, internationalization, AI technology and specialization as the base.

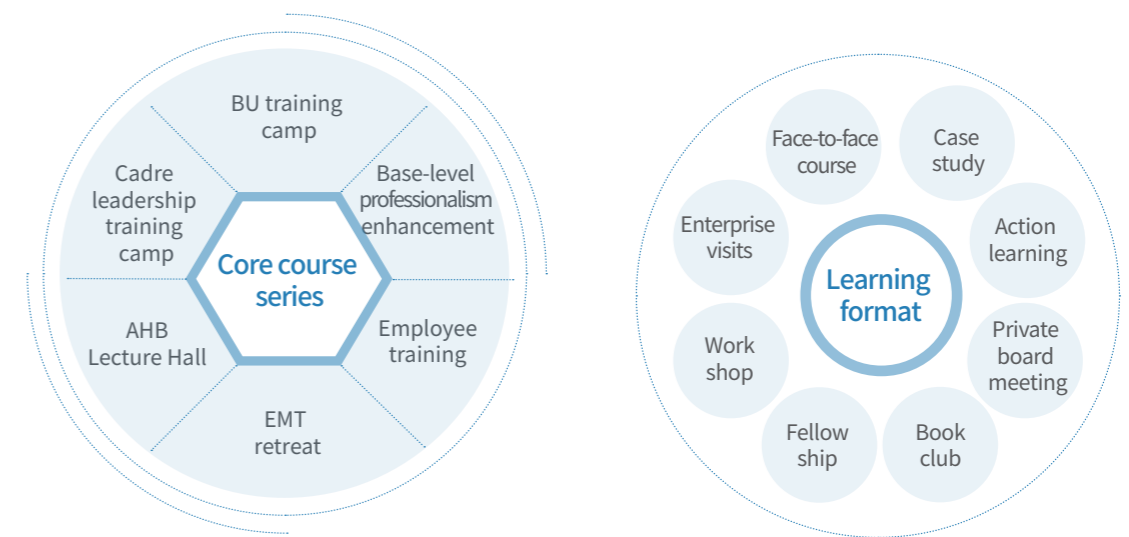
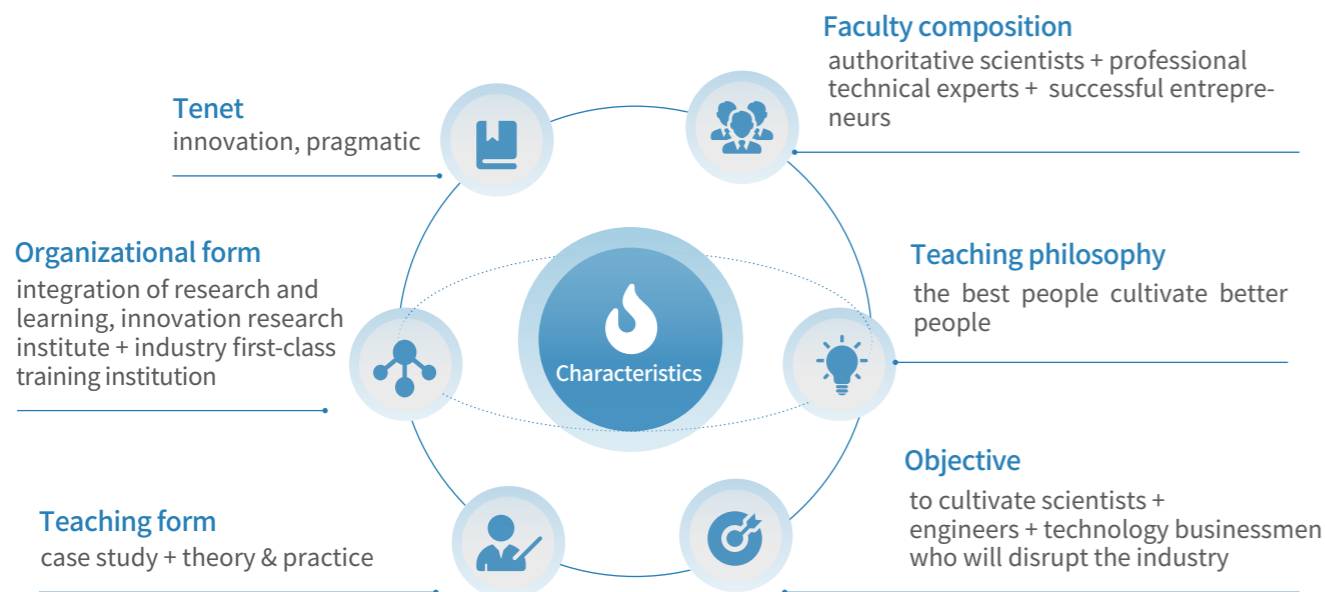


**Phase I Development Plan**



During the reporting period, AHB Talent Development Center launched six training courses and special training camps, and organized 10 lectures of AHB Lecture Hall, with a total of 1,010 employees participating in the courses, and the passing rate of course assessment was 100%.

**Characteristics**







Case | Stellar Program, cultivating new employees

To meet the employment demand of our medium and long-term strategic objectives and build the talent ladder and high-quality team, AHB makes great efforts to create the "Stellar Program", which combines the knowledge theory with the practice of activities. A series of trainings and cultivations will help the new college students to establish the sense of belonging and improve their professional quality, so that they can transform their roles from students to employees as soon as possible, and integrate into the workplace and AHB. By the end of the reporting period, **81** college students have participated in "Stellar Program".



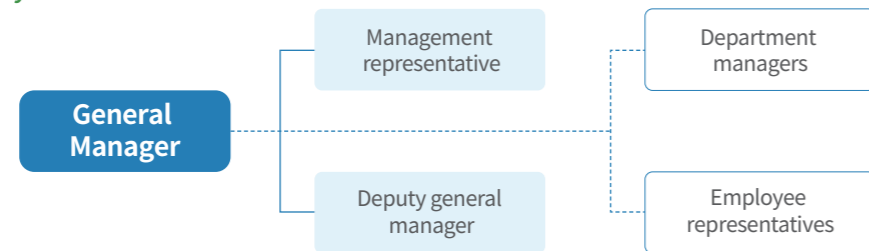
Overall planning



# Occupational Health and Safety

AHB has been always making every effort to ensure the physical and mental health, as well as the safety of life and property of all employees. We have specially established the Health and Safety Committee with the participation of elected employee representatives, which is to coordinate and communicate occupational health and safety matters, ensuring effective operation of the occupational health and safety management system.

## Health and Safety Committee of AHB



The main responsibilities of the Health and Safety Committee include participation in the prevention of work-related accidents, identification of various health and safety issues, collection of employees' opinions, submission of corresponding improvement suggestions, implementation of relevant measures to solve problems, and promotion of the labor and capital dialogue.

