

THE BIOTECHNOLOGY
COMPANY™

About Us

Our Vision

Corporate Philosophy

Contributing to the health of humankind through the development of revolutionary biotechnologies such as gene therapy

Through our efforts aimed at life science research support and implementation of advanced medicine such as gene therapy, we are contributing to the creation of a society in which people can stay well and enjoy life.



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Scope of reporting:

Entities within the scope of consolidation of the Takara Bio Group (Some figures included are non-consolidated data.)

Period of reporting:

Fiscal 2023 (From April 1st, 2022 to March 31st, 2023)

*Activities and initiatives implemented in or before 2022 and in or after April 2023 are also reported.

Reference guidelines

IFRS Foundation, “International Integrated Reporting Framework”
Ministry of Economy, Trade and Industry, “Guidance for Collaborative Value Creation 2.0”



Our History

Shifts in Life Science Research and Industry

1970s-1980s

Researches on microbes led to the successive discoveries of restriction enzymes, which recognize and cut certain DNA sequences, and modifying enzymes, which can synthesize, degrade, or bind DNA and RNA. This, together with the invention of PCR technology, laid the foundation for today's biotechnology involving genetic modification.

1920



1980

1990s

The 1990s saw a spread of biotechnology mainly in the developed countries, with universities and corporate research laboratories around the world actively utilizing genetic information to understand biological phenomena and develop practical applications. Under the Human Genome Project, research groups in Japan, the U.S., and other developed countries worked towards complete sequencing of human genome, which would serve as a basis for such genetic research.

1990



2000s

Following on the researches in human genome, the advancement in technologies for measuring biomolecules and processing information gave rise to a surge in the “-omics” studies of proteins (proteomics), transcripts (transcriptomics), metabolites (metabolomics) and others aimed at understanding life as a whole, the fruits of which became available for drug discovery researches. In the field of genomic studies, a series of developments in new-generation sequencing technologies, combined with the advancement in information processing technologies, led to a boom in the utilization of genetic information.

2000



2010

2010s-present

New technologies that make ingenious use of biological phenomena, such as genome editing technologies and stem cell technologies including iPS cells and ES cells, are being discovered or invented and utilized in life science researches. These new technologies are being used to develop pharmaceuticals and therapies.



2020



1925

Established Takara Shuzo Co., Ltd. (currently, Takara Holdings Inc.)

1970

Completed the construction of the Central Research Laboratories in Otsu, Shiga



1979

Commenced sales of the first domestically produced restriction enzymes as reagents for genetic engineering research



1988

Acquired exclusive distribution rights in Japan for a gene amplification system using PCR technology



1993

Obtained worldwide, broad-ranging PCR-related patent licenses



Established Takara Biotechnology (Dalian) Co., Ltd. in Dalian, China, to manufacture life science research reagents



1995

Developed the RetroNectin® method for highly efficient retroviral transduction in hematopoietic stem cells



Established Takara Bio Europe S.A.S. in Paris, France, in order to sell life science research reagents

Established Bohan Biomedical Inc. (currently Takara Korea Biomedical Inc.) in Seoul, Korea

2000

Launched full-scale gene analysis services

2005

Acquired Clontech Laboratories, Inc. (currently Takara Bio USA, Inc.) in the U.S.



2006

Began next-generation sequence analysis services



2008

Started Japan's first sponsor-initiated clinical trial of ex vivo gene therapy

2009

Began iPS cell manufacturing services

2011

Established DSS Takara Bio India Private Ltd. in New Delhi, India

Net sales
R&D expenses
Operating profit



2013

Launched genome editing services



2014

Completed construction of the Center for Gene and Cell Processing in Kusatsu, Shiga

Began full-scale CDMO business*
Acquired all shares of Cellectis AB in Gothenburg, Sweden, making it a subsidiary and changing the trade name to Takara Bio Europe AB (which was absorbed by Takara Bio Europe S.A.S. in 2022)

*CDMO (Contract Development and Manufacturing Organization)
CDMO refers to provision of contract services for drug development and manufacturing, in all steps of the process from formulation to final manufacturing, for clients such as pharmaceutical companies.
Takara Bio provides CDMO focused on regenerative medicine / gene and cell therapy.

2015

Relocated Headquarters functions to Kusatsu, Shiga

Changed listing to the First Section of the TSE

2018

Designated NY-ESO-1 siTCR™ as a product under the SAKIGAKE Designation System

2020

Launched the Center for Gene and Cell Processing II



Began selling Takara SARS-CoV-2 Direct PCR kit, an in vitro diagnostic



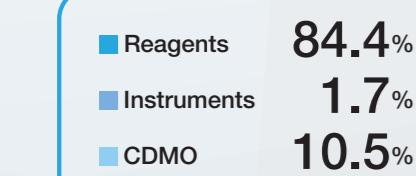
NY-ESO-1 siTCR™ designated as an Orphan Regenerative Medicine

2022

Changed listing to the Prime Market of the TSE

Takara Bio's Progress in Value Creation

Our Business



Net sales:

¥ 78.1 billion
(FY2023)



Gene Therapy Business

Takara Bio is working on the commercialization of its proprietary platform technology for biologics development.

- Platform technology for biologics development
 - RetroNectin®
 - siTCR™ technology
 - JAK/STAT technology
 - CereAAV™ technology
 - RNA technology

Use
→
Licensing

Ancillary materials for gene therapy product manufacture

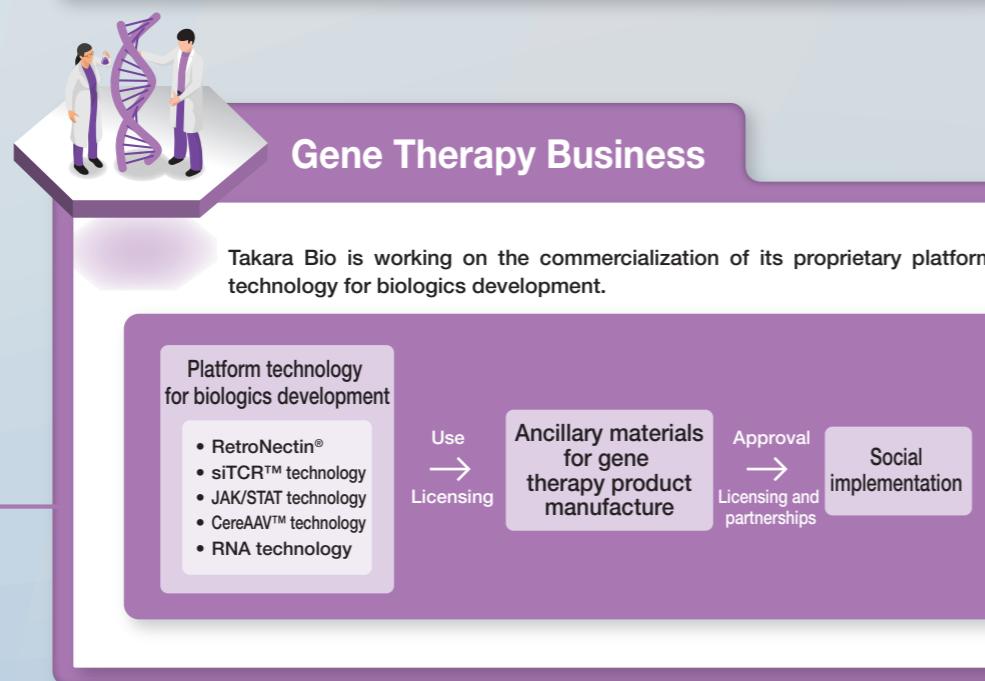
Approval
→
Licensing and partnerships

Social implementation

- Application for marketing authorization of NY-ESO-1 siTCR™ gene therapy product (TBI-1301) utilizing siTCR™ technology in Japan (under preparation)

- Development of JAK/STAT technology suitable for CAR gene therapy and applied development of CereAAV™, a brain-tropic adeno-associated virus vector

- Development, manufacture, and sale of manufacture ancillary materials, such as RetroNectin®, used in the manufacture of gene therapy product

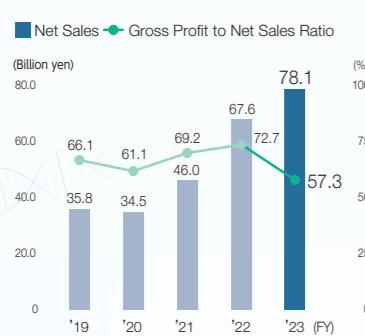




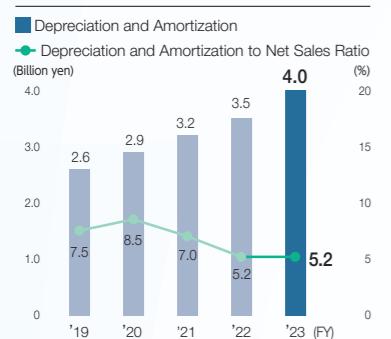
Financial and Non-Financial Highlights

Financial Highlights

Net Sales (billion yen) / Gross Profit to Net Sales Ratio (%)



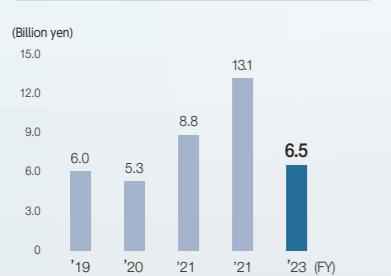
Depreciation and Amortization (billion yen) / Depreciation and Amortization to Net Sales Ratio (%)



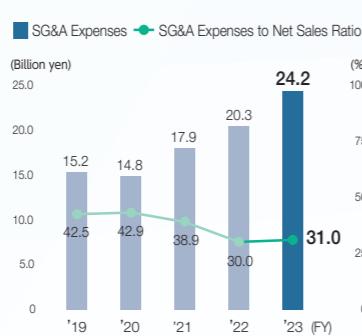
Equity (billion yen) / ROE (%)



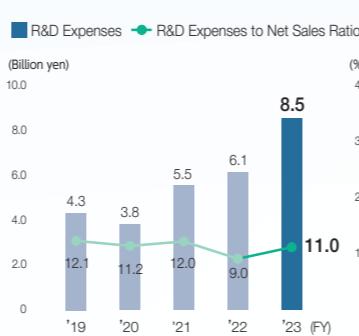
Capital Investment Expenses



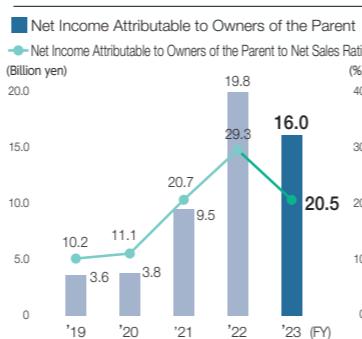
SG&A Expenses (billion yen) / SG&A Expenses to Net Sales Ratio (%)



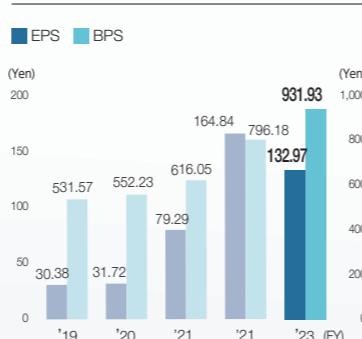
R&D Expenses (billion yen) / R&D Expenses to Net Sales Ratio (%)



Operating Profit (billion yen) / Operating Profit to Net Sales Ratio (%)



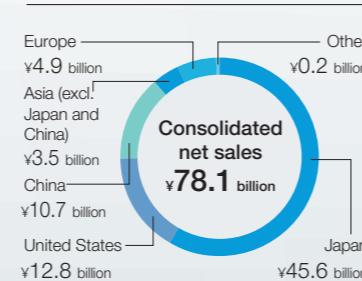
Total Assets (billion yen) / ROA (%)



FY2023 Net Sales by Business Segment (%)

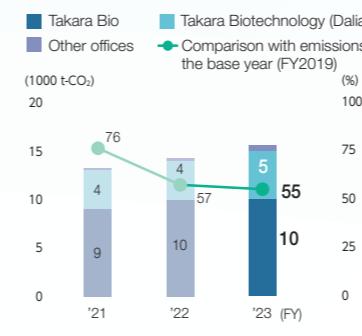


FY2023 Net Sales by Region (billion yen)

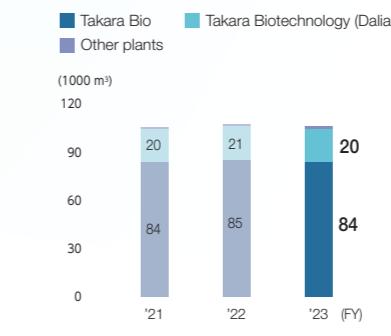


Non-Financial Highlights

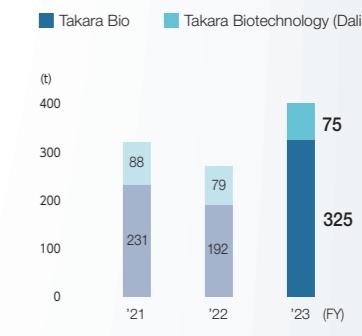
CO₂ Emissions (1000 t-CO₂) / Comparison with Emissions in the Base Year (FY2019) (%)



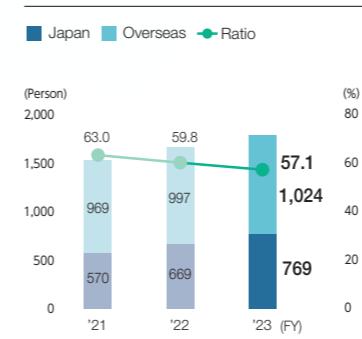
Volume of Water Used (1000 m³)



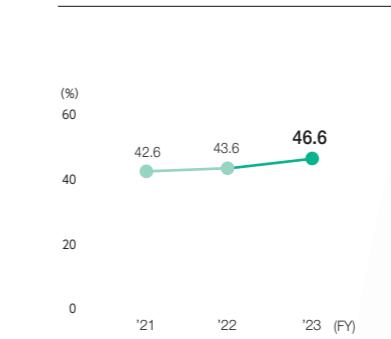
Waste Emissions (t)



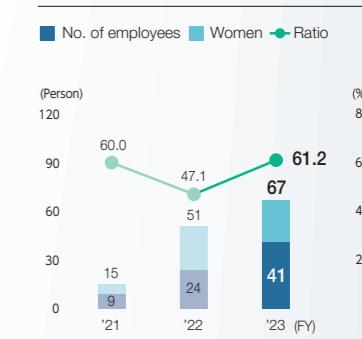
Overseas Employees (%)



Women Employees (%)



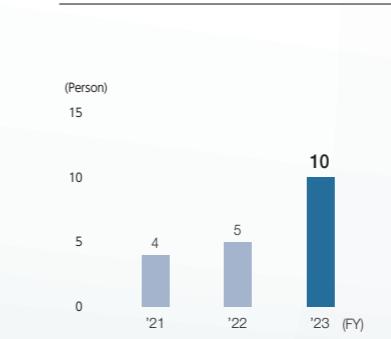
Women in Newly-Graduated Employees (%)



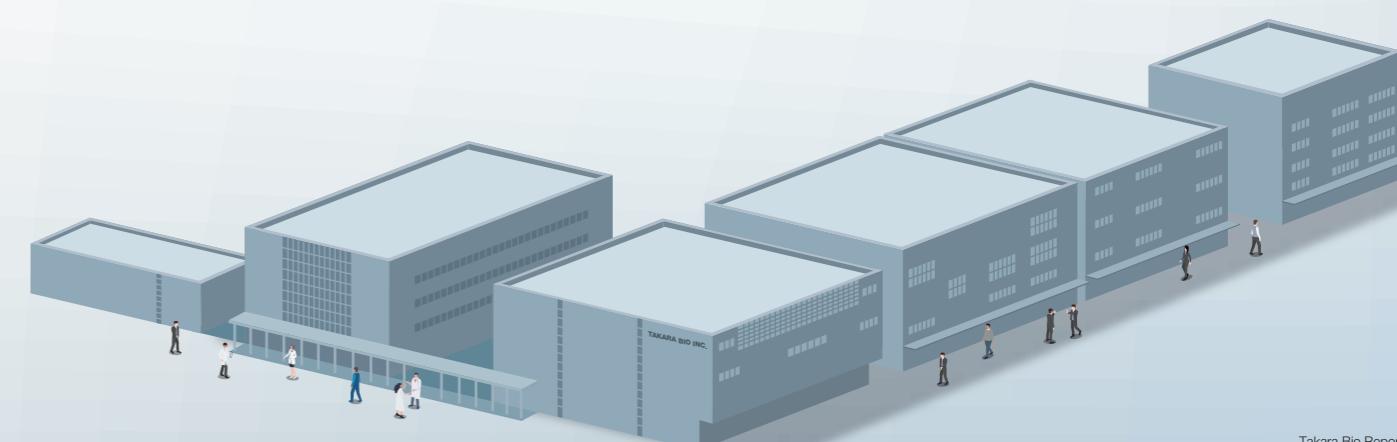
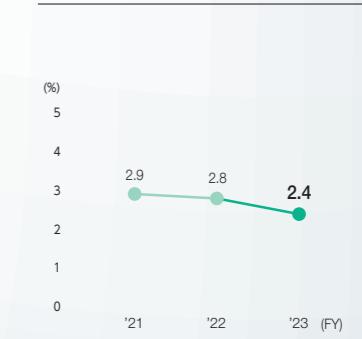
Women in Managerial Positions (%)



No. of Men who Have Taken Childcare Leave



Employees with Disabilities (%)



Message from the President



We aim to be a global platformer that is responsible for the infrastructure of the life science industry through our Reagents/Instruments and CDMO businesses.

