

Exploring the Innovative Promise of Glycoscience

Seikagaku Corporation is a pharmaceutical manufacturer with a history of more than 70 years. As a pioneer in glycoscience, a research field with enormous hidden potential in drug discovery, we create innovative pharmaceuticals and medical devices.

Seikagaku contributes to the health, well-being, and improved quality of life for patients around the world in order to create a prosperous future.

What is Glycoscience?

Glycoscience is a field of research into sugar chains and the complex carbohydrates, or glycoconjugates, that are formed through the binding of these sugar chains with other substances, such as proteins and lipids. Research in this field has demonstrated that sugar chains are deeply involved exchanges of information and substances among cells and are essential for various life phenomena, from the creation of life to aging.

There is also growing interest in the relevance of sugar chains to numerous diseases. Progress in the field of glycoscience is expected to lead to the development of new diagnostic methods and therapies.

Key roles of sugar chains

- 1 Creation of life through fertilization**
Sugar chains are involved in the fertilization process that occurs when a sperm encounters an egg.
- 2 Determining blood type**
The ABO blood type of a person is determined by the shape of sugar chains on the surface of their red blood cells.
- 3 Water retention**
Sugar chains, such as hyaluronic acid, protect cells against excessive water loss.
- 4 Cell growth control**
Sugar chains control the activity of certain growth factors.
- 5 Protecting the body against external enemies**
When a viral or other infection invasion occurs, sugar chains activate immune cells by stimulating macrophages, which are a type of white blood cell.

Sugar chains and diseases

- 1 Viral and bacterial infections**
Pathogens such as the influenza virus bind to specific sugar chains on a cell's surface before penetrating the cell itself.
- 2 Metastasis of cancer**
When cells become cancerous, their sugar chains change shape and start to accelerate the proliferation and metastasis of cancer cells.
- 3 Diabetes**
Abnormal sugar chain genes are believed to be one of the causes of this disease.

<Reference> It has been found that highly metastatic cancer cells feature an increased amount of giant sugar chains, which are much less prevalent in normal cells.

Our Strengths Source of Competitiveness

Seikagaku Corporation has developed a unique business model based on specialization in R&D and manufacturing. We contribute to medical care globally by developing and supplying high-quality pharmaceuticals and medical devices that leverage our unique technological capabilities.

1

Specialization in Glycoscience

Since its foundation, Seikagaku has focused its attention on the importance of glycoscience and has been working on applied research for new drug development. With our many research achievements, we are contributing to advances in medical science globally through our pioneering and specialized work in this niche field.

2

State-of-the-Art Technology Related to GAG*

Through its many years of glycoscience research, Seikagaku has built up a library of GAG compounds and GAG-related enzymes, as well as a wide range of technologies based on the manipulation of these substances. We use these resources to develop new drugs. In its manufacturing operations, we apply our original GAG-related technologies and expertise to various processes, such as extraction, purification and culturing.

*GAG: Glycosaminoglycans, such as hyaluronic acid and chondroitin sulfate, which are structural components known as glycoconjugates.

3

Unique Business Model Specialization in R&D and Manufacturing

Seikagaku does not have its own sales force. Instead, we offer our products through sales partners that have strengths in their respective product fields. This approach allows us to concentrate our management resources into R&D and manufacturing. This is evidenced by the fact that our R&D expenses account for 20% to 30% of net sales, and that 35%* of our employees are involved in R&D.

*Non-consolidated basis

Philosophy

CORE VALUES

<MOTTO>

Creativity, Fairness, Dreams and Passion

<Creed>

We create safe and useful products for human well-being with basic research based on glycoscience.

<Guidelines for Our Activities>

- We create a corporate environment of mutual trust and communication using individual abilities.
- We create innovative and useful products through in-depth cooperation between industrial and academic circles.
 - We assure the highest quality and safety of our products.
 - We enhance interaction with society by establishing genuine trust.

Through these efforts, Seikagaku will strive to become a sound and socially responsible company that protects the natural environment and improves quality of life.

Inspiration Behind Our Motto

Creativity

Individual and corporate creativity are important for scientific advancement aimed at pursuit of truth. We can produce novel new products, new technologies, and new use of products by developing and applying unique and creative approaches, thus we can expect to achieve sound and stable corporate growth as a result of these efforts.

Fairness

We will adhere to principles of fairness that are recognized worldwide, and through self-discipline, will ensure we remain a company that is respected by society at large. Our “Creativity” and our “Dreams and Passion” must be built on a foundation of “Fairness.”

Dreams and Passion

We have high ambition, and strive to achieve our dreams by working toward our ideals. This is the ultimate source of growth for our employees and our company.