AHB's Changfeng, Bayannur and Qinhuangdao production bases have passed the ISO 45001 certification of the occupational health and safety management system.

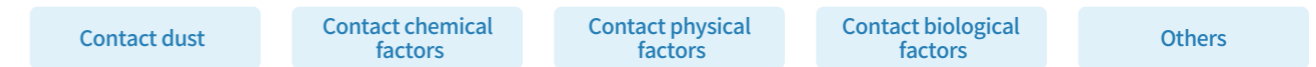
## Employee Health Management

AHB attaches great importance to the physical and mental health of its employees, and has set up the Safety and Environment Department as the management department of employees' occupational health, which is responsible for formulating the system of employees' occupational health and establishing the standards of labor protection supplies, organizing regular occupational physical examinations for employees. Moreover, the department also handles health and safety issues encountered by employees in their work, such as physiological and psychological problems caused by hazardous equipment, work methods, and harmful substances. It effectively controls occupational health and safety risks related to production and operation, and continuously improves occupational health and safety performance. The department will regularly provide training on hazard identification, notification, equipment safety operation procedures to avoid occupational health hazards for employees to provide regular training on the identification and notification of hazardous sources, equipment safety operation procedures, and other measures to avoid the existence of occupational health hazards among employees.

## Health Examination and Psychological Guidance

AHB fully considers the occupational disease hazards in the production and operation process, provides occupational health examinations before and during the employment for the employees who will be exposed to registered dust, high temperature, noise, coal dust, welding dust, power frequency electric field, hydrogen sulfide methanol, ammonia, arsenic, phosphorus and its inorganic compounds, lead and its inorganic compounds, manganese and its inorganic compounds, ultraviolet rays, acetic anhydride acid mist, nitrogen oxides, hydroquinone and other dusts, chemical factors, physical factors, biological factors and others factors (such as special operations), and provides free physical examinations for employees who have been on board for six months.

## Occupational health examination categories




AHB has also built a channel for employees psychological health guidance, and organized mental health training such as "Caring for Women's Mental Health" to help employees relieve psychological pressure.

## Safety Management

AHB strictly abides by the *Law of the People's Republic of China on Work Safety and other laws and regulations* to carefully manages safety issues. On this basis, we have formulated the Fire Safety Management System, the Chemical Management Specifications and other specifications to ensure fire safety and chemical safety management, and conducted fire drills and training.


AHB strictly implements the responsibility system during production and operation, regularly inspects to guarantee perfect and effective safety facilities and equipments, operates in accordance with the rules, and strengthens employee training and drills to mitigate the risk of accidents.



During the reporting period, we invested a total of RMB **3.54** million, which was used for safety training, purchase of additional safety facilities and employee protective equipment.

## Safety Inspection and Accident Handling

AHB has always insisted on safe production and elimination of work-related accidents, and has established a safety production accident management mechanism, including safety awareness training, safety warning reminder and measure optimization, safety emergency response, accident responsibility management and punishment, and regularly conducts safety inspections. In the reporting period, we held 31 safety meetings and carried out 18 comprehensive safety inspections. Through timely rectification of safety hazards found during safety inspections, the completion rate of rectification of safety hazards reached 100%, preventing safety hazards from occurring in a timely manner.



During the reporting period, the total number of deaths due to work-related injuries was **0**, the accident rate of lost man-hours of the directly-affiliated labor force was **1.48%**, and the rate of serious accidents of lost man-hours of the directly-affiliated labor force was **0%**.

## ○ Safety and Occupational Health Training

AHB has formulated the 2023 EHS Training and Education Implementation Plan. All bases hold regular meetings on production safety and carry out safety training on major hazard sources. During the reporting period, Qinhuangdao Base entrusted Hebei Qin'an Safety Technology Co., Ltd. to provide online occupational health training for three categories of people, including main leaders, occupational health managers, and the personnel with occupational hazard. In the reporting period, the total number of safety training sessions amounted to 137, with a cumulative total of 17,096 hours of training and 15 hours of safety training per capital.

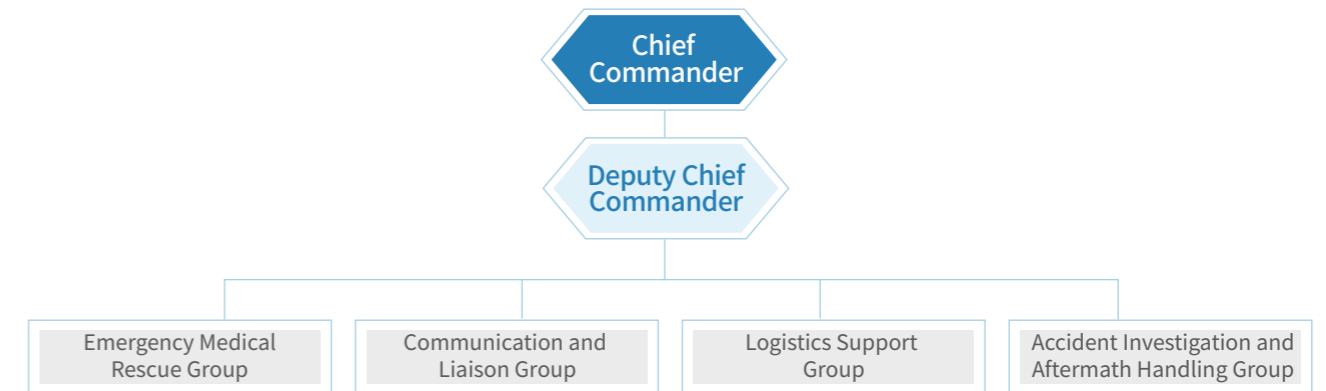
### Safety Risk Evaluation

AHB has conducted a comprehensive identification of potential hazardous factors in the process of production and operation through accident risk assessment, and used the risk matrix evaluation method to evaluate the consequences of possible accident types and determine the risk level.

## ○ Emergency Safety Management

AHB has developed an Emergency Plan for Production Safety Accidents, which sets clear requirements and regulations for handling safety accidents caused by extreme weather and other factors. The aim is to improve the company's ability to quickly respond to production safety accidents, take effective measures before, during, and after accidents, control the occurrence and development of emergencies, and minimize the harm of accidents to personnel, environment, and property as much as possible.

### Emergency organization system



AHB set up an Emergency Rescue Command, which consists of four groups, namely, Emergency Medical Rescue Group, Communication and Liaison Group, Logistics Support Group, and Accident Investigation and Aftermath Handling Group. The Command is composed of Chief Commander and Deputy Chief Commander, and all employees of the Company are members of the rescue organization.