Koichi Nakao
President & CEO

Consolidated Business Performance in FY2023

Fiscal 2023 was a year in which we were greatly affected by the spread of COVID-19, the prolonging of the trade friction between the United States and China, and other events. Under these circumstances, through our Reagents/Instruments and CDMO businesses, Takara Bio actively engaged in the stable supply of COVID-19 testing products and in the development of systems for the manufacture of vaccines, as well as other regenerative medicine / gene and cell products. As a result, full-year consolidated net sales in fiscal 2023 increased by ¥10,442 million year-over-year to ¥78,142 million, thanks to the significant growth in COVID-19 testing reagents and the solid performance of general research reagents.

Gross profit fell by ¥4,445 million year-over-year to ¥44,765 million, due primarily to changes in the composition of net sales.

SG&A expenses increased because of proactive investments in R&D and personnel spending, resulting in a decline in operating profit of ¥8,360 million year-over-year to ¥20,541 million.

Formulation of Medium-Term Management Plan 2026

In May 2023, we announced our newly formulated Medium-Term Management Plan 2026. After coming through the business

deficits of our early years, Takara Bio has continued to grow its business performance by expanding the Reagents business overseas, actively developing the CDMO business, and venturing into the development of gene therapy products.

We will now undertake a reset from the COVID-19 framework, in which we allocated management resources intensively on responding to COVID-related demand, and pursue reforms of our business structure. While working to further expand earnings in the Reagents/Instruments and CDMO businesses, we will advance the Medium-Term Management Plan 2026, positioning it as a "second foundation period," in which we will step up to a new stage of growth. We want to take full advantage of the revenue base that we have built up by actively investing in R&D, equipment, and human resources, using the increased earnings of the three years to fiscal 2023 and connect that revenue base to dramatic growth.

In the Medium-Term Management Plan 2026, we have set quantitative targets of ¥15.0 billion in consolidated operating profit and ROE of 8% in fiscal 2026, the final year of the plan. Our KPIs, which are the process indicators for achieving those quantitative targets, call for consolidated net sales of ¥68.1 billion and R&D expenses of approximately ¥9.0 billion annually, forming the foundations for dramatic growth.

Breaking free from the COVID cliff of plummeting sales after the end of the pandemic, we will halt that decline in fiscal 2024 and return to a growth trajectory. In addition, we hope to achieve the quantitative target of ¥10.0 billion in consolidated operating profit for the final year of our Long-Term Management Plan 2026, which began in fiscal 2021, ahead of schedule.

Aim to be a Global Platformer Responsible for the Infrastructure of the Life Science Industry

The COVID-19 pandemic triggered an awareness among the whole of society that technologies and products that applied biotechnology, such as PCR tests and mRNA vaccines, are essential to healthy living. We believe that this phenomenon has been a major environmental change affecting our business.

The Basic Policy on Economic and Fiscal Management and Reform announced in fiscal 2023 and other basic policies of the Japanese government contain clear references to "biomanufacturing" and other biotechnology areas, such as regenerative medicine / gene and cell therapy as priority investment areas. It could be said that the proactive budgetary measures put in place by the government under such policies have provided a tailwind for our business.

On the other hand, large corporations in other fields have seen this as an opportunity and are entering the life sciences sector, leading to more intense competition.

Under such circumstances, based on our core competencies of genetic engineering and cellular engineering technologies, we will advance our proprietary technologies even further while expanding into new markets and customers. We have positioned our aim to be a global platformer that is responsible for the infrastructure of the life sciences industry as our basic strategy for business growth, under which we will strive for dramatic growth in the years ahead. Specifically, we see our direction as expanding from the business of supporting *research* in the life sciences sector, with academic researchers as our major customers, to the area of support for *industries* related to health and medicine, serving pharmaceutical companies and startups.

In the Reagents business, we will develop "glocal," that is, global and multipolar, marketing and sales strategies to suit regional characteristics and aim for stable growth in each region.

Until recently, we have targeted universities and other research institutions in our product development and sales activities in the basic research sector. Going forward, in addition to these institutions, we also want to strengthen our new product development in industrial and clinical application sectors. To this end, we will maximize the synergies between Japan, United States, and China by dividing R&D themes among them and optimizing our systems for collaboration between these locations.

We will proceed with the restructuring of our reagent manufacturing systems from the dual perspectives of further strengthening the competitiveness of the Group as a whole and business continuity planning that is conscious of pandemics and geopolitical risks. We will transfer manufacturing of reagents from our core plant in Dalian, China to our hubs in Japan, the United States, Europe, and India and establish structures that will enable us to act glocally in each region.

In the Instruments business, demand for PCR instruments increased during the COVID-19 pandemic, and the testing market is expected to expand going forward. To meet that demand, we will pursue the development of testing systems comprising new devices and specialized reagents for a variety of applications. In terms of single-cell analysis system, needs are growing in fields such as ultralow input genetic analysis, so we will work on the development of new models that have improved functions and usability and added applications.

In the CDMO business, we provide contract services related to regenerative medicine products to support the development and manufacture of regenerative medicine / gene and cell therapy products, and contract services related to gene analysis and testing, to support genome analysis and other projects. Development activities are heating up here in Japan as well. Takara Bio has also firmly identified these trends, and we have positioned this area as a key business that should be made into a driver of future growth.

In addition, our manufacturing and analysis facilities, which have one of the largest capacities in Japan, form the foundation of our CDMO business. For the CDMO services related to regenerative medicine products, the Center for Gene and Cell Processing I, which began operation in 2014, and the Center for Gene and Cell Processing II, which began operation in 2020, continue to be fitted with the most advanced equipment. Furthermore, we have started building the Center for Gene and Cell Processing III with the aid of government subsidies under the project for "Developing biopharmaceutical manufacturing sites to strengthen vaccine production project", which was adopted in fiscal 2023. Construction is scheduled for completion in 2027.

In particular, in Center for Gene and Cell Processing II, we have completed installation of equipment of a 3,000-liter scale that will enable the large-scale manufacture of viral vectors using cell suspension culture. Final preparations are currently underway to put this equipment fully into service before the end of fiscal 2024. Further, in the area of cell processing, which we are working to bring to market, we have set up a large manufacturing room that is able to accommodate large-scale commercial production of cell preparations. This chamber is fitted with multiple isolators, built to our own specifications, that guarantee the highest level of sterility. These isolators can also be linked to digital tools to strengthen assurances of data quality and increase productivity of cell manufacture.

Business Performance since Takara Bio's Establishment and the Medium-Term Management Plan 2026



Message from the President

The development of quality testing methods in the development and manufacture of new modalities is another area in which Takara Bio excels. We are establishing systems that will provide a one-stop service for everything from the manufacture of various modalities, that is different types of gene therapy methods, including mRNA vaccines, to quality testing in both their tangible and intangible aspects.

In the field of contract services related to gene analysis and testing, leveraging the capacity and reliability assurance systems of one of Japan's largest gene analysis centers, we will strive to develop businesses such as contract services for government-led genome analysis projects.

The analysis of gene sequences in a device called a sequencer requires "pre-treatment" processes, including processing and preparing DNA and RNA extracted from cells and other samples into particular forms and confirming their quality.

Takara Bio has many proprietary technologies in these pre-treatment processes for the analysis of ultralow nucleic acid extracted from those cells, such as technology to separate and prepare cells one by one and technologies that are useful. We also develop and sell related reagent products. Drawing on these technologies and products, we will work to enhance our services in reproductive health technology testing, such as liquid biopsy tests and preimplantation diagnosis, and services for clinical applications such as disease biomarker discovery, and expand our projects to support clinical development by the pharmaceutical companies.

At our Center for Gene and Cell Processing and Gene Analysis Center, we will strive to further increase productivity while actively promoting the digital transformation of manufacturing. We have also established a technical training center, where we conduct educational and technical training of our personnel involved in manufacturing. We will further focus our efforts on making our quality control systems more robust and on strengthening our human resources development and technological capabilities.

In the Gene Therapy business, we will strengthen our development and manufacture of ancillary materials that are essential to the manufacture of regenerative medicine / gene and cell therapy products and vaccines. Specifically, we plan to further expand our manufacturing capacity of RetroNectin®. RetroNectin® is a product developed independently by Takara Bio. As a manufacturing ancillary material that dramatically improves the efficiency of introduction of genes into cells, it has been registered on the Food and Drug Administration (FDA)'s Drug Master File, and demand for it is growing around the world.

Further, we are focusing our efforts on the development of new products for the manufacture of regenerative medicine / gene and cell therapy products, such as enzymes for use in the manufacture of mRNA vaccines.

Regarding NY-ESO-1 siTCR™ gene therapy product, for which we aim to obtain marketing authorization ourselves, while proceeding with the preparation of our application for authorization in Japan, we will work to build post-market supply systems, including manufacturing, quality assurance, and logistics systems.

Additionally, as well as obtaining data for the clinical application of proprietary platform technology for biologics development that will be useful in improving the safety and

efficacy of gene therapy products, such as JAK/STAT technology, clinical trials for which have begun in Canada targeting blood cancer, and CereAAV™ technology, which carries genes efficiently to cells in the brain and inside the retina, we will also pursue the extension of their application into the CDMO business.

Promoting Sustainability Activities

In the Medium-Term Management Plan 2026, Takara Bio will address various social issues through our business activities and promote sustainability activities with the aim of striking a balance between the realization of a sustainable society and the achievement of the sustainable growth of the Takara Bio Group. We have defined eight important issues, or materialities, such as wellness and safety, giving additional consideration to their impact on the Group's business and stakeholder expectations, which we will re-examine as necessary.

One of our first priority measures is to reduce our CO₂ emissions. Specifically, we will aim to reduce CO₂ emissions per unit of revenue (emissions intensity) to 50% of that of fiscal 2019 in fiscal 2026.

As Takara Bio Group expands its business and makes more capital investments, our CO₂ emissions are expected to increase. As far as possible, we will promote the use of renewable energy and energy conservation activities. Regarding the Task Force on Climate-related Financial Disclosures (TCFD), in addition to enhancing the contents of our disclosures, in terms of the global issue of human rights, we will promote human rights due diligence and reduce human rights risks by identifying and evaluating human rights risks within the Takara Bio Group and in our value chain.

Over the three or so years of the COVID-19 pandemic, while responding to changes in the internal and external environments, we have pursued proactive business development leveraging our core competency of gene-handling technologies, in our efforts to enhance corporate value.

To our shareholders, investors, and all of our stakeholders, we deeply appreciate your ongoing support.



Takara Bio Group Medium-Term Management Plan 2026

Takara Bio Inc. (Takara Bio) has formulated its Medium-Term Management Plan 2026 (the "New Medium-Term Management Plan") for the three-year period ending in fiscal 2026 (year ending March 31, 2026). The New Medium-Term Management Plan sets forth specific action plans for the last three years of the Long-Term Management Plan 2026 (fiscal 2021 to fiscal 2026) formulated in fiscal 2021.

Term	FY2024–FY2026 (3 years)	Quantitative targets (FY2026)	Operating profit	¥15.0 billion	ROE	8% or more
General policy	Achieve the quantitative targets of the Long-Term Management Plan 2026 ahead of schedule and accomplish dramatic growth	KPI*	Net sales	¥68.1 billion	R&D expenses	¥9.0 billion

*KPIs (Key Performance Indicators): Process indicators for the achievement of quantitative targets

1 Business Strategy

- Establish a position as a global platformer responsible for the infrastructure of the life science industry
- Establishment of a glocal manufacturing and marketing system
- Strengthening of quality control processes and manufacturing technologies
- Maximize the value of platform technology for biologics development
- Accelerate the development speed of new products and services by selecting and focusing on R&D projects

2 Strategies of Individual Businesses

(1) Reagents Business

- Aim to grow 7% annually (local currency basis) by developing a glocal marketing/sales strategy tailored to regional characteristics, such as expanding sales of B-to-B custom-made products
- Strengthen development of new products in the industrial and clinical application fields
- Optimize R&D systems and create synergies in Japan, United States, and China R&D structures
- Build a global, multipolar manufacturing system based on a balance between improved efficiency and risk reduction

(2) Instrument Business

- Accelerate the development of new single-cell analysis system (iCELL8® series)
- Systemization by developing a new model of qPCR instruments for the laboratory testing market and developing panel-based reagents

(3) CDMO Business

- ① Contract services related to regenerative medicine products
 - Expand CDMO menu for various modalities and mass manufacturing
 - Cost reductions through robust manufacturing, quality control processes and automation
 - Preparation for construction of the Center for Gene and Cell Processing III (construction to start in fiscal 2025 for completion in fiscal 2028)

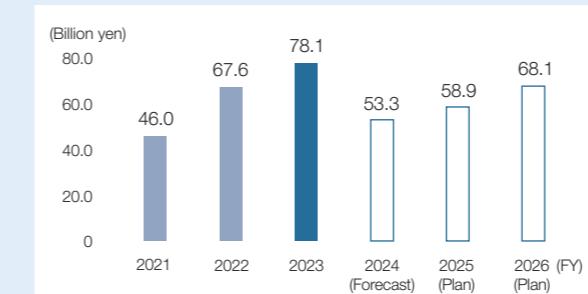
- ② Contract services related to gene analysis and testing
 - Development of analysis/sample preparation and processing technology utilizing liquid biopsy technology
 - Develop NGS-related services for clinical applications
 - Development of biologics development support services through advanced multi-omics analysis

(4) Gene Therapy Business

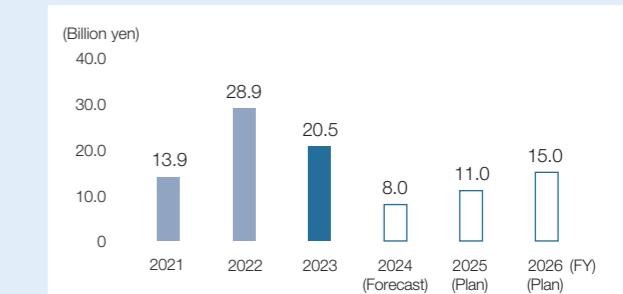
- Aiming to launch NY-ESO-1 siTCR™ gene therapy product (TBI-1301)
- Acquire clinical data for JAK/STAT and CereAAV™ technologies and apply to CDMO Business
- Increase RetroNectin® production capacity
- Develop and commercialize enzymes for mRNA synthesis as Ancillary Materials (raw materials for manufacturing biologics, etc.)

Performance Trends (Plan) in the Medium-Term Management Plan 2026 (FY2024–FY2026)

Net sales



Operating profit



3 Strategies for Strengthening the Management Foundation

(1) Finance

We will continue to invest aggressively in growth and strengthening areas while maintaining financial soundness. In addition, we will improve ROE by maintaining appropriate shareholder returns, and promote management that is conscious of capital costs and market valuation.

- Invest ¥27.0 billion in R&D expenses over three years to optimize development themes and strengthen collaboration between Japan, the U.S. and China
- Planning capital investments of approximately ¥46.0 billion over three years, including the Center for Gene and Cell Processing III.
- Plan to return ¥10.0 billion to shareholders over three years.

(2) Human Resources and Organization

In addition to strengthening the links between the company and its employees, we will create a suitable work environment and implement personnel measures as a foundation for quantum growth.

- Human resources: Shift from recruitment to training and develop human resources capable of responding to change.
- Organization: Realize organizational development that can flexibly adapt to difficulties.
- Suitable work environment: Develop a work environment where diverse human resources can demonstrate their abilities.

