

# 2021 CABIO ESG REPORT

## **CEO Statement**

### **Bent on Future Success as Always**

At Cabio, the first Chinese ARA R&D company, we've been steadfast in pursuing nutrition and health for mankind as our mission since our birth. Over the past more than 20 years we underwent sustainable development until finally going public on the Science and Technology Innovation Board. It was both a long time and a short time. The global Covid crisis which has persisted for over two years and posed an ongoing challenge to us inclines us to think more about social values and responsibilities as we continue to explore and forge ahead. Our reply is clear and resolute: we'll devote consistent efforts to developing nutrition and health solutions hand in hand with the partners to keep out health attacks on our home.

### **Persistence in Sustainable Development**

As a green manufacturing activist, we introduce smart upgrades, energy conservation and emissions reduction into expansion projects. We guarantee to make our factories greener and more eco-friendly.

Just as we believe firmly in baby need personalization, we depend on quality as the lifeline for sustainable development. As always, we'll strengthen quality management, improve operational capability, reinforce the internal and external consciousness of quality and compete for the highest place in industry-leading standards.

Innovation powers the sustainable development of all enterprises. Last year, we made milestone breakthroughs in product innovation and technology patents as well as new progress in animal nutrition and personal care. This operating structure is what we call "a core and two wings". We'll adopt an ongoing proactive approach to make Cabio a robust, sustainable business.

### **Partnership with Relevant Interested Parties**

Still raging in 2021, the Covid pandemic keeps on impacting and transforming the global market, production chain, supply chain and people's style of working & life. We never stop moving ahead with mutual assistance and common development with our upstream and downstream partners in pursuit of common interests in the industry chain as the deepening partnership goes ahead.

In the last analysis, the staff helps us create value, so we've been making every endeavor to create



for them a safe, healthy, fair, inclusive, culturally diverse and sustainable working & living environment. We've been proven to have succeeded and we'll continue doing so as always with a single mind.

Development is an ever-innovating topic. As always, we'll work on innovation shoulder to shoulder with internal and external partners, forging ahead in order to improve business performance, pioneer innovations and materialize benefits for all.

### **Ongoing Cause of Public Benefit**

In the two years since we went public, we've never ceased to make increasingly high demands on ourselves in fulfilling social responsibilities and reward the society with what we're expert at. We've been an active donor of medical supplies during the ebb and flow of the pandemic over the couple of years. In addition, we've taken the initiative in popularizing nutrition knowledge among communities, for example in the form of various online/offline courses that continually influence and update the public consciousness of nutrition and health.

A pioneer in the Chinese microbial oils industry, we consider it our task to lead the exploration in the sector while shouldering the social responsibility for professional talent training and development by maintaining a research and commercialization platform with multiple institutes and institutions of higher education. The platform is constantly providing the society and industry with top professionals and research achievements of a high worth. Meanwhile, we're working consistently to try with and implement environmental protection as our share of responsibility performed for biodiversity and sustainable development.

There's a long and hard road ahead, but we foresee a successful future. Whatever challenges, we'll stay firm and walk with great strides on the way to the green cause of global nutrition and health. Along with the global industry chain, partners and employees, we're on the road to a social enterprise aiming at sustainable development and we believe ourselves to have achieved preliminary success at the present time.

Cabio Chairman: Yi Dewei



## About CABIO

CABIO Biotech (Wuhan) Co., Ltd (short for “CABIO” ) is a biotechnology-based company which combines technologies such as targeted optimization of industrial strains, precisely regulated fermentation and efficient separation and purification. Through sustainable microorganism fermentation, CABIO provides customers from nutrition and health industry worldwide with quality nutrient products and innovative solutions.

The Company has been focusing on R&D, manufacturing and sale of polyunsaturated fatty acid ARA, algal DHA oil, SA, natural-sourced  $\beta$ -carotene and other microorganism-fermented nutrient products for 20 years. Its products are widely applied in infant formula food, dietary supplements, healthy food, formula food for special medical purposes and other products.

On December 19, 2019, CABIO had its IPO on China’s Star Market successfully. It was the first food biotechnology company had its IPO on this Market as a high-tech based company.