# 06 Social Contribution



 Industry Co-development

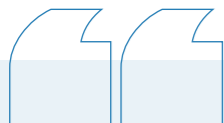
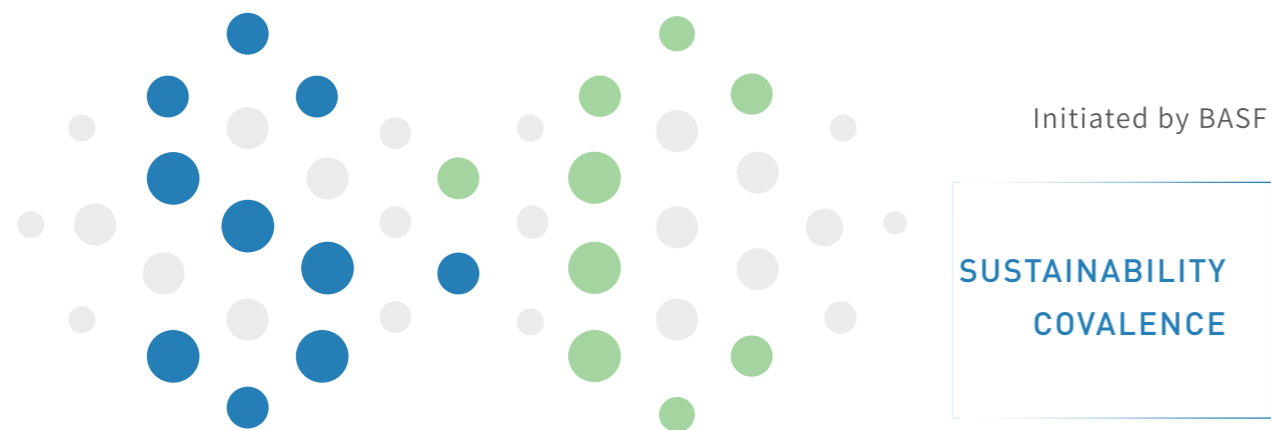
 Public Welfare and Charity

# Industry Co-development

AHB is committed to promoting industry communication and cooperation, realizing technology, facilitating the sharing of technology, resources, and knowledge, building a healthy industry ecosystem with global partners, advancing scientific research and biotechnology, and injecting new vitality into the industry's sustainable development.

## Sustainability Covalence

Initiated by BASF, AHB and other upstream and downstream partners of the value chain jointly create "Sustainability Covalence". The alliance aims to gather industrial chain partners, relying on chemical innovation and global best practices, to jointly promote the low-carbon development of key industries, focus on energy conservation, emission reduction, climate change mitigation, and the promotion of a circular economy, thereby making positive contributions to the national implementation of the sustainable development strategy.



Under the common vision of promoting China's sustainable development, as a long-term strategic partner of BASF and an important founding member enterprise of the alliance, AHB is looking forward to joining hands with the partners of the Sustainability Covalence, and jointly exploring the new momentum of green growth in the synthetic biology industry.

— Chairwoman of AHB  
Henghua Guo



# Academic Seminar



## Case | AHB held the first Master and Doctoral Innovation Workshop

To further promote the integration of production and education and to achieve the resource sharing between academic institutions and the corporate sector, AHB held the first "Huaheng Master and Doctoral Innovation Workshop" in 2023, and more than 30 excellent master and doctoral students from Zhejiang University of Technology, Tianjin Institute of Industrial Biotechnology, Chinese Academy of Sciences and Hefei University of Technology participated in the study.



Huaheng Master and Doctoral Innovation Workshop is designed to cultivate innovative talents with international perspectives and leading-edge technologies, contributing to technological innovation and industrial upgrading. AHB is committed to bringing together its own mature industrialization experience and rich theoretical knowledge of universities, discussing the trending and frontier problems in the field of synthetic biotechnology with universities, and promoting the mutual integration of academic research and practical application. The session of the Huaheng Masters and Doctoral Innovation Workshop is themed "University-Enterprise Cooperation, Shaping the Future Together." It includes various educational segments such as offline lectures, specialized seminars on biomanufacturing, and practical sessions at production bases. These activities provide participants with a comprehensive and in-depth understanding of the development and prospects of the biotechnology industry, enabling students to fully appreciate the multi-dimensional allure of the green biotechnology field.

# Exchange of Scientific and Technological Achievements



## Case | AHB attended China Science and Technology Achievement for Cosmetics Exchange Conference

On March 8-9, 2023, Guangdong Cosmetics Association grandly held "China Science and Technology Achievement for Cosmetics Business Conference" in Guangzhou, China. Under the theme of "scientific and technological innovation, shaping the new momentum of development", this business conference dedicated a feast for the industry to exchange innovative achievements on "new trends, new breakthroughs in raw materials, new technology in formulations, new breakthroughs in brands"; and issued the industry's much-anticipated "Innovation Achievement Award". Among these, AHB won the Innovation Achievement Award by virtue of the unique advantages of synthetic biology-driven cosmetic raw materials such as green manufacturing, low-carbon emission reduction, and brought the latest trend report of "synthetic biology + pure beauty".

In this exchange conference, AHB invited the strategic partner Prof. Qipeng Yuan, Beijing University of Chemical Technology and Changjiang Scholar, Distinguished Professor of the Ministry of Education, to share the achievements of both parties in using synthetic biology to create "new energy" for future cosmetics.



## ○ Technical Competition



### Case | AHB supports the China Innovation Challenge — Sponsoring the Biomanufacturing Technology segment of the competition

On July 18, 2023, the 8th China Innovation Challenge focusing on Biomanufacturing Technology was officially launched. The event was hosted by the Ministry of Science and Technology's Torch Center and the Tianjin Municipal Science and Technology Bureau, and was organized by the National Center for Synthetic Biology Technology Innovation. Henghua Guo, Chairwoman and President of AHB, launched the competition as a representative of enterprises. The competition invited domestic and foreign senior academicians and experts, enterprise backbone and market elites to research and demonstrate the "theoretical threshold" and "production threshold" of all kinds of bio-manufacturing products in the country.

We encourage talented, capable, and bold individuals to step forward and take the lead, as the winning proposal will receive millions of RMB in research and development funds, as well as ten millions RMB in investment and financing. As the primary sponsor of this competition, AHB actively participates in and supports the event, facilitating the rapid and efficient transition of the latest advancements in synthetic biology into industrial applications.