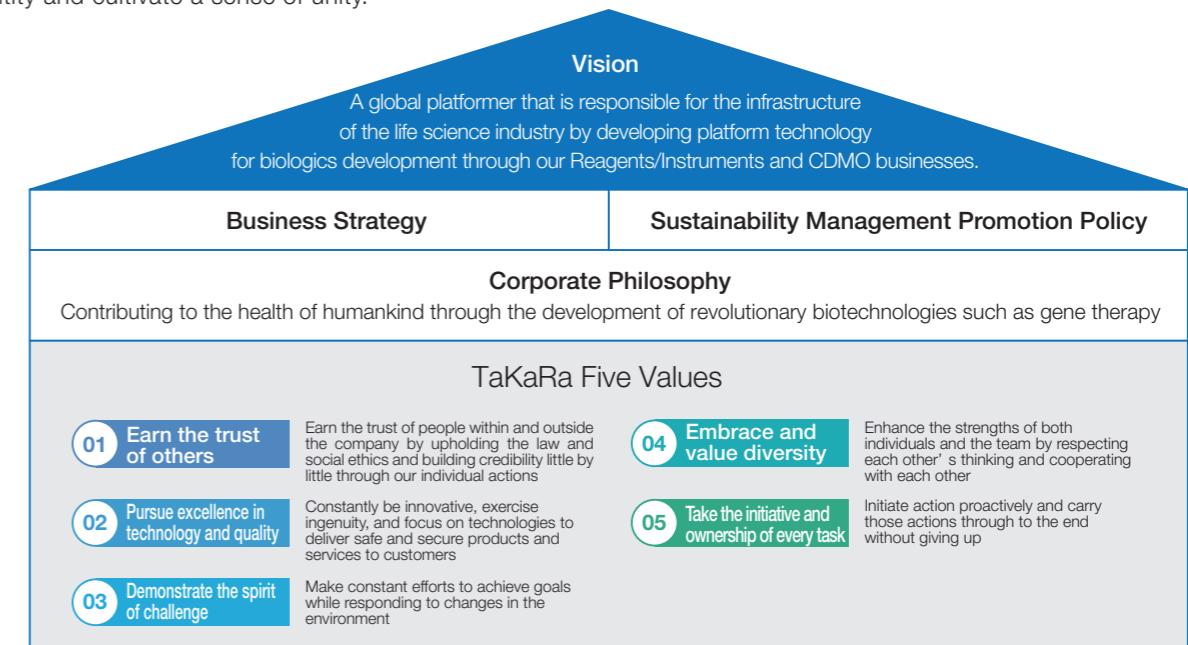
(3) Creating Social Value (Sustainability Activities)

We will address various social issues through our business activities and promote sustainability activities with the aim of striking a balance between the realization of a sustainable society and the achievement of the sustainable growth of the Takara Bio Group.

- Reduction of CO₂ emissions: Promote reduction of CO₂ emissions per unit of revenue (emissions intensity) by 50% from fiscal 2019 (base year) through the use of renewable energy and energy-saving activities, even while CO₂ emissions are expected to increase due to expansion of business activities, expansion of facilities, etc.
- Strengthening the level of disclosures according to the Task Force on Climate-related Financial Disclosures (TCFD)
- Human rights due diligence: Reduce human rights risks by identifying and evaluating human rights risks in the Takara Bio Group and the value chain

Takara Bio Group Identity

The TaKaRa Five Values are the common values of the Takara Group. They indicate our fundamental values in terms of what we hold dear and what we should do as a corporation, re-expressing, in a way that is accessible to our employees in response to changes in the times and globalization, the thinking and spirit behind the Takara Group's corporate motto of "Three Points of Importance, Three Points of Care." With this as our common foundation, the Takara Bio Group has established a Corporate Philosophy, Business Strategy, Sustainability Management Promotion Policy, and Vision. By communicating these throughout the Group, we are working to confirm our organizational identity and cultivate a sense of unity.



Long-Term Management Plan 2026 (FY2021-FY2026)

The Long-Term Management Plan 2026 indicates our ideal for fiscal 2026 based on our corporate philosophy of "contributing to the health of humankind through the development of revolutionary biotechnologies such as gene therapy."

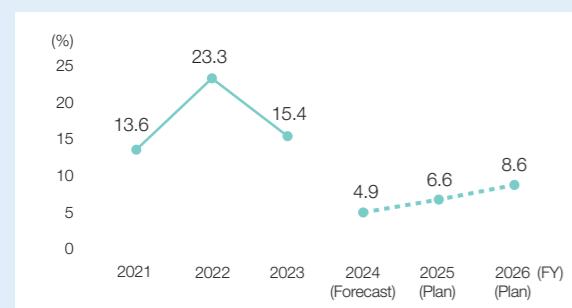
Vision (Ideal)

We aim to be a global platformer that is responsible for the infrastructure of the life science industry by accelerating development of platform technology for biologics development through our Reagents/Instruments and CDMO businesses.

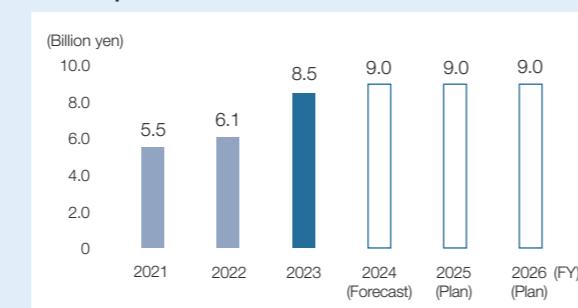
Quantitative targets (FY2026)

Operating profit **¥10.0 billion**
ROE **8% or more**

ROE

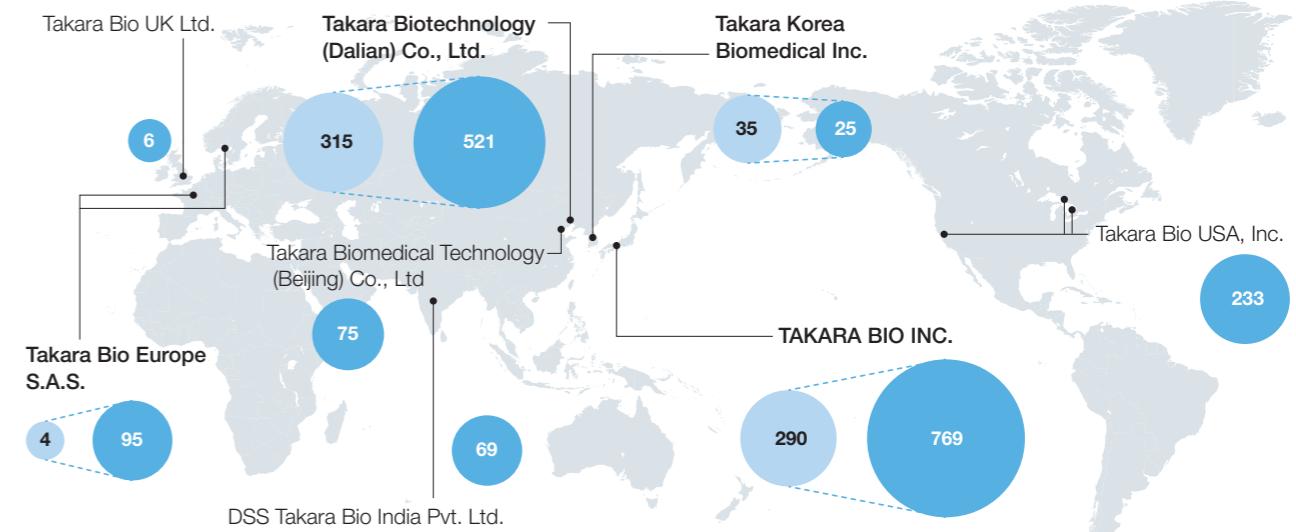


R&D expenses



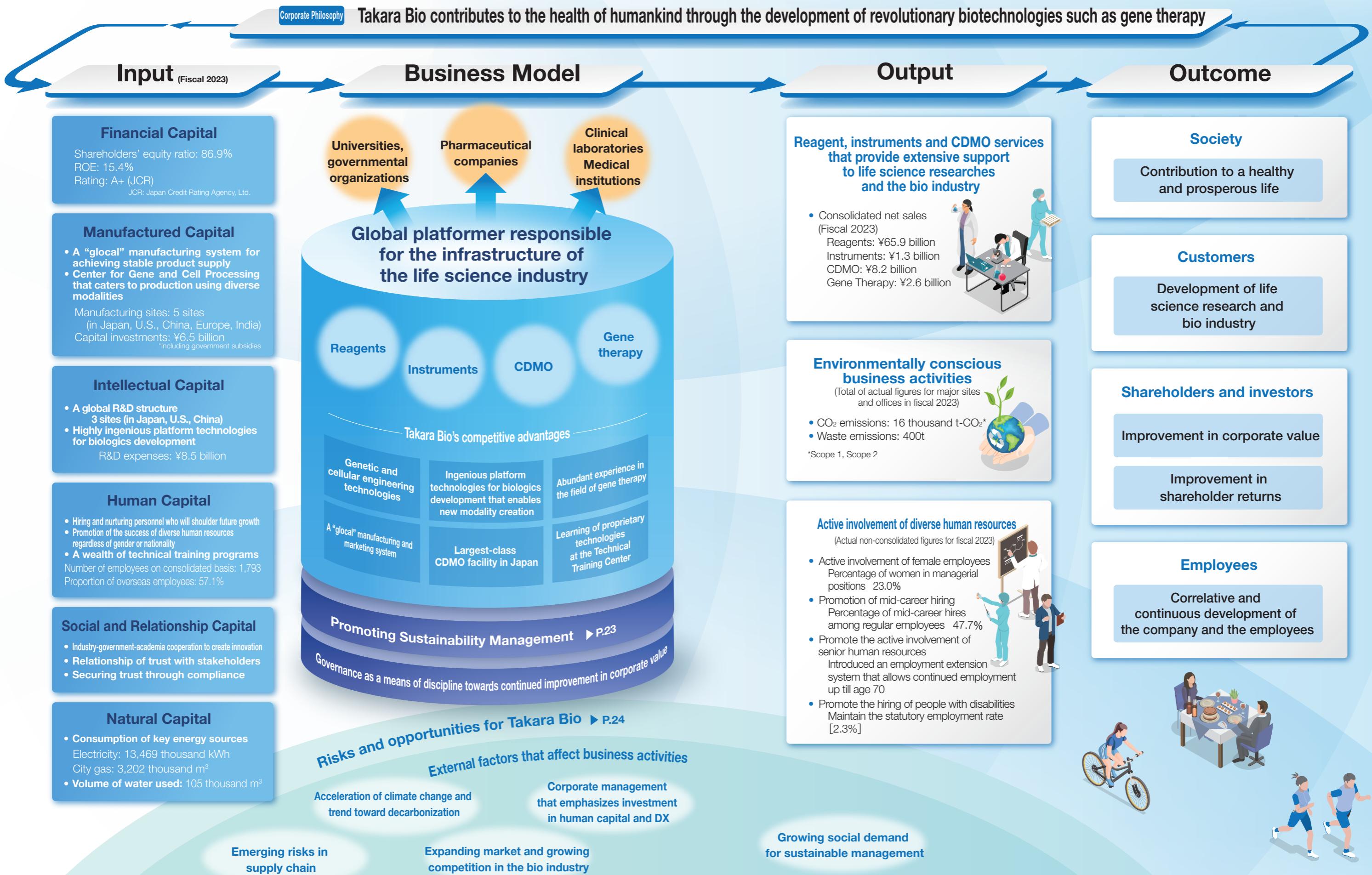
The Expansion of the Takara Bio Group

The number of Group employees has increased significantly from 686 when the company was established at the end of fiscal 2003 to 1,793 at the end of fiscal 2023. 1,024 of those employees work at our overseas subsidiaries in seven countries, including the United States, China, and several European countries. We are extending the TaKaRa Five Values to each of the Takara Bio Group companies that do business around the world.



* Includes the number of employees of subsidiaries that existed on March 31, 2003.

Value Creation Process



Aiming for the Realization of a Healthy Society through the Development and Stable Supply of PCR Products

Expansion of PCR-Related Business into Industrial Fields

During the COVID-19 pandemic, PCR testing has become a familiar presence. In PCR testing, traces of DNA, or the genetic information of cells and microorganisms (bacteria and viruses), contained in a sample are amplified in large quantities over a short period of time for detection (analysis) purposes. Initially, the main use of PCR was for basic research in academic fields, but thanks to its advantages, which include speed, simplicity and accuracy, its application eventually spread to industrial fields, such as infectious disease testing and food and environmental hygiene testing.

Areas where the industrial use of PCR testing is growing

Water quality testing

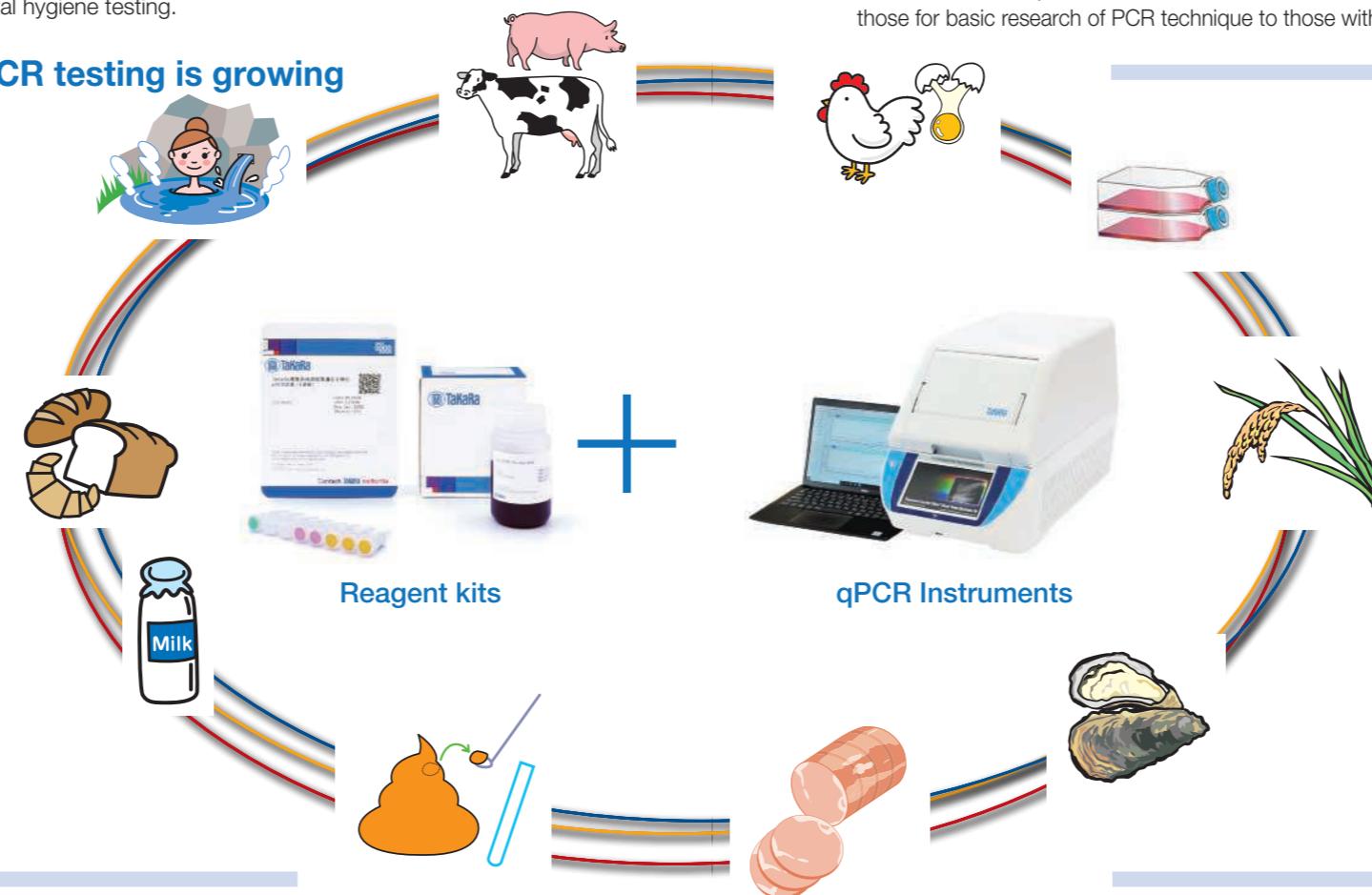
Tests are conducted for *Legionella* spp. that contaminates cooling tower waters, circulating water baths, hot springs, and other places.

Food testing

PCR's short testing time makes it effective for testing foods with short expiration dates.

Stool testing

Kitchen workers are tested for Norovirus, enterohemorrhagic *E. coli*, *Salmonella* spp., and *Shigella* spp.



Advantages of PCR Testing

Microbiological testing is one of the specialty areas of PCR testing. In the past, microbiological testing often involved processes such as culture tests that require special techniques, microscopic observation of morphology, and biochemical tests. Switching to PCR testing has brought many advantages.

- Shorter testing times (in many cases, results can be obtained in one day)
- Even novice users can obtain objective and accurate results
- Able to test many samples (specimens) simultaneously at once (high-throughput screening)
- Able to standardize multiple testing methods, such as culturing and microscopy
- Highly safe and with less waste generated by testing
- Able to detect pathogenic factors and identify related species based on genetic information
- Easy to conduct quantitative analysis

Takara Bio's Efforts in PCR Field

The PCR technique was developed by an American company in the 1980s. In 1988, Takara Bio obtained exclusive rights to distribute PCR systems in Japan and worked to promote PCR techniques. Later, we concluded an extensive, worldwide PCR-related patent license agreement, after which we began manufacturing PCR-related products ourselves. We develop and sell a wide range of products as genetic research reagents to life science researchers worldwide. During the pandemic, we developed products that enable PCR testing directly from saliva to simplify PCR testing, and strived to supply these products in a stable manner.