“Providing safe, healthy and quality nutrient products and valuable solutions for customers and promoting public health through nutritional regulation” is always CABIO’s corporate mission.

CABIO will continue to focus on nutrition and health industry with technological innovation as the core driving force, constantly improve its operation level to international standard and actively participate in global competition so as to become a globally competitive biotechnology company featuring technological innovation which provides innovative natural-sourced nutrition products and solutions for customers from more regions and areas.

As the pioneer of ARA industry in China, CABIO has made a great contribution to the promotion and application of ARA in Chinese market. CABIO has established long term strategic partnership with most domestic manufacturers and held the largest market share in China.

CABIO has established Marketing and service network of global coverage and passed food safety audit and quality verification by many famous multinational enterprises, and has been integrated into their global supply chain system.

CABIO spares no efforts to share its value with global food manufacturers in various ways, not only product solution, but also technical seminars, communication of regulatory compliance and



market trend, joint development and promotion of new products.

CABIO provides competitive product solutions in the following fields: Infant formula food, nutritional food for children, functional healthcare food and dietary supplements, cooking oil and special oil, baked food, confection, juice etc.



## Corporate Culture

### Corporate Mission

We provide safe, healthy and high quality nutrients and valuable solutions and aim to promote public health by means of nutritional regulation.

### Corporate Vision

We provide global customers with green, safe and innovative biosynthesized products and solutions based on biotechnology as the driving force. In the future, we are set to apply synthetic biology to developing nutrition resource substitutes and contributing to the sustainable development of the society.

### Values

**Integrity: Business integrity underlies business sustainability.**

We cling to the core value of business integrity and conform strictly to law and legislation worldwide. We require each employee to act according to the corporate behavior of fair competition and business integrity. We are devoted to achieving the balance among social responsibility, environmental protection and commercial activities.

**Cooperation: Cooperation is the business philosophy through which we link interested parties.**

Cooperation with all interested parties in good faith helps us and the customers share resources, communicate and co-develop a solid healthy industry. We create value for the society as well as our customers, employees, partners, shareholders and employees in the world.

**Openness: Openness sustains us on the best way to growth.**

As a dedicated global watcher, we learn from entities and individuals from different countries and industries and with different professions. Integration of excellent enterprise and talent resources contribute to an open business and talent development platform.

**Innovation: Innovation is the source of vitality that keeps us ahead.**

Technology is the core driving force that aims us consistently at advanced biotechnology, supports us in basic research and helps us mine limitless biotechnology possibilities. Technological innovation backs us with inexhaustible driving power for development.



## **Consistent Innovation and Diversification**

### **Technological Innovation and Development**

In 2021 we continued to increase investments in R&D to the tune of ¥30.9471M, a 51.82% growth year on year.

In 2021 we were granted approval for 24 of 57 invention patent applications. By December 31, 2021 we had owned 83 approved patents (including 77 invention patents), 140 invention patents pending approval in China, and two patents pending approval in Australia and New Zealand, respectively. The patents protect our technological achievements very effectively.

### **New Product Development Trends**

Having passed the pilot tests, our OPO and fucosyllactose products are now in commercial production. We are beginning to isolate such dominant strains, e.g. high-yield astaxanthin, EPA and sialyllactose, to drive industry and technological innovation while continuously and technically supporting demand for human nutrition, animal nutrition and personal care with quality material.

### **Smart Manufacturing in Process**

Centering on R&D, production and O&M, we're pushing ahead with digitization, informatization and application of smart technology so as to switch a number of office and management systems online, leading to leaps in R&D, production, operation and management efficiency.

### **Progresses in Self-innovation**

- We're developing a green oil preparation-targeted technology to control hazardous substances effectively and retain nutrition efficiently.
- We've built a nascent technical analysis platform to support subsequent high-efficiency green R&D activities.
- We've joined hands with Tianjin University (TJU) in filing for a green biomanufacturing program (of national importance) and an industrial strain artificial genome sequencing (of special importance).
- The high-efficiency strain isolation & screening technology we're developing along with CAS Institute of Plasma Physics promises a broad future market.