## ○ Exhibition Communication



### Case | AHB appeared in PChi2023 — Driving the sustainable development of personal care industry

On February 15, 2023, at PChi2023, the first annual technology event of China's cosmetic raw materials industry, AHB officially launched a new bio-based 1,3-propanediol, a diol with multifunctional applications such as preservative, moisturizer and solubilizer, which is in line with the emerging concept of "CLEAN BEAUTY". AHB has developed and applied a fermentation process centered around microbial cell factories. Using glucose as a raw material and employing an efficient metabolic pathway, the one-step fermentation process produces 100% bio-based 1,3-propanediol. This bio-based compound exhibits excellent skin compatibility, safety, and non-irritating properties. It offers advantages such as high stability, safety, and environmental friendliness.



### Case | AHB appeared in FIC 2023 — Start a new way of healthy acid eating

FIC 2023 was held on March 15-17, 2023 at National Exhibition and Convention Center (Shanghai). As an international authoritative professional exhibition of food additives and ingredients, FIC 2023 gathered more than 1,500 famous enterprises from home and abroad, and focused on showing the cutting-edge innovation trends and directions of food additives and ingredients industry. With the theme of "starting a new way of healthy acid eating", AHB brought new bio-based L-malic acid products to this exhibition, comprehensively presenting the multi-faceted application of nutritional solutions in the field of food and health with the background of synthetic biology technology.

Through this exhibition, AHB also strengthened the in-depth interaction and communication with domestic and foreign industry partners, and injected new vitality for promoting the innovation and upgrading of food industry.



### Case | AHB appeared in China Feed Industry Exhibition — Building a new ecology of animal nutrition with global partners

On March 29-31, 2023, China Feed Industry Exhibition was grandly opened in Nanjing International Expo Center, which demonstrated the new achievements of China feed industry in sci-tech innovation and industrial development. Responding to the theme of "Focusing on High Quality, Setting Sail for a New Journey", AHB appeared at the exhibition with sustainable amino acid and vitamin series products and solutions, focusing on the precise nutritional solutions centered on biobased L-valine, which can help customers to improve the production performance of animals and expand the breeding output.



## Public Welfare and Charity

AHB consistently considers social welfare as an integral part of its corporate culture. While ensuring the business development and continuously creating economic value, the Company remains committed to aligning social responsibility with the development goals. AHB proactively establishes mutually supportive and trustworthy relationships with the local communities, actively fulfilling the corporate social responsibilities. By engaging in and supporting various public charity activities and projects, we actively contributes to local public welfare undertakings, giving back to society with practical actions, promoting the sustainable development of the region, and achieving mutual benefit and win-win results.

### ○ Philanthropy

AHB has always attached great importance to the fulfillment of community responsibility, earnestly practicing the corporate mission of "advancing biotechnology to serve life and health," devoting itself to philanthropy, caring for and protecting vulnerable groups within society, and actively contributing to the community. During the reporting period, our total public welfare and charitable donations amounted to RMB 2,588,500, totaling 120 hours of community service.



#### Case | "Help the Disabled and the Needy, Bear in Mind the Mission" — Paying Condolences to Disabled Families

On May 20, 2023, one day before the National Disabled Person's Day, Anhui Yangguang Service Center for the Disabled, Hefei CPPCC Commissioners' Workshop of Helping the Weak and the Disabled, Special Education Commissioners' Workshop and various institutions, together with the Party branch of AHB, organized an activity of helping the disabled and the needy, and paid condolences to some impoverished families with severe disabilities. AHB distributed condolence goods to impoverished families, benefiting six poor families in total.



#### Case | "Party-led Care: Bringing Comfort to Underprivileged Families on Dragon Boat Festival" — Sympathy for Families in Difficulties

On June 18, 2023, AHB joined hands with Hefei Association of Persons with Physical Disability, Anhui Yangguang Service Center for the Disabled, Hefei CPPCC Special Education Commissioners' Workshop, and the CPPCC Hefei Committee for the Assistance of the Weak and Disabled, to carry out a charity event aimed at aiding the disabled and alleviating hardship. During the event, 40 families with disabled members were provided with Dragon Boat Festival gifts, including Zongzi. This activity was a gesture of love and care towards individuals with disabilities, offering these families a sense of societal support and warmth.



#### Case | "Gathering Love for Dragon Boat Festival, Walking Towards Light" — Condolences to Parents Who Have Lost Their Only Child

On June 19, 2023, AHB and Hefei Weimin Social Work Service Center Hand in Hand Project Group, together with Beijing Shangshan Public Welfare Foundation, China Volunteer Public Welfare Project Department, Hefei CPPCC Special Education Commissioners' Workshop, and the CPPCC Hefei Committee for the Assistance of the Weak and Disabled, held a public welfare activity together, and carried out a Dragon Boat Festival gathering 80 lost parents who had lost their only child, and providing services and spiritual comfort to those families. We have carried out the Dragon Boat Festival dinner activity for this group for five consecutive years.

### ○ Community Building

AHB is well aware that the development of enterprises benefits from local economic development. The Company places great importance on community development, creating more job opportunities for local residents, and promoting sustainable development through green and low-carbon operations to help achieve collaborative carbon reduction at the local level. We actively fulfill corporate social responsibility, and regularly hold free lectures on safety, health first aid knowledge and special lectures on synthetic biology for the public and school students, giving back to the society with a sense of responsibility and making contributions to the good well-being of the local community.

### ○ Village-enterprise Partnership

AHB has been striving for integrating into the great cause of promoting the prosperity of the people and building a happy enterprise with a sense of social responsibility. The Report of the 20th CPC National Congress has made further arrangements and deployments for "all-round promotion of rural revitalization" and proposed to "give priority to the development of agriculture and rural areas" and "accelerate the construction of an agricultural power". To actively respond to the national rural revitalization strategy, AHB relies on its strong scientific and technological strength with the background of the frontier technology of synthetic biology to promote the comprehensive upgrading of local rural agriculture and farmers, making contributions to the overall promotion of rural revitalization in China.