Takara Bio Group contributes to the health of humankind by offering PCR products for a wide range of applications, ranging from those for basic research of PCR technique to those with industrial applications.

Livestock infection testing

PCR testing is conducted to minimize economic losses from livestock infections, such as swine fever, African swine fever, and bovine leukemia virus.

Forensic testing and cell testing

This involves amplification of traces of DNA (genes) from blood, hair roots, and cell fragments and using them to detect disease-related genes and to identify individuals.

Crop type identification

PCR testing can accurately identify the variety of agricultural products at a genetic level.

Food poisoning testing

The PCR technique is used to test for food contamination by pathogenic microorganisms, such as norovirus and enterohemorrhagic *E. coli* O157.

Message from the executive in charge

We are developing PCR reagents and other products that can be useful even outside the laboratory

Takara Bio has developed research reagents for analyzing genes and cells, which we supply to researchers in the life sciences field all over the world. Many of these technologies are useful in other industrial fields, as well as research fields. The PCR technique, which is one such useful technology, is beneficial in various fields, such as infectious diseases, food, and environmental health. Until now, we have been developing products on the assumption that technicians and researchers with specialist skills would be handling the equipment and reagents in a laboratory setting. Our current aim, however, is to develop products that are faster, simpler, and better suited to the needs of actual medical and testing settings outside labs.



Tsuyoshi Miyamura,
Senior Managing Director

Growth of CDMO Business for Gene and Cell Therapies

Takara Bio aims to achieve business growth centering on both its Reagents and CDMO businesses. In the CDMO business, we draw on our extensive experience in the development of gene and cell therapies to support the pharmaceutical companies' development and manufacturing of gene and cell therapies as a CDMO. Compared with the CDMO business for antibody-drugs, etc., the CDMO business for gene and cell therapies must deal with a variety of modalities simultaneously. Takara Bio has established the Centers for Gene and Cell Processing, one of the largest dedicated facilities in Japan, which offer a diverse menu in the areas of vector manufacturing, cell processing, quality testing, and gene analysis and testing, to meet the needs of a growing market.

CDMO Services

Vector manufacturing

We manufacture vectors that carry therapeutic genes inside the body and to cells in accordance with GMP/GCTP* standards. Takara Bio has a track record of manufacturing almost every vector used for therapeutic purposes. We are able to provide total support from small-scale test manufacturing in the initial stages of development to large-scale manufacturing for late-phase clinical trials and commercial production.

*Standards for manufacturing control and quality for pharmaceutical and regenerative medicine products

Cell processing (manufacturing of cell preparations)

We manufacture cell-based therapeutics (cell preparations), such as iPS cells, mesenchymal stem cells, and CAR-T cells (genetically modified cells). This work is performed in our 14 dedicated manufacturing rooms (cell processing rooms).

Quality testing

For manufactured gene and cell therapies, we provide a variety of testing services required for pharmaceuticals.

Gene analysis and testing (Photo 4 on page 20)

With our state-of-the-art next-generation sequencers (NGS), we provide a variety of gene analysis and testing services, from large-scale whole human genome projects to genetic analysis of gene and cell therapies and genetic analysis of COVID-19 variants.

Market for Gene and Cell Therapies

The market for gene and cell therapies is expected to grow at a rapid pace of about 30% annually until 2030. The outsourcing needs of pharmaceutical companies that are advancing development are growing steadily, and the CDMO market for cell and gene therapies is also expected to grow.

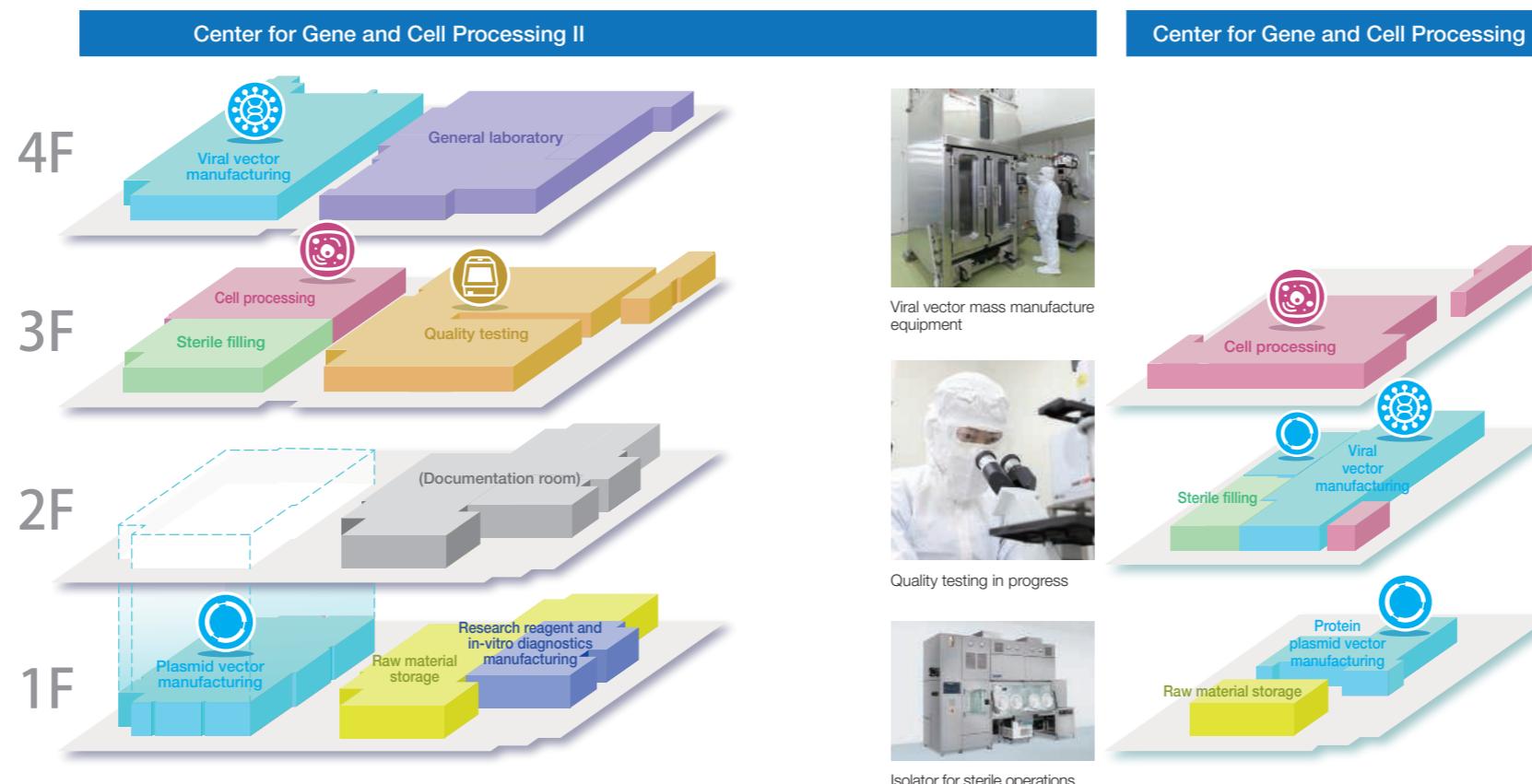
Modalities	2020	2030	Annual growth rate
Gene and cell therapies			
Regenerative medicine	¥280.0 billion	¥2.6 trillion	28%
In vitro gene therapies	¥140.0 billion	¥2 trillion	31%
In vivo gene therapies	¥210.0 billion	¥2.9 trillion	30%
Conventional pharmaceuticals			
Small molecule compounds	¥48 trillion	¥55 trillion	Slight increase
Protein drugs	¥6.4 trillion	¥10 trillion	4%
Antibody drugs	¥16 trillion	¥23 trillion	8%

Source: Prepared by Takara Bio based on handouts from a meeting of the Headquarters for Healthcare Policy (December 23, 2020)

Initiatives for mRNA Vaccine Production and Ancillary Materials Supply

mRNA vaccines were developed and put into practical use during the COVID-19 pandemic. A growing number of pharmaceutical companies are working to develop mRNA, due to expectations of the technology as a treatment for cancer and other diseases, in addition to vaccines. mRNA is manufactured using technology similar to that used in the manufacture of gene and cell therapies. At Takara Bio as well, we are working to win contracts for the manufacture of active pharmaceutical ingredient, API as a part of our CDMO business. The manufacture of mRNA requires ancillary materials (enzyme groups) called modifying enzymes. Takara Bio is developing these materials with the aim of supplying them in large quantities at grades suitable for pharmaceutical manufacture.

We also plan to build a full-scale manufacturing facility for mRNA and ancillary materials (the Center for Gene and Cell Processing III), taking advantage of subsidies from the Ministry of Economy, Trade and Industry. This facility will be a "dual-use" facility, in which manufacturing and supply of vaccines will be conducted at the request of the government in case of emergencies such as a pandemic, while in normal times, we will operate its own business at this facility.



Takara Bio Headquarters (Kusatsu, Shiga)

(1) Center for Gene and Cell Processing I

(2) Center for Gene and Cell Processing II

(3) Center for Gene and Cell Processing III

* Blue Construction start: FY2025; Completion: 2027

(4) Headquarters Office and Research Laboratory:

(3F: Gene analysis and testing facility)

Message from the executive in charge

We provide a one-stop operation from the manufacture of various modalities for gene and cell therapies to quality testing

Our Centers for Gene and Cell Processing are the hub for our CDMO business, and the Center for Gene and Cell Processing I started operation in 2014 as a facility for contract development and manufacturing of gene and cell therapies for pharmaceutical companies. To meet growing demand since then, the Center for Gene and Cell Processing II started partial operations in 2020. The expansion of this second center will be completed in fiscal 2024 with the addition of a large 3,000 liter-class bioreactor for virus vector manufacturing and a cell processing room with a proprietary isolator for cell preparations. Along with the expansion, preparations such as training of specialist personnel are well underway. At Takara Bio, we will work on establishing a one-stop system, from manufacturing various modalities to quality testing in both their tangible and intangible aspects.



Junichi Mineno,
Director & Vice President

Message from the Officer in Charge of Business Administration

We will aim to achieve dramatic growth by taking full advantage of our earnings base.

Yoh Hamaoka, Senior Managing Director



FY2023 Business Environment and Performance

Fiscal 2023 was a year of great uncertainty due to various factors, including the COVID-19 pandemic, Russia's invasion of Ukraine, trade friction between the United States and China, and ongoing inflation in Europe and the United States. While on the one hand, we are seeing continued expansion in the bioindustry domain that is Takara Bio's area of business, on the other hand, competition in the domain is becoming more intense.

Net sales in fiscal 2023 increased by ¥10.4 billion, or 15.4%, year-over-year to a record-high ¥78.1 billion, thanks to significant growth in COVID-19 testing reagents and the solid performance of general reagents for research purposes. Gross profit fell by ¥4.4 billion, or 9%, year-over-year, primarily due to changes in the composition of net sales. The main cause was that the antigen test kits for COVID-19 that we launched in April 2022, which have a relatively low profit margin, accounted for a larger share of sales. SG&A expenses increased due to proactive investment in R&D and personnel spending for future growth, resulting in a decline in operating profit of ¥8.3 billion, or 28%, year-over-year to ¥20.5 billion. ROE was 15.4%.

For these reasons, in fiscal 2023, the final year of the Medium-Term Management Plan 2023, we were able to significantly exceed the plan's quantitative targets of ¥6.5 billion in operating profit and ROE of 6%.

Financial Strategy of the Medium-Term Management Plan 2026

In May 2023, Takara Bio announced the Medium-Term Management Plan 2026. The New Medium-Term Management Plan sets forth specific action plans for the last three years of the Long-Term Management Plan 2026 formulated in 2020, with the aim of achieving the quantitative targets of the Long-Term Management Plan 2026 ahead of schedule.

Our business results under the Medium-Term Management Plan 2023 increased significantly due to strong demand for COVID-19 testing reagents, but during the period of the Medium-Term Management Plan 2026, we expect to face what has been described as the COVID cliff (a sudden drop in results after COVID-19), which will see results fall below those of the previous medium-term management plan. Operating profit for fiscal 2023 was ¥20.5 billion, but is expected to fall to ¥8.0 billion for fiscal 2024. However, when we consider the growth in COVID-19-related sales as a special factor and exclude it when we look at performance trends, both net sales and operating profit are growing steadily, and we will continue to aim for higher earnings in fiscal 2024 and beyond.

In our financial strategy for the Medium-Term Management Plan 2026, we will continue to invest aggressively in growth and strengthening areas while maintaining financial soundness. We will also aim for higher ROE by maintaining appropriate shareholder returns. As of the end of fiscal 2023, Takara Bio has a shareholders' equity ratio of 86.9% and cash and deposits of

¥51.8 billion. We believe that we remain in a favorable financial position. In addition, over the three years of the Medium-Term Management Plan 2026, we expect operating cash flow to be ¥62.0 billion (before deducting R&D expenses). We plan to put these funds toward R&D expenses and capital investments to drive future growth, and toward shareholder returns. We plan to invest ¥27.0 billion in R&D over three years to optimize development themes and strengthen collaboration between Japan, the U.S. and China. Our capital investment plans amount to ¥46.0 billion and include building the Center for Gene and Cell Processing III, which we have planned for the headquarters precinct in Kusatsu, Shiga Prefecture, and upgrading our clinical laboratory at our United States hub. By putting these financial plans and business plans into practice, we aim to achieve ¥15.0 billion in operating profit and ROE of 8% in fiscal 2026, the final year of the plan.

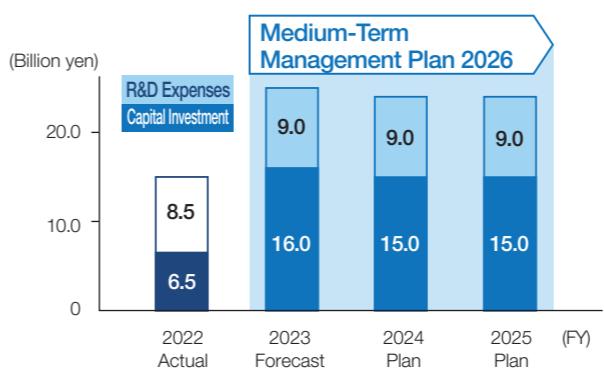
In terms of cost of equity and market valuation, we have put cost of equity at around 6.5%, but as a result of the major leap in operating profit under the Medium-Term Management Plan 2023, ROE grew and remained significantly higher than cost of equity. While ROE will likely fall below cost of equity in fiscal 2024 temporarily, partly due to the impact of the COVID cliff, we expect it to rise once again to above cost of equity in fiscal 2025. PBR should also improve due to the widening of our equity spread.

Outlook for FY2024 Business Performance

In fiscal 2024, based on the expectation that demand for COVID-19 testing reagents will decline, we anticipate a drop in overall net sales. Nevertheless, we expect an increase in revenue from non-COVID-related reagents, instruments, CDMO, and gene therapies.

On the other hand, with the planned increase in SG&A expenses due to proactive investments in R&D and personnel spending, both operating profit and ordinary profit are expected to fall. As a result, our performance forecasts are ¥53.3 billion in net sales and ¥8.0 billion in operating profit.

Capital Investments and R&D Expenses



Shareholder Return Policy

Conscious that we are still in the process of growing our business, we believe that, at this stage, we should continue to be flexible in allocating funds to R&D and capital investments, and we recognize the importance of enhancing our internal reserves. At the same time, we will also place greater emphasis on shareholder returns. In terms of payout ratio, our standard until fiscal 2022 had been 20% of expected net income, not accounting for extraordinary gains or losses, but from fiscal 2023, we are looking toward a payout ratio of 35%. In accordance with this policy, we anticipate dividends of around ¥10.0 billion over the three years of the Medium-Term Management Plan 2026.

Under this dividend policy, we paid a dividend of ¥42 per share in fiscal 2023, while in fiscal 2024, we anticipate that it will be ¥17 per share. This will be the first time since we began to issue dividends that we will pay less than the previous year, but we humbly ask for our shareholders' understanding.

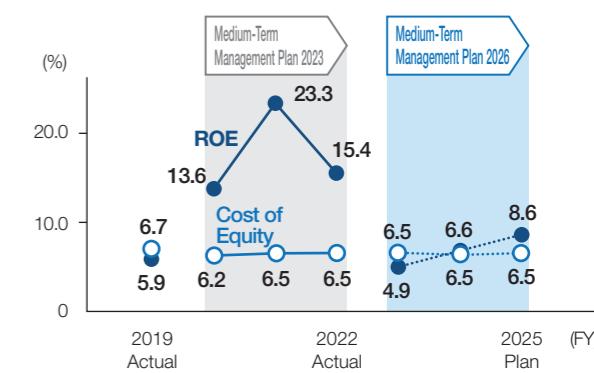
Issues and Initiatives in Sustainability Activities

To date, Takara Bio has promoted its sustainability activities with eight materialities, namely wellness, safety, governance, environment, human rights, human resources, procurement, and community. In the Medium-Term Management Plan 2026, we will place wellness, which is linked to our core business, at the top of that list of materiality priorities and pursue activities even more proactively.