### **Honors of Technology and Innovation**

- We organized and participated in the drafting of the industry standard N-Acetylneuraminic Acid.
- We captured the CFPMA Health and Nutrition Formula Prize.
- Our SA won the InnoCosme Meiyao Star of Material Prize.
- We were granted a National Scientific Achievement First Prize for key technologies relevant to quality infant & baby formula development and industrialization.

### **Diversification of Disciplines**

In 2021, we acquired CASOV, one of our controlled subsidiaries, and made it a wholly-owned one which has been responsible for all personal care and cosmetics operations since.

We also own an animal nutrition business unit and control Calido, one of our subsidiaries. With an animal nutrition technology platform and a service team in place, we offer formulas and solutions regarding pet nutrition and economic animal nutrition. Our business structure diversifies into human nutrition, animal nutrition, and personal care and cosmetics and serves as a solid foundation for a fruitful future.





## **Stress on Health and Quality**

Our tenet is to address personalized baby needs. It's also the original mission we've pursued in the last 20 years as a devoted nutrition and health product provider. We've never wavered in performing our principle of social responsibility: providing safe, healthy, quality nutrition products and valuable solutions and contributing to the public health cause via nutritional conditioning. We adhere to a development strategy that prioritizes quality, bases our market status on food safety and draws momentum from quality management. We implement and improve a food safety & quality management system against international standards while cooperating with upstream/downstream to supply to consumers safe, healthy and quality products as well as valuable nutrition solutions.

## **Safety and Quality First**

Consistent maintenance and improvement of the food safety and quality management system guarantees food safety. In 2021, ISO 9001, FSSC 22000 and the Business Integrity Management Systems continued to work effectively at our base. Our ARA and DHA products were recognized as FDA GRAS, with the former certified as EU novel foods and the latter as USDA organic foods in November 2021. As an international supplier we had our products pass the numerous rounds of stringent examination of many multinational corporations.

Test management is a significant step of product safety control. In 2021 we increased test items relevant to raw materials, auxiliary materials, processes and risk control to 596; testing equipment and facilities grew to ¥13.82M in value, while annual testing expenses grossed ¥5.23M. On July 25, 2021, our testing center got CNAS accreditation on site (CNAS L15492).

## **Low-carbon Green Goals and Public Benefit**

### **Low-carbon, Green and Environmental Manufacturing**

In active response to the government's strategic goal of peak carbon emissions and carbon neutrality, we include green development as a component of our corporate development strategy. To do so we choose such solutions as low carbon, environmental protection, and clean, green manufacturing in strict compliance with environmental laws and regulations and materialize the consciousness of green production and environmental protection. In 2021, we continually stepped up environmental investments. Thus far we're carrying out a cost reduction and efficiency enhancement plan along with waste recycling measures, thanks to a complete set of liquid,



gaseous and solid waste treatment facilities.

### **Liquid Waste**

Liquid waste includes primarily industrial wastewater and domestic wastewater. In 2021, we discharged 122,314 t wastewater in Gedian and 111,959 t wastewater in Jiangxia, both treated in full compliance with the Directive for the Pollutant Discharge of Urban Wastewater Treatment Plants (GB18918-2002; Class 1.A). There was no case of substandard excessive discharge.

### **Gaseous Waste**

In Gedian, we discharge part of the unorganized emissions from manufacturing as well as organized emissions, such as process gas and malodorous gas from wastewater treatment facilities. All the gas must pass the emissions standards before discharge. The Gedian-based plant is granted approval for emissions of 0.1 t/a SO<sub>2</sub>, 0.468 t/a NO<sub>x</sub>, 0.42 t/a smoke & dust and 2.552 t/a VOCs. We've won a bid from Hubei Environmental Resources Trading Center on 2021 emissions of 0.1 t/a SO<sub>2</sub> and 0.468 t/a NO<sub>x</sub>, and smoke & dust and VOCs are equivalently deducted from the emissions allowance.