## Appendix I Laws and Regulations

Aspects	Applicable Laws
Governance -related	<i>Civil Code of the People's Republic of China</i>
	<i>Company Law of the People's Republic of China</i>
	<i>Securities Law of the People's Republic of China</i>
	<i>Accounting Law of the People's Republic of China</i>
	<i>Criminal Law of the People's Republic of China</i>
	<i>Anti-monopoly Law of the People's Republic of China</i>
	<i>Anti-Unfair Competition Law of the People's Republic of China</i>
	<i>Law of the People's Republic of China on the Preservation of State Secrets</i>
	<i>Basic Standards for Internal Control of Enterprises</i>
Environmental -related	<i>Law of the People's Republic of China on the Promotion of Cleaner Production Environmental Protection</i>
	<i>Protection Law of the People's Republic of China</i>
	<i>Law of the People's Republic of China on Environmental Impact Assessment</i>
	<i>Law of the People's Republic of China on Prevention and Control of Water Pollution</i>
	<i>Law of the People's Republic of China on Prevention and Control of Atmospheric Pollution</i>
	<i>Law of the People's Republic of China on Prevention and Control of Environmental Pollution by Solid Waste</i>
	<i>Law of the People's Republic of China on Prevention and Control of Soil Pollution</i>
	<i>Law of the People's Republic of China on Prevention and Control of Noise Pollution</i>
	<i>Regulations on the Safety Administration of Dangerous Chemicals of the People's Republic of China</i>
	<i>Law of the People's Republic of China on Energy Conservation</i>
	<i>Biosecurity Law of the People's Republic of China</i>

Aspects	Applicable Laws
Social -related	<i>Production Safety Law of the People's Republic of China</i>
	<i>Emergency Response Law of the People's Republic of China</i>
	<i>Cybersecurity Law of the People's Republic of China</i>
	<i>Data Security Law of the People's Republic of China</i>
	<i>Copyright Law of the People's Republic of China</i>
	<i>Advertising Law of the People's Republic of China</i>
	<i>Fire Protection Law of the People's Republic of China</i>
	<i>Law of the People's Republic of China on Tenders and Bids</i>
	<i>Labor Law of the People's Republic of China</i>
	<i>Labor Contract Law of the People's Republic of China</i>
	<i>Employment Promotion Law of the People's Republic of China</i>
	<i>Social Insurance Law of the People's Republic of China</i>
	<i>Special Provisions on Labor Protection of Female Employees</i>
	<i>Law of the People's Republic of China on the Protection of Minors</i>
	<i>Law of the People's Republic of China on Prevention and Control of Occupational Diseases</i>
	<i>Law of the People's Republic of China on Donations for Public Welfare</i>
	<i>American Foreign Corrupt Practices Act (FCPA)</i>
	<i>American Federal Trade Commission Act</i>
	<i>American Data Protection Act</i>
	<i>EU General Data Protection Regulation (GDPR)</i>



## Appendix II Key Performance Indicators

### ○ Environmental Data

Index	Amount
<b>Exhaust gas</b>	
Nitrogen oxides (tons)	44.21
Sulphur oxides (tons)	18.61
Particulate matter (tons)	3.94
<b>Energy consumption</b>	
<b>Direct Energy</b>	
Lignite (tons)	29,149.91
Natural gas (m <sup>3</sup> )	1,216,125.18
Diesel (tons)	62.32
Gasoline (tons)	6.22
<b>Indirect Energy</b>	
Purchased electricity (MWh)	177,025.47
Steam (GJ)	119,291.99
Biomass fuel (GJ)	329,073.24
<b>Total Consolidated Energy Consumption (MWh)</b>	<b>418,823.48</b>
<b>Consolidated Energy Intensity (MWh/RMB million revenue)</b>	<b>216.08</b>
<b>Greenhouse gases</b>	
Scope I: Direct GHG Emissions (tons CO <sub>2</sub> e)	37,146.46
Scope II: Indirect GHG emissions from energy (tons CO <sub>2</sub> e)	100,958.68
Scope III: Other indirect GHG emissions (tons CO <sub>2</sub> e)	100.58
<b>Total GHG Emissions (tons CO<sub>2</sub> e)</b>	<b>138,205.72</b>
<b>GHG Emission Intensity (tons CO<sub>2</sub> e/RMB million revenue)</b>	<b>71.30</b>

Index	Amount
<b>Waste</b>	
<b>Hazardous Waste</b>	
Total Amount of Hazardous Waste Emissions (tons)	42.33
Hazardous Waste Emission Intensity (tons/RMB million revenue)	0.02
Waste transferred from disposal (recycling) (tons)	9.28
Waste for directly disposal (incineration, with energy recovery) (tons)	0.00
Waste for directly disposal (incineration, without energy recovery) (tons)	32.69
Waste for directly disposal (landfilling) (tons)	0.36
Waste for directly disposal (other operations) (tons)	0.00
<b>General Waste</b>	
Total Discharge of General Waste (tons)	18,344.44
General Waste Emission Intensity (tons/RMB million revenue)	9.46
Waste transferred from disposal (recycling) (tons)	18,148.13
Waste for directly disposal (incineration, with energy recovery) (tons)	0.00
Waste for directly disposal (incineration, without energy recovery) (tons)	0.00
Waste for directly disposal (landfilling) (tons)	0.00
Waste for directly disposal (other operations) (tons)	173.05
<b>Wastewater</b>	
Chemical Oxygen Demand (COD) discharge (tons)	47.65
Total phosphorus (TP) (tons)	1.35
Total nitrogen (TN) (tons)	7.42
Ammonia nitrogen (NH <sub>3</sub> -N) (tons)	1.03
Total wastewater discharge (million liters)	1,342.68
Wastewater discharge intensity (million liters/RMB million revenue)	0.69
<b>Water resources</b>	
Fresh water usage (million liters)	1,195.35
Recycled water usage (million liters)	357.54
Intensity of water use (million liters/RMB million revenue)	0.80
<b>Packaging materials</b>	
Total use of packaging materials (tons)	523

## ○ Social Data

Index	Amount
<b>Employee profile</b>	
Total number of employees (persons)	1,691
<b>By gender</b>	
Male	1,257
Female	434
<b>By age</b>	
Under 30 years old	786
31-50 years old	832
Above 51 years old	73
<b>By position</b>	
Management team (Grade 5 and above)	109
Senior professionals (Grade 4)	240
Junior professionals (Grades 1-3)	1,342
<b>By region</b>	
China (including Hong Kong, Macao and Taiwan)	1,684
Other countries	7
<b>By ethnic groups</b>	
Han ethnicity	1,572
Other ethnic groups	119
<b>New employees</b>	
Total number of new employees (persons)	873
<b>By gender</b>	
Male	670
Female	203

Index	Amount
<b>Diversity</b>	
Proportion of management team hired from local area	51%
Proportion of women in management team	27%
<b>Performance evaluation and career development appraisal</b>	
Number of employees who underwent performance evaluation and career development appraisal in the reporting period (persons)	1,595
<b>By gender</b>	
Male	1,164
Female	431
<b>By age</b>	
Under 30 years old	702
31-50 years old	829
Above 51 years old	64
<b>Parental leave</b>	
Total number of employees taking parental leave (persons)	251
Total number of employees took parental leave	84
<b>By gender</b>	
Male	60
Female	24
Total number of employees who returned to work in the reporting period after taking parental leave	82
<b>By gender</b>	
Male	60
Female	22
<b>Employee training</b>	
Total annual training expenditures (million RMB)	1.11