We will also undertake activities to reduce CO₂ emissions, enhance disclosure levels under the TCFD (Task Force on Climate-related Financial Disclosures), and promote human rights due diligence.

Going forward, Takara Bio will continue to promote sustainability management with the aim of striking a balance between the realization of a sustainable society and the achievement of the sustainable growth of the Takara Bio Group.

ROE/Cost of Equity



Promoting Sustainability Management

Aims to Resolve Social Issues through Business Activities

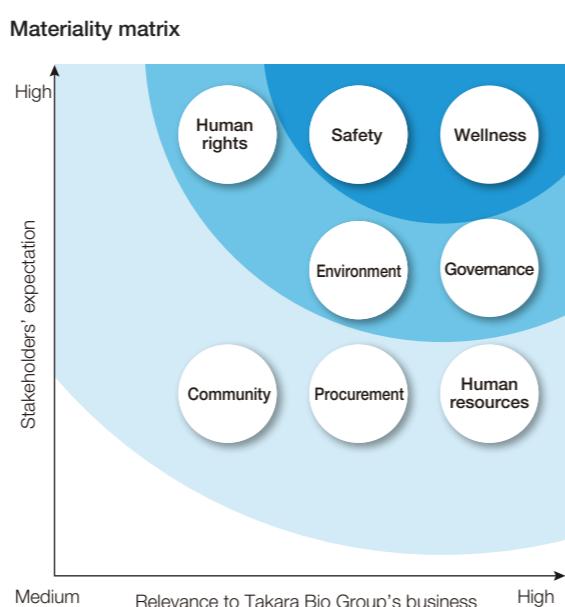
Based on our corporate philosophy of “contributing to the health of humankind through the development of revolutionary biotechnologies such as gene therapy,” Takara Bio Group will tackle various social issues related to sustainability, including health, through its business activities, from the perspective of enhancing corporate value over the medium to long term, with the aim of achieving both “realization of a sustainable society” and “sustainable growth of Takara Bio Group.” In our efforts, we identify materiality and promote sustainability management to help resolve social issues through collaboration with stakeholders and collaboration with Takara Group.

Identification of materialities

We identified eight materialities that are most relevant to the Group’s business from a medium- to long-term perspective, with additional consideration to stakeholder expectations, that we will look to as we carry out our sustainability activities. As we tackle social issues with our central focus on these eight materialities, we aim to strike a balance between realization of a sustainable society and achieving sustained growth of Takara Bio Group.

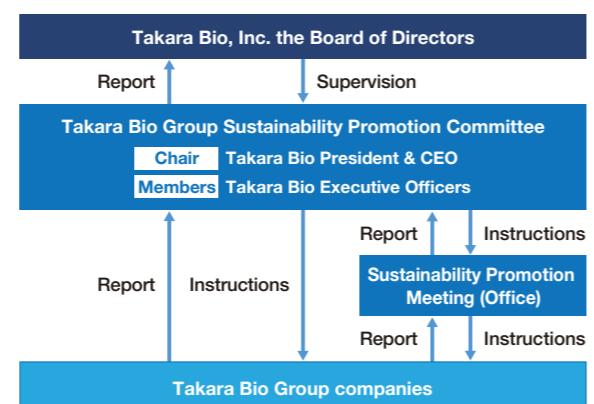
Initiative themes and measures for each materiality

Wellness	<ul style="list-style-type: none"> Supporting life science research and its development around the world Application of gene analysis technology to testing and diagnostics Initiatives to develop gene therapy
Safety	<ul style="list-style-type: none"> Ensuring safe quality
Governance	<ul style="list-style-type: none"> Promoting Corporate Governance Promoting compliance Strengthening the Risk Management System
Environment	<ul style="list-style-type: none"> Addressing Climate Change Issues Environmentally Conscious Product Packages and Packaging
Human rights	<ul style="list-style-type: none"> Respect for Human Rights Initiatives to Identify Human Rights Risks
Human Resources	<ul style="list-style-type: none"> Human Resources Development Organizational Development Promote the active participation of diverse human resources and realize a comfortable work environment and work-life balance
Procurement	<ul style="list-style-type: none"> Collaboration with suppliers
Community	<ul style="list-style-type: none"> Support for the next generation/local communities Support for victims and regions in the event of a large-scale disaster



System for implementation

The Group established the “Takara Bio Group Sustainability Promotion Committee” chaired by the President of Takara Bio to implement sustainability activities, and is carrying out initiatives related to each materiality.



Information about sustainability activities can also be found on the Takara Bio website. <https://www.takara-bio.com/>

Risks and Opportunities, Materiality

Takara Bio analyses risks and opportunities to its business in the medium- to long-term and identifies important issues to be addressed with priority as its materialities.

Process for identifying materialities



Priority area	Risks and opportunities	Relevant materiality
Product liability	<p>Risk Economic loss due to product recall and compensation and loss of trust in case a problem occurs</p> <p>Opportunity Establish superiority based on excellent quality and build brand power</p>	Safety
Competition	<p>Risk Increased competition driven by new entrants and M&As</p> <p>Opportunity Increase profit by establishing advantages in business</p>	Wellness
R&D	<p>Risk Delay or failure in R&D projects</p> <p>Opportunity Establish technological competitive advantage</p>	Wellness, Human resources
Intellectual property rights	<p>Risk Loss of competitive advantage due to invalidation or expiration of registered patent rights, infringement of rights of other companies</p> <p>Opportunity Stable business expansion, advantages in business</p>	Wellness, Governance
Climate change	<p>Risk Introduction of greenhouse gas emissions regulations, carbon tax and other new systems and standards (transitional risks)</p> <p>Opportunity Opportunities to develop new business or new products</p>	Environment, Wellness
Human resources	<p>Risk Shortage or loss of talents, difficulty in securing talents with expert knowledge or skills</p> <p>Opportunity Establish superiority in R&D, manufacturing, sales, etc.</p>	Human resources, Human rights
Overseas business	<p>Risk Increased geopolitical risks (procurement, human rights, tax affairs)</p> <p>Opportunity Business expansion through global operation and risk dispersion by having multiple bases</p>	Procurement, Human rights, Governance
Legal regulations	<p>Risk Restraint on business activities due to tightening of legal regulations</p> <p>Opportunity Creation of new business opportunities</p>	Wellness, Governance
Disasters, accidents, and pandemics	<p>Risk Discontinuation of or delay in business activities due to disaster, accidents or pandemic, disruption in supply chain</p> <p>Opportunity Increase in sales of infectious disease testing reagents</p>	Governance, Procurement, Community
Information security	<p>Risk Losses and loss of trust due to system failure or information leakage</p> <p>Opportunity More added value to products and services</p>	Governance

KPI for each materiality → P. 35-36

Promoting Sustainability Management



Through our efforts aimed at bringing socially impactful advanced medicines to market, such as support of life science research and development of gene therapy, we are working to create a society in which people can stay well and enjoy life.

Supporting life science research and its development around the world

Takara Bio offers as many as ten thousand diverse products and services in the life science field, ranging from those for basic research to those with industrial applications. We are supporting the growth of research in the life sciences worldwide by establishing a global, multipolar system of manufacturing facilities in Japan, China, the U.S., and Europe and ensuring a stable product supply.



Takara Bio's research reagents

Contributing to the life science community

We are supporting the life science community by sponsoring various life science and bio-related academic conferences and events including technology seminars targeting bio researchers. We are also working to promote social understanding of biotechnology by participating in seminars held at universities and organizations and hosting publicity workshops for university students.

We also commercialize promising academic technology seeds through open innovation.



Technology seminars

Application of gene analysis technology to testing and diagnostics

Based on the genetic engineering technology we have cultivated through our research reagents business, we are focusing on developing "glocal" products customized to the characteristics and demands of each region in the world, in addition to virus testing products for infectious diseases that are prevalent worldwide.



In vitro diagnostic
Takara SARS-CoV-2 Direct PCR kit

Initiatives for developing gene therapies

We are working to develop gene therapy-related technologies that meet unmet medical needs through the development and practical implementation of platform technology for biologics development leveraging technology using genes and cells. In addition to promoting CDMO business to support the development/manufacturing of regenerative medicine/gene and cell therapy, we are also engaged in the development and sales of ancillary materials compatible with new modalities.



CDMO service

An example of developing promising academia technology seed (Fiscal 2023)

In the field of gene therapy, we entered into an exclusive patent license agreement on JAK/STAT cytokine signaling technology with Canada's University Health Network and commenced a clinical trial for CD19 JAK/STAT CAR-T therapy (TBI-2001) at the Princess Margaret Cancer Centre (in Toronto, Ontario, Canada), our joint development partner.



To ensure that our customers can use our products and services safely, we have established a basic policy on quality assurance and work to ensure safety in compliance with that policy.

Takara Bio Group Quality Assurance Basic Policy

- Takara Bio Group provides high quality products and services that fulfill the trust and expectations of customers.
- The Takara Bio Group delivers safe products and services that give customers a sense of certainty.
- Takara Bio Group complies with laws and regulations.
- The Takara Bio Group ensures the dissemination of this basic policy to each and every officer and employee in the Group and makes its execution certain.

*Extracted from Takara Bio Group Quality Assurance Policy

Quality control efforts

To ensure reliable quality, the Takara Bio Group is achieving and maintaining quality management system certifications (ISO 9001, etc.) and working to make improvements in quality and customer satisfaction.

We built a GMP/GCTP compliant quality control system at our Center for Gene and Cell Processing, which provides CDMO services, and have become licensed as a manufacturer/distributor of specific processed cells/regenerative medicine products, pharmaceutical products (drugs, etc.), and in vitro diagnostics. Our lab for gene analysis services and genetic testing is also CAP-LAP certified and licensed as a clinical laboratory.

We will strive to maintain these certifications and licenses, as well as expand the scope of certification as needed.

Appropriate publication of product information

We actively work to publish documents related to product safety. We publish and provide information as appropriate in multiple languages in accordance with laws and regulations, including user manuals, CoA (Certificate of Analysis), SDS (chemical Safety Data Sheet), poisonous and deleterious substance labeling in accordance with the Poisonous and Deleterious Substances Control Law, and LMO (living modified organism) product labeling in accordance with the Cartagena Protocol.

Nurturing a quality-oriented corporate culture

Having established a "Task Force to Foster Quality Culture", we are working to foster a corporate culture that is conducive to quality enhancement by creating a system that gives employees the awareness and a sense of responsibility for the maintenance and enhancement of quality (quality improvement structure).

Message from the executive in charge

Nurturing a quality culture

Pharmaceutical companies and bio venture firms are working in full swing to develop gene and cell therapy medicines. Takara Bio is specializing in the field of regenerative medicine and is proactively developing its CDMO business in such domains as "vector manufacturing", "cell processing", and "quality testing". In conducting CDMO business, it is crucial to maintain and improve quality based on technology. And this cannot be achieved without fostering corporate culture, climate, and the awareness of each individual for the maintenance of quality (quality culture), in addition to putting in place a system for GMP compliance and post-marketing. Aiming to create such quality culture, we have established a "Task Force to Foster Quality Culture", which is continuously advancing its actives through cross-divisional efforts in cooperation with the QMS Promotion Committee.

We believe that a desirable approach towards this is the one in which employees continuously take actions out of their own awareness and sense of responsibility to voluntarily and proactively maintain and enhance quality, and the top management, supervisors, and employees all share the same values with regard to the maintenance and enhancement of quality, based on the values of our company, the "TaKaRa Five Values." To allow us to continue taking this desirable approach, we are now building a system for quality activities.



Masanobu Kimura
Senior Executive Officer

[Japan]

Offices (region)	Standard, certification, etc.
	JIS Q 9001:2015 (ISO9001:2015)*1
	JIS Q 13485:2018 (ISO13485:2016)*2
	CAP-LAP
	Clinical Laboratory Registration
	Certification from the Health Science Center for Accreditation of Laboratory Animal Care and Use
	Authorization of manufacturing cell processing products in Japan
	Authorization of manufacturing of regenerative medicine products
	Authorization of manufacturing and distribution of regenerative medicinal products
	Authorization of manufacturing of biologics
	Registration for manufacturing of in-vitro diagnostics
	Authorization of manufacturing and distribution of in-vitro diagnostics
	Authorization of distribution of pharmaceutical products (wholesaler)

As of March 31, 2023

- *1 [Scope of registration]
 - Design, development, manufacturing, and sales of research reagents, cell culture media, and scientific instruments
 - Design, development, manufacturing, and sales of pharmaceutical raw materials
 - Design, development, and provision of gene engineering/cell engineering research support services and generic testing support services
 - Design, development, and provision of contract manufacturing, quality testing, inspection, and storage services for products such as regenerative medicine products, investigational products, and cell processing products
 - Design, development, manufacturing, and sales of raw materials for in-vitro diagnostics
 - Design, development, manufacturing, and sales of in-vitro diagnostics
- *2 [Scope of registration]
 - Design, development, manufacture, and sale of reagents for molecular biology used as raw materials for in-vitro diagnostics
 - Design, development, manufacturing, and sales of in-vitro diagnostics (virus test kits)

[Overseas]

Offices (region)	Standard, certification, etc.
Takara Bio USA, Inc. (U.S.)	ISO 13485:2016
Takara Bio Europe S.A.S. (France)	ISO 9001:2015
	ISO 9001:2015
Takara Biotechnology (Dalian) Co., Ltd. (China)	ISO 13485:2016 (EN ISO 13485:2016)
DSS Takara Bio India Private Ltd. (India)	ISO 9001:2015
	ISO 13485:2016

As of April 6, 2023

Promoting Sustainability Management



We consider the preservation of the global environment and the harmonious conduct of our business activities to be an important topic in the way we manage the company, and to that end we strive to observe the applicable environmental laws, ordinances, and regulations as we proactively take part in natural conservation activities and work to conserve resources and energy. We are working to reduce the environmental burden generated by all of our processes, ranging from R&D and the procurement of raw materials to production, distribution, sales, and consumption.

Takara Bio Group Environmental Policy

Takara Bio Group positions the harmonization of its business activities with global environmental preservation as one of its key challenges, and contributes to building a sustainable society by establishing and continuously improving the environmental management system.

1. We comply with laws and regulations related to the environment, in addition to other requirements that we have agreed to.
2. In the course of Takara Bio Group's business activities, we place particular emphasis on the following items.
 - (1) We strive to prevent environmental pollution.
 - (2) We strive to promote energy and resource conservation, and try to use sustainable resources.
 - (3) We strive to reduce greenhouse gas emissions and mitigate climate change.
 - (4) We support and promote activities related to biodiversity and ecosystem protection and preservation.
 - (5) We contribute to the realization of a recycling-oriented society by reducing water consumption, controlling waste generation, and promoting recycling.
3. We actively disclose information on our environmental initiatives and environmental performance, while striving to communicate with society.
4. While using education and awareness programs to convey this Environmental Policy to all members of Takara Bio Group, we also energetically support employees' participation in social contribution activities.

Environmental preservation strategies

The main facilities at Takara Bio headquarters account for a large percentage of Takara Bio Group's CO₂ emissions and water usage. At these buildings, we are implementing environmental preservation strategies such as use of construction design that incorporates new building techniques with high environmental performance.

Examples of environmental preservation strategies for Takara Bio headquarters

- Installed cogeneration systems
- Increased heat insulation in exterior walls and windows
- Used high-efficiency transformers
- Enabled visualization of the building's management system to optimize energy performance through the Building Energy Management System
- Plan to use renewable energy
- Installed solar panels
- Designed buildings to prevent biohazard risk



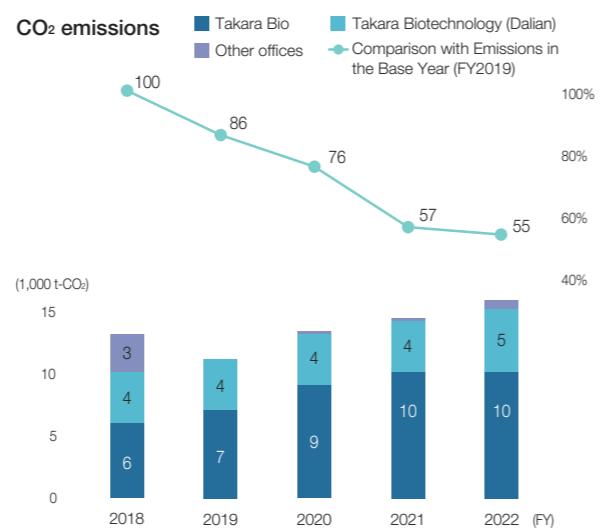
Solar panels installed at our headquarters

Current CO₂ emissions and reduction targets (Scope 1, 2)

Takara Bio Group generated 16,000 t of CO₂ in fiscal 2023. The emissions increased due to the full-scale operation of the Center for Gene and Cell Processing II. As Takara Bio Group expands its business, our CO₂ emissions are continuing to increase. However, we aim to consider environmental impact in our business activities. As of fiscal 2023, Takara Bio Group's CO₂ emissions (emissions intensity) are at 55% of that of fiscal 2019.