At the Jiangxia-based plant, all the emissions are process-generated organized emissions shown in tests to be in line with applicable emissions standards. In December 2018, the Jiangxia-based plant won a bid from Hubei Environmental Resources Trading Center on emissions of 0.58 t/a SO<sub>2</sub> and 2.78 t/a NO<sub>x</sub>. At Jiangxia, we have a 10 t/h gas boiler in service and a 1 t/h gas boiler on standby. The 10 t/h gas boiler has a 8,040 annual working hour. The SO<sub>2</sub> emissions and NO<sub>x</sub> emissions are 0 t/a and 0.839 t/a, indicating no substandard excessive emissions.

### **Noise**

Both branch companies comply with the limit levels 2 and 4 of the Emissions Standard for the Boundary Ambient Noise Emissions of Industrial Enterprises (GB 12348-2008), according to an independent testing service provider.

### **Solid Waste**

In Gedian, we employ a competent waste treatment plant to recycle solid waste or consign it to the regular disposal of the sanitary authority. We recycle and reuse part of such waste. In Jiangxia, solid waste is usually gathered and regularly consigned it to the regular treatment of the sanitary



authority. Sludge is consigned to Green Energy Eco-tech Co., Ltd. for biomass power generation before being made into organic fertilizer. Hazardous waste is collected and regularly consigned to the disposal of the competent waste treatment plant.

### **Energy Conservation, Emissions Reduction and Sustainable Development**

Our EHS Division is responsible for conducting environmental management and achieving energy conservation and emissions reduction targets in every aspect.

We manufacture products using the biofermentation technology which is in itself an environment-friendly and resource-saving technology designed to reduce environmental pollution and protect the environment by maximizing the utility rate of resources and reducing production & operating cost.

While in capacity expansion we take the initiative in materializing green manufacturing ideas by introducing power system automatic update modules and spending more on energy conservation & emissions reduction designs for fundraising and investment purposes. We've fitted the workers' dorms with BIPV which serves to address roof leaks and generate 92,500 kWh in electricity per annum with remarkable cost cutting effects. In the financial report period, we devoted efforts to reducing internal costs, boosting cost effectiveness, optimizing processes and enhancing productivity to minimize energy consumption. Energy metering systems are used to monitor energy consumption in real time. We put very great importance on clean production and our manufacturing process has been recognized for clean production. At the same time, energy conservation and emissions production begins at the step of procurement because the relevant electricity metering systems take the energy efficiency ratio into consideration.

Throughout 2021, our Gedian-based branch company bought externally-sourced steam instead of direct use of petrochemical energy, successfully bringing SO<sub>2</sub> and NO<sub>x</sub> emissions down to 0. In Jiangxia, continual use of renovated low NO<sub>x</sub> boilers helps reduce NO<sub>x</sub> emissions and maintain SO<sub>2</sub> emissions at 0 continually. The replacement of coal with natural gas improves thermal efficiency and thereby reduces total carbon emissions. There's waste gas monitoring all year round and fermentation tail gas and after-treatment tail gas are gathered, treated and reduced using the water wash system and photolysis system. In 2021, we spent ¥1.355M in energy conservation and emissions reduction as well as ¥5.6413M in environmental protection.



Apart from manufacturing, we generalize the OA-based e-office system to reduce the use of the paper-based system. We encourage the entire staff to adopt the everyday low-carbon office system by partially replacing A4-size paper with A5-size paper. Offices tune HVAC systems to proper time and temperature settings. The decor features environmental materials and minimalism as part of the low carbon, environment-friendly inspirations.

## **Public Benefit for the Society**

The pioneer in the domestic microbial oils industry, we never wavered in pursuing industry leadership and exploration by providing safe, healthy, quality nutrition products and valuable solutions and contributing to the public health cause via nutritional conditioning. We devote efforts also to talent development programs for the society while updating the public's awareness of nutrition and health consistently .

## **Support for Social Education**

### Cabio Scholarship

In order to support the education cause and train topnotch talent, we pay out to the Cabio Scholarship at CAS Hefei Institute of Physical Science (HIPS). In 2021, we paid out ¥300,000 as awards to applied research-involved graduates known for diligence, aspiration, creativity and academical excellence.