Index	Amount
Total number of employees trained (persons)	1,423
By gender	
Male	1,012
Female	411
By positions	
Management team (Grade 5 and above)	61
Senior professionals (Grade 4)	50
Junior professionals (Grades 1-3)	1,312
Total hours of employee training (hours)	70,425
By gender	
Male	54,418
Female	16,007
By positions	
Management team (Grade 5 and above)	4,224
Senior professionals (Grade 4)	1,715
Junior professionals (Grades 1-3)	64,486
Per capita hours of employee training (hours)	49.49
By gender	
Male	53.77
Female	38.95
By position	
Management team (Grade 5 and above)	69.25
Senior professionals (Grade 4)	34.30
Junior professionals (Grades 1-3)	49.11

Index	Amount
<b>Safety training</b>	
Total number of safety training sessions in the reporting period	137
Total number of hours of safety training in the reporting period	17,096
Hours of safety training per person on duty <sup>4</sup>	12.55
<b>Work-related Injuries</b>	
Number of work-related fatalities (persons)	0
Total working hours	3,368,472
Lost time injury rate of directly-affiliated labor force <sup>5</sup>	1.48%
Lost time severity rate of directly-affiliated labor force <sup>6</sup>	0
<b>Product health and safety</b>	
Incidents of non-compliance concerning the health and safety impacts of products and services	0
Number of products recalled for safety and health reasons	0
Number of complaints for safety and health reasons	0
<b>Marketing and labeling</b>	
Incidents of non-compliance concerning product and service information and labeling	0
Marketing violations	0
<b>Supply chain</b>	
Percentage of procurement spending from local suppliers	65.46%

<sup>4</sup>Number of hours of safety training per person on duty = total number of hours of safety training during the reporting period / total number of employees

<sup>5</sup>Lost time injury rate of directly-affiliated labor force = Total number of lost-time accident incidents x (1,000,000 / total hours worked)

<sup>6</sup>Lost time severity rate of directly-affiliated labor force = Days lost due to injury x (1,000 / total hours worked)

## Appendix III Content Index

**Usage Statement:** This Report is prepared by AHB with reference to the GRI Sustainability Reporting Standards (GRI Standards), and the Guidelines for Preparation of Corporate Social Responsibility Reports in China (CASS-ESG 5.0) issued by the Corporate Social Responsibility Research Center of Chinese Academy of Social Sciences. The reporting period is from January 1, 2023 to December 31, 2023.

### GRI 2: General disclosures 2021

GRI Standards	CASS-ESG 5.0 Guidelines	Corresponding Chapter
<b>Organizations and the reporting practices</b>		
2-1 Organizational details	P1.2 Information description P4.1 Basic information P4.2 Strategy and culture P4.3 Business overview	About the Report About AHB
2-2 Entities included in the organization's sustainability reporting	P1.2 Information description	About the Report
2-3 Reporting period, frequency and contact point		
2-4 Restatements of information		
2-5 External assurance	P1.1 Quality assurance	The Company has not carried out external assurance this year.
<b>Activities and workers</b>		
2-6 Activities, value chain and other business relationships	S5 Responsible supply chain management	Responsible Supply Chain
2-7 Employees	S1 Employment	Responsible Employer
2-8 Workers who are not employees	Not applicable	Key Performance Indicators
<b>Governance</b>		
2-9 Governance structure and composition	G1.1 Board composition diversity G1.2 Board independence	Corporate Governance - Governance Structure
2-10 Nomination and selection of the highest governance body		
2-11 Chair of the highest governance body		
2-12 Role of the highest governance body in overseeing the management of impacts	P2 Message from executive management	Corporate Governance - Compliance and Risk Management
2-13 Delegation of responsibility for managing impacts		
2-14 Role of the highest governance body in sustainability reporting	G2.1 The Board's ESG management policy G2.1 The Board's mechanism for ESG work and leadership	ESG Development Strategy - Assessment of Material Topics

Index	Amount
<b>Sustainable purchasing</b>	
Number of target suppliers that have signed the Supplier Code of Conduct	264
Number of target suppliers that have participated in Corporate Social Responsibility (CSR) assessments	76
Number of target suppliers that have participated in Corporate Social Responsibility (CSR) on-site audits	56
Proportion of purchasers who have received sustainable procurement training	100%
Proportion of audited/assessed suppliers participating in improvement actions or capacity building	34.46%
<b>Anti-corruption</b>	
Percentage of Ops that have undergone corruption risk assessment	100%
Confirmed incidents of corruption in the reporting period	0
Total hours of anti-corruption training	1,730
<b>Total number of anti-corruption training participants (persons)</b>	<b>173</b>
<b>By position</b>	
Management team (Grade 5 and above)	2
Senior professionals (Grade 4)	6
Junior professionals (Grades 1-3)	165
<b>Public welfare Inputs</b>	
Public welfare donation (RMB 10,000)	258.85
Public service (hours)	120

GRI Standards	CASS-ESG 5.0 Guidelines	Corresponding Chapter
2-15 Conflicts of interest	Not applicable	Corporate Governance - Compliance and Risk Management
2-16 Communication of critical concerns	G2.1 The Board's ESG management policy	ESG Development Strategy - Assessment of Material Topics
2-17 Collective knowledge of the highest governance body		ESG Development Strategy Corporate Governance - Governance Structure
2-18 Evaluation of the performance of the highest governance body	Not applicable	Please refer to Annual Report
2-19 Remuneration policies	G2.5 Executive compensation linked to ESG performance	
2-20 Process to determine remuneration	Not applicable	
2-21 Annual total compensation ratio		For confidentiality reasons, we do not disclose annual total compensation ratios. We will consider disclosing relevant data in the future.
<b>Strategy, policy, and practice</b>		
2-22 Statement on sustainable development strategy	P2 Message from executive management G2.1 The Board's ESG management policy	ESG Development Strategy
2-23 Policy commitments		
2-24 Embedding policy commitments		
2-25 Processes to remediate negative impacts	Not applicable	Corporate Governance - Business Ethics
2-26 Mechanisms for seeking advice and raising concerns	G1.7 Anti-commercial bribery and anti-corruption system	
2-27 Compliance with laws and regulations	G1.3 Compliance system	During the reporting period, the Company did not have any major violations, nor was it punished with any significant fines for violating relevant laws and regulations.
2-28 Membership associations	V2.8 Strategic cooperation mechanism and platform	About AHB
<b>Stakeholder involvement</b>		
2-29 Approach to stakeholder engagement	G3.6 Communication with stakeholders	ESG Development Strategy - Assessment of Material Topics
2-30 Collective bargaining agreements	Not applicable	Responsible Employer - Employee Rights and Interests

**GRI 3: Material topics 2021**

GRI Standards	CASS-ESG 5.0 Guidelines	Corresponding Chapter
3-1 Process to determine material topics	G3.6 Communication with stakeholders	ESG Development Strategy - Assessment of Material Topics
3-2 List of material topics	G3.5 Identification of material ESG issues	