CO₂ emission reduction targets

Reduce CO₂ emissions per unit of revenue (emissions intensity) to 50% of that of the base year (fiscal 2019) by fiscal 2026 through the effective use of renewable energy and other means



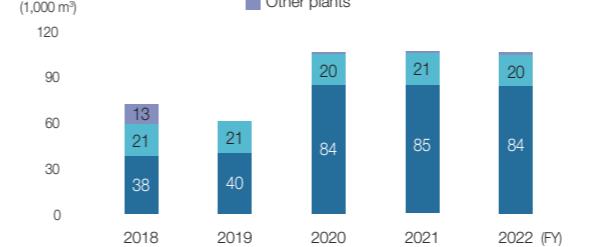
*Group's total CO₂ emissions: Scope 1 (direct emissions from fuel use) and Scope 2 (indirect emissions from energy sources such as purchased electricity)

Volume of water used

Takara Bio Group used 105,000 m³ of water in fiscal 2023, which was a 1,000 m³ decrease from the previous year.

Takara Bio, Takara Biotechnology (Dalian), and Takara Bio USA, which are manufacturing sites, obtain water resources from the water supply system and do not have direct water intake from rivers or the sea.

Volume of water used



Water risk

Our three major manufacturing sites (Japan, China, and the United States) were assessed using "Aquaduct Water Risk Atlas" provided by the World Resources Institute to identify drought and flood risks (river flooding and sea level rise) in relation to the water supply necessary for business continuity at present (FY2023) and in the future (FY2031).

*<https://www.wri.org/aqueduct>

Water stress risk (drought)

The assessment results showed a high risk for Takara Biotechnology (Dalian) and Takara Bio USA, whereas a "low to medium" risk for Takara Bio, which accounts for the majority of the Group's manufacturing.

Evaluation target	Present (FY2023)	Future (FY2031)	Fiscal 2023 Water usage
Takara Bio	Low to medium	Low to medium	83.7 thousand m ³
Takara Biotechnology (Dalian)	Medium to high	High	19.9 thousand m ³
Takara Bio USA	Low	High	1.7 thousand m ³

River flooding risk

The assessment results indicated a risk of 0–50 cm flooding at Takara Bio USA. We have determined that the risk of damage from river flooding is low as the facilities at Takara Bio USA are elevated by 50 cm.

Evaluation target	Present (FY2023)	Future (FY2031)
Takara Bio	> 0cm	> 0cm
Takara Biotechnology (Dalian)	> 0cm	> 0cm
Takara Bio USA	0 – 50cm	0 – 50cm

Risk of sea level rise

The assessment results showed that the risk of sea level rise is > 0 cm at three major manufacturing sites. We have determined that the risk of damage from sea level rise is minimal.

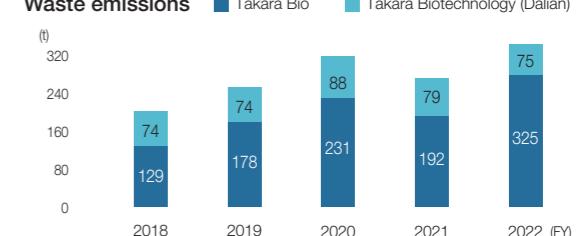
Water pollution

Takara Bio, Takara Biotechnology (Dalian), and Takara Bio USA, which are manufacturing sites, all drain wastewater into sewage systems, and no wastewater is discharged into rivers or oceans. In biohazard facilities that handle microorganisms, viruses, genetically modified products, etc., a waste liquid sterilization system has been introduced to sterilize contaminated wastewater at high temperature and pressure, thereby giving consideration to safety and environment. Hazardous substances and biologically active substances are also treated as waste to prevent their incorporation into wastewater.

Waste materials

In fiscal 2023, waste emissions increased due to the demolition of Takara Bio's former research and manufacturing buildings and product disposal. In order to reduce waste emissions, we are working on 3R of containers and packaging (reduce, reuse, and recycle).

Waste emissions



Environmentally conscious packages

Takara Bio uses paper boxes or PET* film pouches containing aluminum for packaging reagents, its main products. To reduce the environmental burden, the Group is promoting a switch from paper boxes to FSC-certified materials** and materials using plant-based oil ink.

We are also promoting a switch from single-sided aluminum pouches to aluminum-free pouches. For some products, we use double-sided aluminum pouches to maintain product quality.

*Polyethylene terephthalate

**FSC certification is an international system for certifying products under appropriate forest management. It was established to promote sustainable utilization and conservation of forest resources.



Paper packages

Switch to FSC-certified materials and materials using plant-based oil ink



Single-sided aluminum pouch



Aluminum-free pouch

Switch from single-sided to aluminum-free pouches

Promoting Sustainability Management

Business risks and opportunities from climate change

Takara Bio Group is identifying the business impacts of climate-related risks and opportunities, and is formulating strategies. Scenario analysis was carried out using a “below 2°C scenario,” in which the average global temperature increase is restricted to below 2°C than pre-industrial levels, and a “4°C scenario,” in which the average global temperature is increased by 4°C. This analysis evaluated the degree of impact on our business operations and the likelihood of those scenarios occurring, while also examining countermeasures. The table below shows the risks and opportunities that could have a significant impact on the Group. In the scenario analysis, we referred to the RCP 2.6 (below 2°C) and RCP 8.5 (4°C scenario) of IPCC (Intergovernmental Panel on Climate Change) and WRI Aqueduct.

Below 2°C scenario

Social changes	Risks/Opportunities	Type	Business impact	Time axis ¹	Impact ²	Countermeasures
Rising energy costs	Transition risk	Market	Risk of financial impact from higher energy prices resulting in increased manufacturing costs	Short-medium term	Medium	<ul style="list-style-type: none"> Energy conservation and facility renewal at manufacturing sites (ongoing) Introduction of renewable energy (under investigation)
Orders and regulations on products and services	Transition risk	Policy and law	Risk that use of specified substances will become prohibited by laws and regulations, causing a suspension in the supply of raw materials such as plastic products and making the supply of products and services difficult	Medium-to long-term	Medium	<ul style="list-style-type: none"> Responses based on laws and regulations in each country, trends in relevant organizations, and trends in new environmental regulations (under investigation) Development and use of substitutes (under investigation)

4°C scenario

Social changes	Risks/Opportunities	Type	Business impact	Time axis ¹	Impact ²	Countermeasures
Frequent and serious abnormal weather (heavy rains, floods, etc.)	Physical risk	Acute Chronic	Risk of financial impact due to suspension in the supply of products and services due to damage to manufacturing sites caused by flood, etc.	Medium-long term	Medium	<ul style="list-style-type: none"> Decentralization of manufacturing sites (ongoing) BCP risk management (ongoing)
			Risk of damage to manufacturing sites due to flood damage, etc., and the need for equipment replacement, resulting in financial impact. Or risk that business continuity becomes difficult due to leakage of hazardous substances, etc. due to damage to biohazard facilities	Medium-long term	Medium	<ul style="list-style-type: none"> Decentralization of manufacturing sites (ongoing) BCP risk management (ongoing)
			Risk of financial impact due to disruption of supply chain due to flood, etc. and suspension of supply of products and services	Medium-long term	Medium	<ul style="list-style-type: none"> Decentralization of manufacturing sites (ongoing) BCP risk management (ongoing)
			Risk of financial impact due to suspension of operations at manufacturing sites and supply of products and services due to drought	Short-medium term	Medium	<ul style="list-style-type: none"> Decentralization of manufacturing sites (ongoing) BCP risk management (ongoing)
Infectious disease outbreak	Physical risk	Chronic	Risk of reduced economic and R&D activities due to infectious disease outbreaks. Or the risk that the supply chain will be disrupted, resulting in a shortage of raw materials, etc., resulting in financial impact from the suspension of the supply of products and services.	Short-medium term	Medium	<ul style="list-style-type: none"> Decentralization of manufacturing sites (ongoing) More global business expansion (ongoing)
Development of new products and services through R&D and technological innovation	Opportunities	Products/services	Opportunities for increased research and development in this field and expansion of related new products and services due to the spread of climate-related infectious diseases	Short-medium term	Medium	<ul style="list-style-type: none"> Research and development of new products and services and research on new market needs (ongoing)

¹ Time axis: Short-term: up to 2025; Medium-term: up to 2030; Long-term: up to and after 2030

² Impact: Qualitative assessment of the likelihood of a risk materializing, the resulting risks, and states of current measures, etc., and classification of the impact as large, medium, or small.

Summary

Transition risk:

- Risk of financial impact from higher energy and raw materials costs (e.g., carbon tax)
- Risk of difficulty in supplying products and services due to import and export restrictions on raw materials and products based on restrictions on specified substances (example: suspension of supply of raw materials for plastic products)

Physical risk:

- Risk of financial impact from high tides due to rises in sea levels, floods due to river flooding, droughts, etc. (example: damage to manufacturing sites)
- Risk of reduced global life science research activity and reduced business opportunities due to climate change (example: global pandemics)

Opportunities:

- Opportunities to expand business through the development of new products and services related to climate change (example: new products and services derived as countermeasures against global pandemics)

Please visit our website for disclosure based on the TCFD framework.

<https://ir.takara-bio.co.jp/en/sustainability/environment.html>



We aim to build a “vibrant and bright workplace and a corporate culture that nurtures people” from the standpoint of respect for people, and to develop “human resources who are well-balanced among corporate employees, members of society, and individuals” in this context.

Takara Bio Group Human Resources Policy

Takara Bio Group considers human resources to be an important management capital. We are an organization in which each and every employee gathers together. Based on the belief that the collective strength of human resources is the source of sustainable growth and development of the company, we believe that it is essential to maximize the capabilities of individuals and organizations by investing in human resources in order to achieve further enhancement of corporate value and growth of the Group.

We will promote the development of workplaces where work is fulfilling and rewarding, as well as a corporate culture that fosters people. At the same time, we will develop human resources who will support the next generation of the Group and human resources who will realize global business growth, and realize the active participation of diverse human resources.

Fostering human resources

We have put in place personnel systems and training programs as we strive to achieve a corporate culture that can best reflect the skills possessed by and challenges by each employee into our management and business activities.

Our training program includes stratified training by job level and years of service, as well as objective-based training. We also offer technical training programs such as for GMP/GCTP manufacturing at the technical training center.

Examples of stratified training programs

Training	Objectives and details
Training for new hires, 3rd-year employees, 6th-year employees, and newly appointed managers	Training on knowledge and skills required for each job level
OJT leader training	Training on the role of OJT leaders (veteran employees assigned to individual new hires) and guidance methods
Compliance leader training	Group training on compliance for employee representatives selected at each workplace

Examples of objective-based training programs

Intended participants	Objectives and details
All employees	Fire prevention training, AED education and training, safety confirmation
	Compliance education
	Study seminar to improve IT skills
	Information security education
	Takara Holdings Corporate History Museum Observational Training Program
Young tech-oriented employees	Intellectual property training
Marketing Division employees	Sales training
Employees who perform manufacturing and quality control tasks	GMP education and training, ISO education and training

Promoting the active involvement of diverse human resources

The existence of diverse viewpoints and senses of values that reflect different experiences, technical skills, and attributes regardless of gender, nationality or other traits among employees is the strength that allows the Company to continuously grow.

We believe that active involvement of diverse human resources at Takara Bio is essential to achieving such continued growth.

Employee composition at Takara Bio (not the Group)

	FY2021	FY2022	FY2023
Employees with disabilities (%)	2.9%	2.8%	2.4%
	42.6%	43.1%	46.5%
	60.0%	47.1%	61.1%
	19.7%	22.0%	23.0%

Achieving a comfortable workplace environment and a work-life balance

We are working hard to put workplace and labor environments in place that will allow our employees to work comfortably, and are crafting systems to ensure that all our employees can work enthusiastically while maintaining a balance between their work and their personal lives in keeping with their individual lifestyles.

Crafting workplace and labor environments	Regular health checkups, mental health care, health consultations by occupational physicians, counseling with clinical psychologists, helplines, and internal reporting systems (in Japan and at international subsidiaries)
Work-life balance	Flex time, temporary part-time work for parents, parental and caregiving leave, consultations for employees taking parental leave, reformation of long working hours, “no overtime day,” support for injured or sick employees, and enhancement of employment system for senior human resources

Promoting Sustainability Management



In corporate governance, we are building an optimal corporate governance system with the goal of maintaining a state of appropriate corporate governance in order to achieve sustainable growth and increase corporate value over the medium-to long-term.

In compliance, to realize our corporate philosophy, each and every executive and employee thoroughly implements actions based on the "Compliance Action Guidelines" and strengthens the compliance promotion system throughout the Group, including overseas.

To strengthen the risk management structure, we are working to prevent risk manifestation and reduce corporate risks in Japan and abroad, and aim to build a system for responding quickly and appropriately in times of disasters and other emergencies.

Our corporate governance

In order to achieve sustainable growth and enhance corporate value over the medium- to long-term, Takara Bio Group recognizes that it should endeavor to cooperate with various stakeholders, including shareholders, employees, customers, creditors, and local communities in an appropriate manner. To achieve this, our corporate governance structure must promote honesty and fairness throughout all our corporate activities at all times, which is why Takara Bio has established its Corporate Governance Policy and other specific policies.

Corporate governance structure

Our system is set up so that the Board of Directors makes decisions in an agile manner with a clear sense of ownership and speed and supervises execution of business, while our independent External Directors, who are experienced in and knowledgeable about the company's business, partner with the Audit & Supervisory Board to audit and supervise execution of business.

Director and Board of Directors

The Board of Directors of Takara Bio is composed of nine individuals, of whom three are external directors. In addition, in order to rapidly respond to the management environment and to clarify the management responsibilities of a director, the term of office of a director has been set to one year.

Audit & Supervisory Board

The Audit & Supervisory Board of Takara Bio is composed of five individuals, of whom three are External Audit & Supervisory Board members. The Audit & Supervisory Board members and Audit & Supervisory Board of Takara Bio are to make appropriate decisions from an independent and objective

standpoint regarding their role and the performance of their duties. In addition, the Audit & Supervisory Board members must attend meetings of the Board of Directors and various important management meetings as well as conduct appropriate financial and operational audits via an exchange of opinions, etc. between management and the internal auditing department, etc., and they must also make a variety of proposals to management when they are determined to be needed.

Special Committee

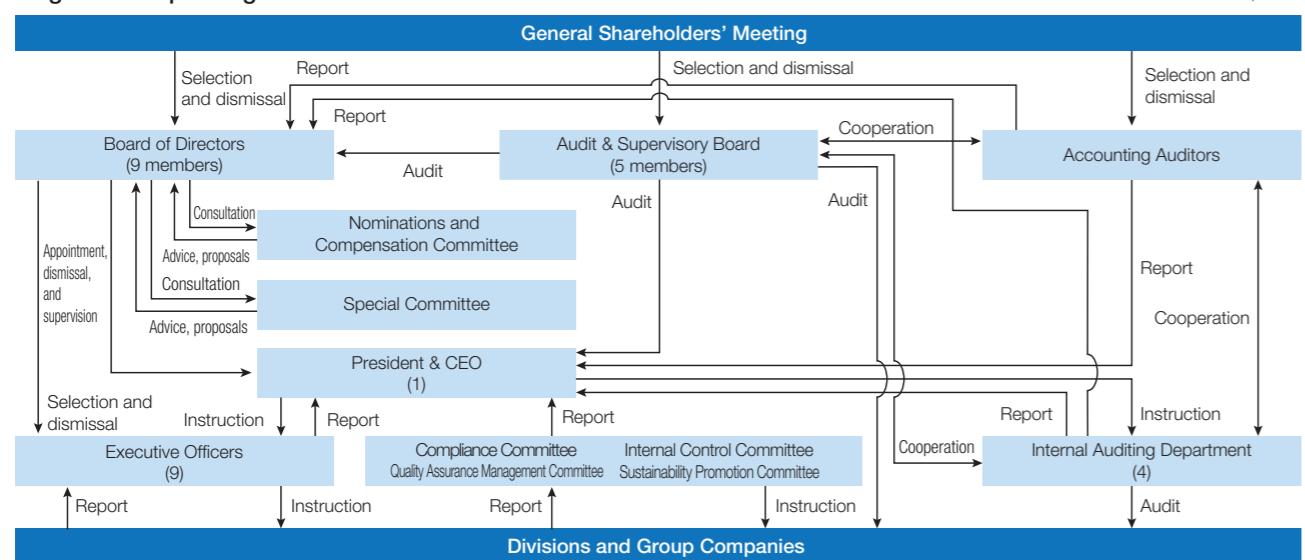
To protect the interests of minority shareholders, we have established Special Committee under the Board of Directors to provide appropriate advice and recommendations. The committee is composed of three or more independent members, including External Officers, and the chairperson is to be selected from among its members, ensuring the independence of the committee. The committee deliberates and examines matters relating to significant transactions and practices that conflict with the interests of our parent company or its subsidiaries and our minority shareholders, and advises and recommends the results to the Board of Directors.