### The Collaboration Labs: Commercialization of Academic Findings and School-Business Collaboration

- Together with Wuhan Institute of Technology (WIT), we established and run the Hubei Functional Oils School-Business Collaboration & Innovation Center specializing in improving the self-innovation capability for the biofunctional oils industry.
- Together with HIPS, Cabio established and run the Cabio-HIPS Collaboration Lab which, by carrying out studies and graduate programs in such fields as strain selective breeding and product development, expedites commercialization of new research findings while providing innovative talent for the industry.
- Cabio has signed with South-Central Minzu University (SCMU) a contract on creating the School-Business Collaborative Bioengineering Innovation Center, which also functions as a practical training platform for science majors. It's a manner of commercialization of academic findings and benefits both the school and the business. It serves for both scientific research and hands-on training for the students.
- The collaboration labs combine the quality special resources of the strategic partners in order to train innovative professionals as always. Every year these labs are responsible for 30-50 innovative experts in diverse fields, e.g. synthetic biology, microbiology, fermentation engineering, chemical engineering, chemical process technology, analytical chemistry and engineering design. The labs keeps creating top talent and high-value products for the society.



## **Public Benefit Activities**

### Alxa Society of Entrepreneurs and Ecology

We're a member of the Alxa Society of Entrepreneurs and Ecology (SEE) and donate to SEE environmental protection programs. It's so far one of the most influential Chinese entrepreneur-sponsored environmental organizations. Via SEE we take part in environmental protection activities and public benefit activities, assuming our share of the responsibility to protect the environment and realize sustainable development.

### Popular Science for the Public to Upgrade Knowledge

We're a very active participant in organizing community nutrition & health knowledge popularization activities. We have many apps such as WeChat and live courseware designed to popularize nutrition & health knowledge among the public and improve their nutriment knowledge. We have won many honors and prizes, such as the Center for Food & Drug Public Education. As an enterprise persisting in its responsibility, we implement our social responsibilities as a responsible company does to enhance its social image.

## **Talent Policy**

### **Basic Employee Rights**

We have a staff of 406 representing the head office and branch companies. A devoted people-centered company, we put importance on good faith, innovation, teamwork and enterprise. To do so, we do our best to make the working environment humanized, warm and comfortable by signing employment contracts with the entire staff on wages and benefits. We also attach importance to policy on occupational health and career development so we and the staff advance together.

### **Employee Equality**

All our employment contracts, based on such national laws, legislation and regulations as the Labor Relations Act and the Employment Contract Act, are signed with employees according to the principle of equality, free will and fair negotiation. In job interviews we forbid discrimination arising from sex, age, nationality, religion and disabilities. The originals of the ID card and related documents of every job seeker are very closely examined to preclude child labor and forced labor. In 2021, 100% of our staff signed or renewed the employment contracts.

### **Female Rights**

We set equal wage policy for male and female employees in regard of pay fixation, pay adjustment and various other benefits in order to bring out the best in the females. We strictly implement the Regulation on the Industries Forbidden for Female Employees, ensuring they're entitled to such childbirth-relevant legal rights as pregnancy leave and maternity leave. Every female employee has half-day leave on Women's Day as per the State Council directives and receives special gifts in celebration of the festival.

### **Pay System**

We're always stepping up efforts to improve the HR management system, pay system and incentive system. There're institutions in place to best protect such employee rights as pay, benefits, working hours, holidays and work safety protection.

### **Employee Welfare**

At both the home office and subsidiaries, we maintain such insurance products as pension, health insurance, unemployment insurance, work injury insurance and maternity insurance for the



employees, if applicable. There're also commercial insurance products for them and their children, such as accident insurance and supplemental insurance. In 2021, we continued to provide our employees with board/lodging and bus service. Every year we have health checks, holiday gifts and birthday cake coupons for our staff. In order to make their work and life more colorful, we organize team extensions, ball games, departmental parties & gatherings, and annual gatherings.