**Material topics and management methods**

GRI Standards	CASS-ESG 5.0 Guidelines	Corresponding Chapter	
<b>Economic performance of the company</b>			
GRI 3: Material Topics 2021	3-3 Management of material topics	Not applicable	
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed		2023 ESG Highlights
	201-2 Financial implications and other risks and opportunities due to climate change	E5.2 Impact of climate-related risks and opportunities on operations E5.3 Climate-related risk management	Green Development - Response to Climate Change
	201-3 Defined benefit plan obligations and other retirement plans	S1.7 Remuneration and benefits system S1.8 Social security coverage	Responsible Employer - Employee Rights and Interests
	201-4 Financial assistance received from government	Not applicable	Please refer to Annual Report
GRI 202: Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage 202-2 Proportion of senior management hired from the local community		Key Performance Indicators
<b>Water management</b>			
GRI 3: Material Topics 2021	3-3 Management of material topics	E2.9 Water utilization policy E3.1 Policy to reduce wastewater discharge	
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource		Green Development - Resource Management
	303-2 Management of water discharge related impacts	E3.1 Policy to reduce wastewater discharge E2.13 Recycled water consumption	Green Development - Environmental Management System - Resource Management
	303-3 Water withdrawal	E2.10 Fresh water consumption	Green Development - Resource Management Key Performance Indicators
	303-4 Water discharge	E3.2 Wastewater discharge	
<b>Clean technology opportunities</b>			
GRI 3: Material Topics 2021	3-3 Management of material topics	E2.4 Clean energy utilization policy E2.5 Clean energy utilized	Green Development - Green Manufacturing
<b>Synthetic biotechnology and environmental protection</b>			
GRI 3: Material Topics 2021	3-3 Management of material topics	E1.8 Environment-friendly products or technology R&D and application	Contribution to Sustainable Development Product Innovation and Responsibility - Product Innovation and Sustainability

GRI Standards	CASS-ESG 5.0 Guidelines	Corresponding Chapter
<b>Employee salary and benefits</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	S1.7 Environmental training and education Responsible Employer - Employee Rights and Interests
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	Not applicable Responsible Employer - Employee Rights and Interests Key Performance Indicators
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	S1.7 Environmental training and education Responsible Employer - Employee Rights and Interests
	401-3 Parental leave	S1.10 Care for employees Responsible Employer - Employee Rights and Interests Key Performance Indicators
<b>Employee training and development</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	S2.2 Occupational training system Responsible Employer - Talent Cultivation
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	S2.3 Investments in occupational training Responsible Employer - Talent Cultivation Key Performance Indicators
	404-2 Programs for upgrading employee skills and transition assistance programs	S2.2 Occupational training system Responsible Employer - Talent Cultivation
	404-3 Percentage of employees receiving regular performance and career development reviews	S2.4 Occupational training performance Responsible Employer - Talent Cultivation Key Performance Indicators
<b>Product quality and safety</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	S4.1 Product / service quality management S4.3 Responsible marketing Product Innovation and Responsibility - Product Management - Customer Service
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	S4.2 Product qualification rate S4.5 Active response to customer complaints Product Innovation and Responsibility - Product Management - Customer Service
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	S4.9 Negative incidents related to customer health and safety during the reporting period During the reporting period, the Company did not have any breaches related to the health and safety implications of its products and services.

**Other environmental topics and management methods**

GRI Standards	CASS-ESG 5.0 Guidelines	Corresponding Chapter
<b>Energy and resource management</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	E2.1 Energy management system Green Development - Response to ClimateChange
GRI 302: Energy 2016	302-1 Energy consumption within the organization	E2.2 Energy consumption Green Development - Response to ClimateChange Performance Indicators
	302-2 Energy consumption outside of the organization	Not applicable During the reporting period, the Company has not yet counted the external energy consumption of the organization.
	302-3 Energy intensity	E2.3 Energy consumption intensity Green Development - Response to Climate Change Key Performance Indicators
	302-4 Reduction of energy consumption	E2.14 Green office measures Green Development - Response to Climate Change - Green Manufacturing
	302-5 Reductions in energy requirements of products and services	Not applicable Green Development - Green Manufacturing
<b>Emission management, Greenhouse gas emissions, Waste treatment and recycling</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	E3.1 Policy to reduce wastewater discharge E3.5 Waste discharge management policy E3.1 Policy to reduce wastewater discharge Environmental Management Policy
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	E5.5 Direct GHG emission
	305-2 Energy indirect (Scope 2) GHG emissions	E5.6 Indirect GHG emission Green Development - Response to Climate Change
	305-3 Other indirect (Scope 3) GHG emissions	
	305-4 GHG emissions intensity	E5.7 GHG emission intensity
	305-5 Reduction of GHG emissions	Not applicable During the reporting period, the Company has not recorded emissions of Ozone-depleting Substances (ODS) .
	305-6 Emissions of ozone-depleting substances (ODS)	
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	E3.4 Exhaust gas emissions cable Green Development - Resource Management

GRI Standards	CASS-ESG 5.0 Guidelines	Corresponding Chapter
GRI 306: Waste 2016	306-1 Waste generation and significant waste-related impacts	E3.5 Waste discharge management policy
	306-2 Management of significant wasterelated impacts	E3.5 Waste discharge management policy
	306-3 Waste generated	E3.6 General waste discharge E3.7 General waste discharge intensity E3.8 Hazardous waste discharge
	306-4 Waste diverted from disposal	Not applicable
	306-5 Waste directed to disposal	
<b>Biodiversity conservation</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	Not applicable
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	E4.1 Impact of business operations on biodiversity and ecological system
	304-3 Habitats protected or restored	E4.2 Biodiversity conservation actions
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	E4.1 Impact of business operations on biodiversity and ecological system
<b>Response to climate change</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	E5.1 Governance mechanism to address climate-related risks and opportunities E5.2 Impact of climate-related risks and opportunities on operations E5.3 Climate-related risk management E5.4 Targets and performance in relation to climate-related risks and opportunities
<b>Environmental impact assessment of ongoing projects</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	E4.1 Impact of business opertions on biodiversity and ecological system