Nominations and Compensation Committee

The Nominations and Compensation Committee was established as a discretionary committee under the Board of Directors with the aim of strengthening the independence, objectivity, and accountability on the functions of the Board of Directors. The committee is composed of three or more members elected by a resolution of the Board of Directors, the majority of whom are External Officers, and the chairperson of which is selected after establishment of the Committee among External Officers.

As of June 29, 2023

Diagram of corporate governance structure



Promoting Sustainability Management

Promotion of compliance

Takara Bio has established its own "Compliance Committee", with the President as the Chairperson in order to enhance the system for promoting compliance for the Group as a whole.

In addition, Takara Group has established its own "Compliance Action Guidelines". Each of the Group companies suitably abides by the law and social ethics and undertakes risk management, enabling the Takara Group as a whole to fulfill its corporate social responsibility and to improve its corporate value.

Takara Group Compliance Action Guidelines

Basic policy

Basic Policy With the aim of realizing our corporate philosophy, which is "Contributing to the creation of a vital society and a healthy lifestyle through our fermentation technology and biotechnology in a way that achieves harmony with nature," the Takara Group will always conduct trustworthy and fair corporate activities in accordance with our code of conduct, "what makes consumers full of life makes me full of life."

- ① We will comply with laws and regulations in Japan and overseas, fully recognize social ethics, and act with common sense and responsibility as a member of society.
- ② We will work to lower environmental burdens, and contribute to the development of life science that values the dignity of life.
- ③ We will conduct sustainable business activities that are widely useful to society by pursuing profit through fair competition rather than pursuing profit in a manner contrary to these Action Guidelines.
- ④ We will comply with employment regulations, and will not engage in any unfair or dishonest practices in violation of employment regulations.
- ⑤ We will always draw a line between public and private matters, and will not pursue personal gain by using corporate assets, information, business authority, or position.

Compliance education

In order to enhance employees' compliance awareness, the Takara Group issues "compliance newsletters" that deal with compliance-related subjects familiar to its employees and offers an "e-learning course" every month. As stratified training, we also provide "risk compliance seminars for top management" led by guest specialists, annual group training for risk compliance leaders who promote workplace compliance education for each job level, as well as "training sessions for new managers", and "new hire training".

Appropriate operation of whistleblowing system

We have two "Takara Group helplines" in place inside and outside (i.e., a third-party organization) of the Company, as contacts for whistleblowers in the event that they have noticed any legal infringements or unfair practices. We operate these helplines in accordance with the rules on whistleblower protection in order to ensure that whistleblowers do not receive disadvantageous treatment due to the reports they have made. The Company gives full consideration to maintaining confidentiality when investigating reports and takes appropriate action based on confirmed facts.

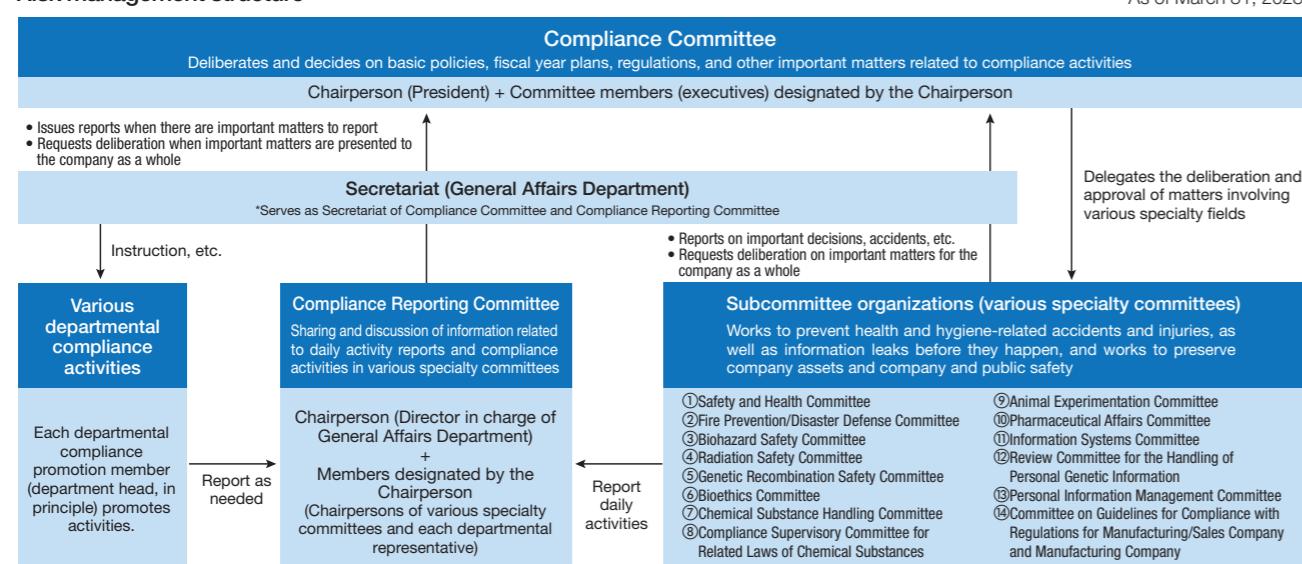
Our Group companies in overseas locations also have their local whistleblowing hotlines and have established and operate processes that allow their local employees to directly contact the helpline in Japan for reporting and consultation through a third-party organization.

Reinforcement of the risk management structure

The Group carries out regular workplace inspections in normal times in order to understand and strategize for risks, and the results of those inspections are discussed at the "Compliance Committee".

We also have business continuity plans (BCP) in place. When damage from disasters, worldwide pandemics of infectious diseases, supply chain disruptions, or other events cause a significant impact on business continuity, we will leverage our risk management structure in accordance with the basic policy to promptly restore and continue our business.

Risk management structure



We respect the human rights of all stakeholders and are engaged in various human rights-related initiatives including education and training.

Takara Bio Group Human Rights Policy (excerpt)

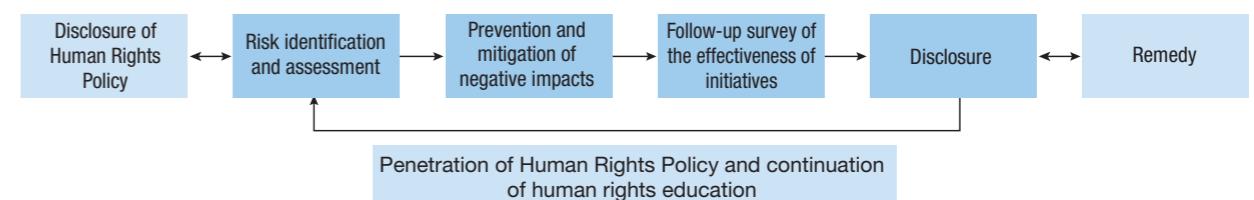
Recognizing that Takara Bio Group may potentially affect the human rights of various stakeholders, including business partners, customers, and local communities, in addition to our employees, through our business activities, we respect human rights as set out in the United Nations International Bill of Human Rights and the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work.

This policy applies to all officers and employees of Takara Bio Group. We will also request business partners to support and comply with this policy.

Respect for human rights

Through various training programs, we are promoting "education to deepen understanding and respect of human rights and cultural diversity". We are also advancing initiatives focused on "recruitment activities without discrimination", "harassment prevention activities", and the "protection of personal information and privacy".

Human rights due diligence process based on "Guiding Principles on Business and Human Rights"



In addition to ensuring the safety and quality of raw materials and more, we also aim to realize sustainable procurement by giving consideration to the social responsibilities of the entire supply chain, such as the environment, human rights, and compliance with laws and social ethics.

Takara Bio Group Procurement Policy

1. Ensuring safety and quality
In accordance with Takara Bio Group Quality Policy, we will promote activities aimed at ensuring a high level of safety and quality.
2. Consideration for the environment
Based on Takara Bio Group Environmental Policy, we will engage in activities with consideration for the global environment.
3. Consideration for human rights
In accordance with Takara Bio Group Human Rights Policy, we will engage in activities with consideration for human rights.
4. Compliance with laws and social ethics
In accordance with Takara Group Compliance Action Guidelines, we will comply with laws and social ethics. We will not request entertainment or gifts from suppliers, nor will we be the recipient of entertainment that exceeds the boundaries of common sense.
5. Equitable and fair transactions
We will treat all suppliers with common sense and honesty and conduct equitable and fair transactions. When selecting suppliers, we will make our decisions after equitable and fair comparisons and evaluations, based on quality, price, delivery date, technical capabilities, supply capacity and other conditions.
6. Maintaining information security
We will appropriately manage confidential information and personal information obtained during procurement activities.
7. Expectations of suppliers
With regard to the above, we expect the same considerations from our suppliers, and will endeavor to promote initiatives throughout the entire supply chain.

Collaboration with suppliers

We have formulated guidelines for sustainable procurement. We will make our business partners aware of these guidelines, request their compliance with the guidelines, and collaborate with suppliers to resolve issues.

Promoting Sustainability Management

Sustainability Plan 2026 (List of Theme, Measures, and Targets for Each Materiality)

Materiality	Theme	Measures	Targets by fiscal 2026	Materiality	Theme	Measure	Targets by fiscal 2026
Wellness	Supporting life science research and its development around the world.	Wide-ranging support for life science research and industrial development.	Promote the development of global, multipolar manufacturing facilities (Japan, the U.S., Europe, and China) and support the development of life science research through stable product supply.	Environment	Addressing Climate Change Issues	Reduce CO ₂ emissions per unit of sales by 50% in fiscal 2026 compared to fiscal 2019.	①Promote energy conservation activities and use of renewable energy, etc.
		Contributing to life science community.	①Disseminate information about biotechnology fundamentals and the latest technology by holding seminars and workshops. ②Commercialize promising academic discoveries through open innovation. ③Promote social understanding of biotechnology.			②To endorse and participate in local and organizational CO ₂ reduction activities	
		Application of gene analysis technology to testing and diagnostics	Supply testing and diagnostic kits for viruses, etc.			Promoting Information Disclosure on Initiatives for Climate Change.	Promote disclosures based on TCFD framework
		Initiatives to develop gene therapy	Promote the development of gene therapy-related technologies that meet unmet medical needs.			Improve employees' environmental awareness.	Promotion of energy and resource conservation activities that can be tackled on an individual basis and on a work-site basis
	Ensuring product safety	Maintain quality management system certifications (ISO9001, etc.)	Maintain current ISO certifications at offices and work to improve quality and customer satisfaction. Expand scope of ISO certification as necessary	Environment	Environmentally Conscious Product Packages and Packaging	①Promote the conversion of paper packages to forest-certified paper and the use of vegetable oil ink, aiming for 100% by fiscal 2026	
		Achieve and maintain compliance with relevant quality, manufacturing, and safety standards such as GMP/GCTP, and third-party certification.	①Maintain business licenses and registrations. Make additional acquisitions as required ②Establish a quality system and a stable supply of products on market for regenerative medicine/ gene and cell therapy, and continuously improve the systems.			②Achieve 100% double-sided aluminum-free packaging for one-sided aluminum-free packaging by fiscal 2026	
		Appropriate provision of product information	Provision of SDS (safety data sheets) in various languages (Japanese, English, and Chinese) for reagents (in-house products) by fiscal 2026 (excluding some in-licensed products).			③Change packaging refrigeration box to polystyrene foam (recycled refrigeration box) using recycled materials, aiming for 100% by fiscal 2026.	
		Fostering a corporate culture that emphasizes quality.	Establish a Task Force to Foster Quality Culture to develop and maintain a system (quality improvement system) that emphasizes quality and has a sense of awareness and responsibility.			④Implement human rights and multicultural education in new employee training and job position training.	
Safety	Ensuring product safety	Maintain quality management system certifications (ISO9001, etc.)	Maintain current ISO certifications at offices and work to improve quality and customer satisfaction. Expand scope of ISO certification as necessary	Human rights	Respect for human rights	②Promote non-discriminatory hiring activities.	
		Achieve and maintain compliance with relevant quality, manufacturing, and safety standards such as GMP/GCTP, and third-party certification.	①Maintain business licenses and registrations. Make additional acquisitions as required ②Establish a quality system and a stable supply of products on market for regenerative medicine/ gene and cell therapy, and continuously improve the systems.			③Work to prevent harassment.	
		Appropriate provision of product information	Provision of SDS (safety data sheets) in various languages (Japanese, English, and Chinese) for reagents (in-house products) by fiscal 2026 (excluding some in-licensed products).			④Promote the protection of personal information and privacy	
		Fostering a corporate culture that emphasizes quality.	Establish a Task Force to Foster Quality Culture to develop and maintain a system (quality improvement system) that emphasizes quality and has a sense of awareness and responsibility.			①Understand the situation by creating a human rights risk response map and take measures as necessary	
	Promotion of compliance	Promoting Corporate Governance	Establish an optimal corporate governance structure.	Human rights	Initiatives to identify Human Rights Risks	②Disseminate Human Rights Policies to suppliers and ask them to comply	
		Reinforce the compliance promotion structure	Hold regular meetings of the Risk Compliance Committee.			Development of next-generation leaders, young human resources, and executive candidates.	Implementation of training by job position and purpose.
		Implementing Compliance Training.	①Thorough implementation of "Takara Group Compliance Action Guidelines". ②Conduct training according to position to raise awareness of compliance among executives and employees (once a year). ③Conduct workplace education on priority compliance themes (four times a year).			Job rotation according to individual interests, abilities, and aptitudes.	Creation of skill maps, use of self-assessment systems, and identification of appropriate issues through training.
		Appropriate operation of the whistleblowing system	Prevent illegal and inappropriate behavior, as well as recurrence of such behavior, by properly operating the whistleblowing system and responding promptly and appropriately to the content of internal reports.			Support for balancing work and childcare, promotion of women's careers.	①Enhancement of childcare support ②To maintain 100% return to work from childcare leave
	Governance	Strengthening the Risk Management System	①Work to prevent and mitigate risks in Japan and abroad, and build a system that can respond quickly and appropriately in the event of an emergency such as a disaster. ②Reduction of occupational accidents. ③Monitoring the status of risk management at each company and business site (creating risk map) through the "Workplace Inspection Report", the "Risk Compliance Checklist", and interviews with employees, etc., to prevent risks from materializing and to reduce risks (once a year in principle). ④Regularly conduct various emergency training (safety confirmation training, fire prevention training, AED use training, etc.) (in principle, once a year).	Human resources	Promote the active participation of diverse human resources and realize a comfortable work environment and work-life balance	Support for injured and sick person	Support balance between work and cancer treatment and build a systematic mental health care system.
		Promoting risk management and crisis management.	①Work to prevent and mitigate risks in Japan and abroad, and build a system that can respond quickly and appropriately in the event of an emergency such as a disaster. ②Reduction of occupational accidents. ③Monitoring the status of risk management at each company and business site (creating risk map) through the "Workplace Inspection Report", the "Risk Compliance Checklist", and interviews with employees, etc., to prevent risks from materializing and to reduce risks (once a year in principle). ④Regularly conduct various emergency training (safety confirmation training, fire prevention training, AED use training, etc.) (in principle, once a year).			Improvement of working environment for overseas employees.	Respond to problems specific to overseas assignments (inflation, exchange rate fluctuations, etc.).
						Enhancement of the employment system for older workers.	Continue employment until age 70
						Employment of persons with disabilities.	Maintain the statutory employment rate
						Reduction of overtime	Aim for 5% reduction of overtime annually compared to fiscal 2023 results.
						Developing a working environment that can demonstrate the abilities of diverse human resources	Review relevant of regulations
Procurement	Strengthening the Risk Management System		①Formulate Procurement Policy and Procurement Guideline, disseminate them to suppliers, and ask them to comply ②Survey the status of suppliers and request improvements as necessary	Procurement	Collaboration with suppliers	Establishment and operation of guidelines for sustainable procurement	
			①Continuously conduct lectures and on-site classes related to life sciences and the design of career plans of next-generation for neighboring educational institutions. ②Continue to participate in and cooperate with local cleanup activities, such as volunteer participation and sponsorship of local events.			Implementation of on-site classes and lectures at local educational institutions.	
	Community		Support for victims and regions in the event of a large-scale disaster.	Community	Support for the next generation/local communities	Donations, water supply and volunteer activities for the disaster-stricken areas.	Implement support activities such as water supply and volunteer dispatch in the event of a large-scale disaster.