## **EHS**

We deem environment, health and safety (EHS) as an important part of our social responsibilities. Focusing on risk management, our EHS management system is a very mature one that serves as a classical example for the global food industry. Our corporate culture is built on two cornerstones — workplace safety and food safety. In order to keep the cornerstones firm in place, we make the management system visible, implement workplace safety inspections, provide multiple forms of workplace safety education and training, and organize workplace safety drills with a view to improving the staff's sense of safety and ensuring they work in a healthy, safe environment.

### **Safety Rules Upgrades**

We're continually upgrading our EHS management system according to ISO 14001 and ISO 45001 as well as the relevant national workplace safety regulations.

### **Risk Control and Safety Inspection**

We carry out such workplace safety inspections as electrical safety, equipment inspection, process risk assessment and patrols to follow up with all safety control measures without delay. We devote consistent efforts to requesting work permits of the employees and issue strict approvals for highly dangerous operations. In 2021, our safety training observation program (STOP) completed 1,377 observations.

### **Occupational Hazard Detection and Protection**

We conduct close monitoring of occupational hazards by providing routine health checks and occupational disease checks for the whole staff before, during and after work. Workers with potential occupational hazards are identified in time or suspended from office or shifted to other offices. All our staff are provided with a complete set of personal protective equipment (PPE) and warning signs provided where necessary for the purpose of workplace safety.





### **Safety Awareness, Training and Education**

Employees are provided with a suitable working environment, knowledge and pragmatic training on occupational safety and other safety tips. For special occupations, operators must get government qualifications and authorizations and go through annual inspection. Employees share workplace accidents cases and take part in systematic emergency drills on a regular basis. By 2021, we had completed a total of 132 various training sessions.

### **Improvements in the Working and Living Environments**

We look on the entire staff as a family and give them care and love in every aspect. In addition to the current diverse welfare system, we've redecorated the offices, canteens and dorms in the past more than a year so they live better and more comfortably and enjoy a higher sense of belonging.

### **Talent Classification and Sustainable Development**

#### **Differential Employee Development Strategy**

As for talent development, we grow with the employees and share our success with them. There's a differential career development system targeting managers and technicians. A well-developed online/offline training system is in place so the employees can improve themselves and grasp personal development opportunities by learning in a diverse training environment. In 2021, we identified talent based on different levels and specialties pertinent to our current traditional operations and future innovation operations. We classified our employees into the managerial type, market type, technical type and innovative type. They went through a comprehensive analysis designed to assess various capabilities and qualities. After that we prepared and implemented a differential development plan.

#### **Training and Learning Propels Personal Development**

In 2021, we carried out organized online/offline training programs in various forms — internal & external team training, fragmented time training, and program workshop. The training & development programs cost ¥625,700 and per capita training time came to 49 h. The employees received training on workplace & process safety, food safety, the authorized economic operator (AEO) system and professional credentials & certificates. We went on with our new apprenticeship system, i.e. a vocational education program involving both the school and the enterprise in order to improve professional skills for employees. We also completed multiple special training programs with success, e.g. core skill training for mid-and-lower-level management, the high-potential young employee development program, and the smart

manufacturing knowledge popularization program.

### **Bent on Goals as Always and Continuing to Take Responsibilities**

In 2022, we'll continue to provide safe, healthy, quality nutrition products and valuable solutions and contribute to the public health cause via nutritional conditioning. Our effort to improve and upgrade the industry chain will drive industry progresses, providing the customers with more kinds of higher-quality products and services.

We'll steadily increase operational efforts to create value for the shareholders. There'll be multifaceted communication with the investors to disclose precise, true and complete information in time. There'll be more care for our employees, like institution and salary system improvement designed to maximize the stimulative role of salary. We'll provide a better personal development platform for a growing team of professional talent.

We'll carry out and promote social activities of a public interest nature. Following the tenet of green production and green manufacturing, we'll continue to drive clean production, energy conservation and consumption reduction in an effort to explore a green, environmental and sustainable development pattern.

Obliged, we move on with our responsibilities, including corporate social responsibilities, with determination and step by step. There'll be innovative breakthroughs in all the domains, e.g. responsibility management, R&D, employee benefit and public benefit. We'll devote every endeavor to a more proactive and smoother relationship with all interested parties.