Other employee topics and management methods

GRI Standards	CASS-ESG 5.0 Guidelines	Corresponding Chapter
<b>Talent management</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	S1 Employment S2 Development and training
<b>Employee health and safety</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	S3.1 Occupational health management S3.4 Production safety management system
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	S3.2 Occupational health and safety management system certification S3.7 Emergency management system
	403-2 Hazard identification, risk assessment, and incident investigation	S3.6 Potential risk inspection and rectification
	403-3 Occupational health services	S3.8 Investments in production safety
	403-4 Worker participation, consultation, and communication on occupational health and safety	S3.5 Safety education, publicity and training
	403-5 Worker training on occupational health and safety	S3.9 Production safety training performance
	403-6 Promotion of worker health	S3.7 Emergency management system
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	
	403-8 Workers covered by an occupational health and safety management system	S3.2 Occupational health and safety management system certification
	403-9 Work-related injuries	S3.10 Number of accidents in production safety S3.11 Number of work-related injuries / deaths S3.12 Lost work days due to work injury
	403-10 Work-related ill health	S3.1 Occupational health management S3.3 Number of new occutional diseases
<b>Prevention of child and forced labor</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	S1.1 Compliance with labor law standards
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	Not applicable
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	

GRI Standards	CASS-ESG 5.0 Guidelines	Corresponding Chapter
<b>Employee communication</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	G3.6 Communication with stakeholders ESG Development Strategy - Assessment of Material Topics
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	Not applicable Responsible Supply Chain - Supply Chain Management
<b>Employee diversity and equal opportunity</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	S1.2 Diversity and equal opportunity Responsible Employer - Employee Rights and Interests
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	S1.3 Employee composition
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	Not applicable

**Other operational topics and management methods**

GRI Standards	CASS-ESG 5.0 Guidelines	Corresponding Chapter
<b>Customer satisfaction and complaint handling</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	S4.5 Active response to customer complaints S4.7 Customer satisfaction S4.8 Complaint resolution rate Product Innovation and Responsibility - Customer Service
<b>Information privacy and security</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	S4.6 Information security and privacy protection Product Innovation and Responsibility - Information Security Management
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	During the reporting period, the Company did not receive any confirmed complaints of violation of customer privacy and loss of customer data.
<b>Intellectual property protection, Responsible marketing</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	S4.3 Responsible marketing Product Innovation and Responsibility - Customer Service
GRI 417: Marketing and Labeling 2016	417-1 Requirements for product and service information and labeling	Not applicable During the reporting period, the Company did not have any product and service information and logo violations. During the reporting period, AHB had no violations involving marketing communications.
	417-2 Incidents of non-compliance concerning product and service inform	
	417-3 Incidents of non-compliance concerning marketing communications	

GRI Standards	CASS-ESG 5.0 Guidelines	Corresponding Chapter
<b>Supply chain management, Green procurement, Industry chain synergy development</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	S5 Responsible supplychain management
GRI 308: Supplier Environmental Assessmnt 2016	308-1 New suppliers that were screened using environmental criteria	S5.1 Supply chain ESG management system S5.2 Supplier ESG reviewand assessment S5.3 Number of suppliers reviewed
	308-2 Negative environmental impacts in the supply chain and actions taken	S5.5 Number of potential suppliers rejected due to non-compliance S5.6 Supplier ESG training system S5.7 Supplier ESG training performance
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	S5.1 Supply chain ESG management system S5.2 Supplier ESG review and assessment S5.3 Number of suppliers reviewed
	414-2 Negative social impacts in the supply chain and actions taken	S5.4 Number of suppliers subject to suspension of cooperation due to non-compliance S5.5 Number of potential suppliers rejected due to non-compliance S5.6 Supplier ESG training system S5.7 Supplier ESG training performance
<b>Business ethics, Anti-corruption</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	G1.3 Compliance system Corporate Governance - Business Ethics
GRI 205: Anti-corruption 2016	205-2 Communication and training about anti-corruption policies and procedures	G1.6 Complaint and reporting mechanism G1.7 Anti-commercial bribery and anti-corruption system G1.8 Anti-corruption training performance
	205-3 Confirmed incidents of corruption and actions taken	G1.9 Corruption incidents and responses G1.10 Information transparency G1.11 Incidents incurring penalties due to violation of information disclosure requirements During the reporting period, the company did not have any reported or investigated corruption incidents, corruption related prosecutions or administrative penalties.



**Other economic topics and management methods**

GRI Standards		CASS-ESG 5.0 Guidelines	Corresponding Chapter
<b>Compliance operation</b>			
GRI 3: Material Topics 2021	3-3 Management of material topics	G1.3 Compliance system	Corporate Governance - Compliance and Risk Management
<b>Investor relations</b>			
GRI 3: Material Topics 2021	3-3 Management of material topics	G3.6 Communication with stakeholders	Corporate Governance - Protection of Investors' Rights and Interests
<b>Corporate governance</b>			
GRI 3: Material Topics 2021	3-3 Management of material topics	G1 Corporate governance	Corporate Governance
<b>Risk management</b>			
GRI 3: Material Topics 2021	3-3 Management of material topics	E5.3 Climate-related risk management G3 ESG Management	Corporate Governance - Compliance and Risk Management rate Governance

**Other community topics and management methods**

GRI Standards		CASS-ESG 5.0 Guidelines	Corresponding Chapter
<b>Community public welfare</b>			
GRI 3: Material Topics 2021	3-3 Management of material topics	V3.6 Total charitable donations V3.7 Volunteering performance	Social Contribution - Public Welfare and Charity
<b>Community relations</b>			
GRI 3: Material Topics 2021	3-3 Management of material topics	Not applicable	Social Contribution - Public Welfare and Charity
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs  413-2 Operations with significant actual and potential negative impacts on local communities		Responsible Employer - Employee Rights and Interests Responsible Supply Chain - Sustainable Supply Chain  The Company is not involved in operating sites that have an actual or potentially significant negative impact on local communities.

# Appendix IV Feedback Form

Dear readers,

Thank you for reading the 2023 ESG Report of Anhui Huaheng Biotechnology Co., Ltd. In order to improve our ESG management, we expect you to put forward valuable comments and suggestions to the company by filling in the feedback form after reading. Your valuable advice will be an important basis for us to continuously improve our ESG working practices. Looking forward to your reply!

1. Category of stakeholder:

Government Shareholder Customer Supplier Employee Community

2. Your overall comments on this Report:

Excellent Good General Poor

3. Your comments on the performance of corporate governance responsibilities of AHB:

Excellent Good General Poor

4. Your comments on the performance of environmental responsibilities in management of AHB:

Excellent Good General Poor

5. Your comments on the performance of social responsibilities of AHB:

Excellent Good General Poor

6. Do you think the information disclosed in this Report is complete?

Yes No

7. Your other opinions and suggestions on improving and enhancing the performance of ESG responsibilities by AHB:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Your contact information

Name: \_\_\_\_\_ Tel: \_\_\_\_\_

Employer: \_\_\_\_\_ Email: \_\_\_\_\_

Job title: \_\_\_\_\_ Fax: \_\_\_\_\_

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