Sustainability Indices

Governance-related Information-Number of external directors and external Audit & Supervisory Board members

		FY2021	FY2022	FY2023
Directors	Internal Directors	9	9	9
	External Directors	6	6	6
	Ratio of External Directors (%)	33%	33%	33%
Audit & Supervisory Board members	Internal Audit & Supervisory Board members	5	5	5
	External Audit & Supervisory Board members	2	2	2
		3	3	3

Employee information (Takara Bio Group)

Items	Breakdown	Unit	FY2021	FY2022	FY2023
No. of employees by region	Japan	person	570	669	769
	Overseas	U.S.	person	202	204
		China	person	587	601
		Europe	person	88	102
	Other*	person	92	90	94

*Asia excluding Japan and China

Employee information (Takara Bio)

Items	Breakdown	Unit	FY2021	FY2022	FY2023
No. of employees	Male	person	327	377	411
	Female	person	243	292	358
No. of new graduate hires	Male	person	6	27	26
	Female	person	9	24	41
Diversity	Employees with disabilities (%)	%	2.9	2.8	2.4
	Women in managerial positions (%)	%	19.7	22.0	23.0
Status of employees	Average years of service	year	12 years and eight months	10 years and 10 months	11 years and nine months
	Average age	year	41 years and 0 months	39 years and 10 months	40 years and eight months
	Average annual remuneration (Tens of thousands of yen)	Tens of thousands of yen	695	705	709
	No. of women who have taken childcare leave	person	7	10	11
	No. of men who have taken childcare leave	person	4	5	10
	Women who returned to work after taking childcare leave (%)	%	100	100	100
	Monthly average of overtime hours	hour	25.5	24.3	24.7
	Annual paid holidays taken (days)	day	9.8	10.9	13.4
	Turnover* (%)	%	1.8	6.7	10.2
	Average years of employment (male)	year	13.7	11.9	12.4
	Average years of employment (female)	year	11.4	9.5	9.5
	No. of work-related injuries (including minor injuries)	case	2	3	5
	Frequency	—	0	0	0
	Severity	—	0	0	0

*Turnover of newly-graduated employees who leave within three years of service

Environment-related information

Items	Applicable companies	Unit	FY2021	FY2022	FY2023
CO ₂ emissions (Scope 1,2)	Takara Bio	t-CO ₂	8,585	9,833	10,418
	Takara Biotechnology (Dalian)	t-CO ₂	4,058	4,126	4,619
	Other offices	t-CO ₂	187	294	655
Waste emissions	Takara Bio	t	231	192	325
	Takara Biotechnology (Dalian)	t	88	79	75
Amount of chemical substances handled (under PRTR Law)	Takara Bio	kg	97	186	382
Volume of water used	Takara Bio	m ³	84,190	84,657	83,689
	Takara Biotechnology (Dalian)	m ³	19,963	21,251	19,936
	Other offices	m ³	75	80	1,805

Messages from External Directors



Nobuko Kawashima

Appointed June 2016/
Board of Directors meeting
attendance in FY2023:
12 of 12 (100%)

Expectations of the New Medium-Term Management Plan

The COVID-19 pandemic, an unprecedented crisis affecting the entirety of global society, is showing signs of ending, and we are almost back to normal. Throughout this time, Takara Bio has made major contributions to COVID-19 measures by providing its superior PCR testing technology, which is the company's particular strength, to meet Japan's needs. I feel that here we must return to basics and continue to focus our efforts on our existing Gene therapy business using biotechnology to develop treatments for cancer and other diseases.

The Group's direction has been further clarified by the development of the New Medium-Term Management Plan. In conjunction with the Long-Term Management Plan, I believe that the Company will continue its efforts not only to improve corporate performance but also to realize a sustainable society.



Kazuko Kimura

Appointed June 2019/
Board of Directors meeting
attendance in FY2023:
12 of 12 (100%)

Business growth as a life science company

The time has come for Takara Bio to make another leap forward under Japan's Bioeconomy Strategy, which seeks to realize the world's most advanced bioeconomy society by 2030. However, this will not be merely an extension of what we have done until now. We are in the midst of the fourth industrial revolution, and the use of DX, AI, and even generative AI will determine the success or failure of any business. AI-driven biologics development is also becoming more prevalent in pharmaceutical development, and the time and cost of new drug development are being drastically reduced. Breakthrough new drugs may emerge one after another at pace that we could never have foreseen. Takara Bio's manufacturing of medical technology products related to regenerative, cell and gene therapy, as well as cells and viral vectors, must also keep up with that pace. To this end, we need to switch to a mode of operation that suits the new era, including building analytical systems that befit the Company for the analysis of the vast amounts of data we have accumulated, including research papers, clinical trials and patents, and the appropriate use of generative AI. Education and recruitment of human resources are also needed. The times have changed quite suddenly.

In keeping with that change, we must respond to social demands while keeping current challenges in mind, such as precision medicine, rare diseases, a declining birthrate and an aging society, emerging and re-emerging infectious diseases, and planet health.

Investors are certain to welcome the positive attitude toward DX, AI and generative AI, as well as the superiority of our life science technology, that are demonstrated in the New Medium-Term Management Plan.



Noriomi Matsumura

Appointed June 2020/
Board of Directors meeting
attendance in FY2023:
12 of 12 (100%)

Aiming to make a leap in the post-COVID world

The impact of the COVID-19 pandemic on social life has finally faded, and daily life is returning to its pre-pandemic norms. During the unprecedented crisis of the COVID-19 pandemic, Takara Bio contributed greatly to society through the provision of high-quality PCR reagents. As this meant more direct involvement in clinical medicine, it was a major turning point for the Company, whose core business has been the sale of research reagents.

The development of mRNA vaccines is one of the factors that enabled humanity to beat COVID-19. mRNA vaccines are expected to make significant advances in the future, including the development of vaccines against other viruses, such as influenza, and even cancer, and they are attracting attention from researchers and pharmaceutical companies all over the world. Going forward, Takara Bio will expand our CDMO business, including mRNA medicines, by leveraging the biotechnologies we have accumulated. Based on my experience as a clinical physician and medical researcher, I will strive to provide effective advice to the Company.

Members of the Board, Audit & Supervisory Board Members, and Executive Officers

As of June 23, 2023

Board of Directors



Koichi Nakao
President & CEO

Apr. 1985 Joined Takara Shuzo Co., Ltd. (currently Takara Holdings Inc.)
Apr. 2002 Director
Jun. 2003 Managing Director & Executive Officer
Jun. 2004 Senior Managing Director & Executive Officer
Apr. 2006 Senior Managing Director & Executive Officer, COO
Jun. 2007 Vice President & Executive Officer, COO
Jun. 2008 Vice President, COO
May 2009 President (incumbent)
Takara Bio USA Holdings Inc. Director, President (incumbent)
Jun. 2009 Director, Takara Holdings Inc. (incumbent)
Jun. 2015 President & CEO (incumbent)



Junichi Mineno
Director & Vice President, Executive Officer

Apr. 1984 Joined Takara Shuzo Co., Ltd. (currently Takara Holdings Inc.)
Apr. 2011 Executive Officer
Jun. 2012 Senior Executive Officer
Jun. 2014 Managing Director
Jun. 2015 Managing Director & Senior Executive Officer
Jun. 2019 Director & Senior Corporate Officer
Apr. 2022 Vice President & Executive Officer (incumbent)
Jun. 2023 Director & Vice President (incumbent)



Yoh Hamaoka
Senior Managing Director & Senior Corporate Officer

Feb. 2000 Joined Takara Shuzo Co., Ltd. (currently Takara Holdings Inc.)
Apr. 2004 Executive Officer
Jun. 2009 Senior Executive Officer
Jun. 2021 Director & Senior Corporate Officer (incumbent)
Jun. 2023 Senior Managing Director (incumbent)



Tsuyoshi Miyamura
Senior Managing Director & Senior Corporate Officer

Apr. 1988 Joined Takara Shuzo Co., Ltd. (currently Takara Holdings Inc.)
Jun. 2009 Executive Officer
Jun. 2014 Senior Executive Officer
Jun. 2018 Director
Apr. 2022 Senior Corporate Officer (incumbent)
Jun. 2023 Senior Managing Director (incumbent)



Katsuhiko Kusakabe
Senior Managing Director & Senior Corporate Officer

Apr. 1986 Joined Takara Shuzo Co., Ltd. (currently Takara Holdings Inc.)
Jun. 2007 Executive Officer
Jun. 2021 Senior Executive Officer
Jun. 2023 Senior Managing Director (incumbent) & Senior Corporate Officer (incumbent)



Mutsumi Kimura
Director

Apr. 1985 Joined Takara Shuzo Co., Ltd. (currently Takara Holdings Inc.)
Apr. 2002 Director
Jun. 2003 Managing Director
Jun. 2007 Senior Managing Director
May 2009 Director & Vice President
Jun. 2009 Representative Director & Vice President
Jun. 2014 Director, Takara Holdings Inc.; Senior Managing Director, Takara Shuzo Co., Ltd.
Jun. 2016 Representative Director & Vice President, Takara Holdings Inc.
Jun. 2017 Director, Takara Shuzo Co., Ltd. (incumbent)
Jul. 2017 President, Takara Shuzo International Co., Ltd.
Jun. 2018 President, Takara Holdings Inc. (incumbent)
Apr. 2020 Director, Takara Shuzo International Co., Ltd. (incumbent)
Jun. 2022 Director (incumbent)



Nobuko Kawashima
Director (External Director)

Apr. 1986 Joined The Long-Term Credit Bank of Japan (currently Shinsei Bank, Limited)
Sep. 1987 Joined Dentus Communication Institute Inc.
Sep. 1985 Research fellow at the Centre for Cultural Policy Studies of the University of Warwick
Apr. 1987 Research fellow at the Faculty of Economics at Doshisha University
Apr. 2004 Professor with the Faculty of Economics at Doshisha University (incumbent)
Jun. 2016 Director (External Director) (incumbent)
Jun. 2021 External Director, TOKAI Holdings Corporation (incumbent)



Kazuko Kimura
Director (External Director)

Apr. 1976 Joined the Safety and Environmental Health Bureau of the Ministry of Health and Welfare (currently Ministry of Health, Labour and Welfare)
Apr. 1979 Director, Political Affairs Bureau
Jul. 1996 Seconded to the pharmaceutical department of the World Health Organization
Jul. 1999 Seconded to the Organization for Pharmaceutical Safety and Research
Apr. 2000 Professor of International Medical Research Laboratory, Institute of Medical, Pharmaceutical and Health sciences, Kanazawa University
Jun. 2013 Director (External Director), Alfrès Holdings Corporation
Sep. 2013 Representative Director, Medicines Security Workshop (incumbent)
Apr. 2017 Professor of International Medical Research Laboratory, Kanazawa University (incumbent)
Specially Appointed Professor with the Graduate School of Medical Sciences at Kanazawa University
Jun. 2019 Director (External Director) (incumbent)
Jun. 2021 External Director, Mitsubishi Logistics Corporation (incumbent)



Noriomi Matsumura
Director (External Director)

May 1998 Doctor with the Department of Obstetrics and Gynecology, Hyogo Prefectural Amagasaki General Medical Center
Apr. 2000 Doctor with the Department of Obstetrics and Gynecology, Toyooka Public Hospital
Sep. 2002 Doctor with the Department of Obstetrics and Gynecology, Kyoto University Hospital
Apr. 2007 Program-Specific Assistant Professor with the Department of Obstetrics and Gynecology, Kyoto University Hospital
Apr. 2008 Assistant Professor with the Department of Obstetrics and Gynecology, Kyoto University Hospital
Dec. 2012 Teacher with the Maternal and Perinatal Care Unit, Kyoto University Hospital
Aug. 2013 Associate Professor with Gynecology and Obstetrics, Medicine, Graduate School of Medicine at Kyoto University
Apr. 2017 Professor with the Department of Obstetrics & Gynecology, Faculty of Medicine at Kindai University (incumbent)
Jun. 2017 Vice chairperson of Board Certification Committee at Japan Society of Obstetrics and Gynecology (incumbent)
Dec. 2018 Director and TR Committee member of Japanese Gynecologic Oncology Group
Jun. 2020 Director (External Director) (incumbent)
Jul. 2020 Board Member, Japan Society of Gynecologic Oncology (incumbent)

Audit & Supervisory Board Members

Akihiko Kita
Standing Audit & Supervisory Board Member

Apr. 1984 Joined Takara Shuzo Co., Ltd. (currently Takara Holdings Inc.)
Apr. 2014 Executive Officer
Jun. 2016 Standing Audit & Supervisory Board Member (incumbent)

Masahide Tamaki
Standing Audit & Supervisory Board Member

Apr. 1983 Joins Takara Shuzo Co., Ltd. (currently Takara Holdings Inc.)
Apr. 2007 Director
Jun. 2016 Senior Executive Officer
Jun. 2019 Standing Audit & Supervisory Board Member (incumbent)

Kunihiko Kamada
External Audit & Supervisory Board Member

Apr. 1992 Registered as an attorney at law (Osaka Bar Association)
Mar. 1993 Registered as a patent attorney
Apr. 2001 Part-time lecturer at Mieji University
Jan. 2011 Daichi Law Office, P.C. (incumbent)
Jun. 2016 External Audit & Supervisory Board Member (incumbent)

Yasuo Himeiwa
External Audit & Supervisory Board Member

Aug. 1983 Joined the accounting firm of Peat Marwick Mitchell & Co. (currently KPMG)
Aug. 1990 Registered as a Certified Public Accountant of Japan
Aug. 1994 European Director at KPMG Project Japan
Jan. 1994 Century Audit Corporation (currently Ernst & Young ShinNihon LLC)
Feb. 2001 Senior partner at Ernst & Young ShinNihon LLC
Sep. 2003 Partner at Azusa & Co. (currently KPMG AZSA LLC)
Jul. 2009 Director, Azusa & Co. (currently KPMG AZSA LLC)
Osaka GJP (Global Japanese Practice)
May 2015 National Employee Association Chairman, KPMG AZSA LLC

Executive Officers

Masanobu Kimura
Senior Executive Officer

Kyoko Nakajima
Senior Executive Officer

Akira Kodera
Senior Executive Officer

Noritaka Nishiwaki
Executive Officer

Nobuto Koyama
Executive Officer

Takuya Kakemi
Executive Officer

Tatsuji Enoki
Executive Officer

Akiyuki Sato
Executive Officer

Hiroki Tomohisa
Executive Officer

Investor Information

As of March 31, 2023

Corporate Data

Trade Name	TAKARA BIO INC.	Lines of Business	Production and sales of research reagents, scientific instruments and others, CDMO business, and gene therapy business
Head Office	7-4-38 Nojihigashi, Kusatsu, Shiga 525-0058, Japan		
Telephone	(main): +81-77-565-6920 (PR and IR Department): +81-77-565-6970	Number of Employees of Takara Bio Group	1,793 (consolidated)
Established	April 1, 2002	URL	https://www.takara-bio.com
Issued Capital	¥14,965,828,496		

Main Offices

Headquarters	7-4-38 Nojihigashi, Kusatsu, Shiga 525-0058, Japan	Tokyo Branch	2-15-10 Nihonbashi, Chuo-ku, Tokyo 103-8232, Japan
Kusatsu Office	7-2-62 Nojihigashi, Kusatsu, Shiga 525-0058, Japan		

Consolidated Subsidiaries

Location	Issued Capital and Subscription
Takara Biotechnology (Dalian) Co., Ltd.	¥2,350 million
Takara Korea Biomedical Inc.	₩3,860 million
Takara Biomedical Technology (Beijing) Co., Ltd.	¥1,330 million
DSS Takara Bio India Private Ltd.	₹110 million
Takara Bio USA Holdings Inc.	\$70,857 thousand
Takara Bio USA, Inc.	\$83 thousand
Takara Bio Europe S.A.S.	€891 thousand
Takara Bio UK Ltd.	£100 thousand

Investor Information

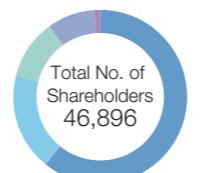
Common Shares

Authorized	400,000,000 shares
Issued	120,415,600 shares
Total No. of Shareholders	46,896
Stock Listing	Tokyo Stock Exchange (securities code number: 4974)
Fiscal Year	From April 1 to March 31 of the following year
Annual Meeting of Shareholders	Every June
Record Date	Dividends : March 31 Interim dividends : September 30
Share Unit Number	Other record dates will be posted in advance if necessary 100 shares

Major Shareholders

Name	Number of Shares Held	Percentage of Issued Shares
Takara Holdings, Inc.	73,350,000	60.91
The Master Trust Bank of Japan, Ltd. (trust account)	7,114,500	5.91
Custody Bank of Japan, Ltd. (trust account)	2,489,800	2.07
STATE STREET BANK WEST CLIENT-TREATY 505234	671,300	0.56
GOVERNMENT OF NORWAY	651,797	0.54
JP MORGAN CHASE BANK 385781	615,720	0.51
KIA FUND F149	549,000	0.46
STATE STREET BANK AND TRUST COMPANY 505001	543,149	0.45
The Dai-ichi Life Insurance Company, Limited	503,600	0.42
Bank of Kyoto, Ltd.	500,000	0.42

Distribution of Shareholders



Other Corporations	61%
Individuals and Others	18%
Financial Institutions	11%
Foreign Investors	9%
Securities Companies	1%

TAKARA BIO INC.

7-4-38 Nojihigashi, Kusatsu, Shiga 525-0058, Japan
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