Contents

Profile

Our History	05
Business Activities and Products	07

Value Creation

Message from the President & CEO	09
Value Creation	13
Six Material Issues	15
Mid-term Management Plan FY2022 to FY2025	17
Summary of the Key Measures	19
Business Progress	22
Research and Development	23
Quality Compliance	29
Marketing	31
Production	33

Foundation for Value Creation

Sustainability Progress	34
Sustainability Management	35
Environment	36
Social	40
Governance	43

Data Section

Consolidated 10-year Summary	55
Review Of Operations	57
Financial/Non-financial Highlights	59
Overseas Subsidiaries	60
Corporate Data	61
Stock Information	62

<< Editorial Policy >>

The Seikagaku Corporate Report 2023 is an integrated report containing both financial data and information about environmental, social and governance (ESG) initiatives. Non-financial information includes the history of our growth, our value creation processes, and initiatives in various business areas.

This report was created with the aim of providing stakeholders with a fuller understanding of our business activities and the value provided by Seikagaku Corporation.

<Target audience>

Seikagaku stakeholders, including shareholders and investors.

<Period covered by the report>

This report covers fiscal 2022 (April 1, 2022–March 31, 2023), but it also includes references to activities in fiscal 2023.

Our History

Success Based on Steady Pursuit of a Unique Vision

As indicated by the company name, Seikagaku Corporation focuses on research in the field of biochemistry (seikagaku in Japanese). The history of Seikagaku Corporation is a story of growth in step with the development and progress of glycoscience.

1950

Start of manufacture and sales of chondroitin sulfate for pharmaceutical products, following approval for pharmaceutical manufacturing in Japan



1960

Start of manufacture and sales of glucide-related research reagents developed in-house

*The research reagent business was terminated in 2012

1981

Start of manufacture and sales of world's first endotoxin colorimetry reagents

1987

Launch of ARTZ®*, the world's first joint function improving agent with hyaluronic acid as its main active ingredient
Launch of OPEGAN® as the first Japanese-made ophthalmic viscoelastic device



*The joint function improving agent ARTZ® delisted from the NHI drug price standard on March 31, 2022

1992

Launch of ARTZ®, a joint function improving agent, in Sweden under the name "Artzal®," making the start of full-scale overseas marketing of joint function improving agents

1993

Launch of ARTZ Dispo®, a joint function improving agent

1995

Launch of OPEGAN Hi® (now Sodium Hyaluronate 0.4 Ophthalmic Viscoelastic Preparation 1% SEIKAGAKU), an ophthalmic viscoelastic device

2001

Launch of SUPARTZ®, a joint function improving agent, in the U.S. (now SUPARTZ FX®)



2007

Launch of MucoUp®, a submucosal injection agent for endoscopic surgery



2012

Launch of Gel-One®, an intra-articular single-injection viscosupplement for the treatment of knee osteoarthritis, in the U.S.



2016

Launch of SHELLGAN®, an ophthalmic viscoelastic device



2018

Launch of HERNICORE®, a treatment for lumbar disc herniation



2019

Launch of HyLink®, an intra-articular single-injection viscosupplement for the treatment of knee osteoarthritis in Italy



2021

Launch of JOYCLU®, a joint function improving agent



1940s~

The world's first company to successfully produce chondroitin sulfate on a commercial scale.

1970s~

Pharmaceuticals using hyaluronic acid are developed.

1990s~

Enhances its range of pharmaceuticals using hyaluronic acid and expands its activities in overseas markets.

2018~

Product diversification leveraging cutting-edge glycoscience technology. Toward a new stage.

1947

Kosei Suisan K.K. (now Seikagaku Corporation) is established and opens the Kurihama Office (now Kurihama Plant) in Yokosuka City, Kanagawa Prefecture



1949

Masakane Mizutani (a former President of Seikagaku Corporation) commences trial production with the aim of realizing the world's first production of chondroitin sulfate on a commercial scale

1960

The Tokyo Research Institute (renamed the Tokyo Research Center in 1966) is opened in Shinjuku-ku, Tokyo

1962

The Company changes its name to Seikagaku Corporation

1968

The Tokyo Research Center (now the Central Research Laboratory) is relocated to Higashiyamato City, Tokyo



1975

The Takahagi Plant is opened in Takahagi City, Ibaraki Prefecture

1989

The Company's stock is registered on the Japan Securities Dealers Association market

1997

Seikagaku Corporation acquires Associates of Cape Cod, Inc. (U.S.A.), a manufacturer and seller of endotoxin-detecting reagents, etc.



1998

ISO 13485 certification is achieved

2004

Seikagaku Corporation is listed on the Second Section of the Tokyo Stock Exchange

2005

Seikagaku Corporation is promoted to the First Section of the Tokyo Stock Exchange

2013

The CMC Research Laboratory is established in Higashiyamato City, Tokyo (on the same site as the Central Research Laboratory)

2020

Seikagaku acquires CDMO* business operator Dalton Chemical Laboratories, Inc. (Canada)



*CDMO: Contract Development and Manufacturing Organization
A business that supplies comprehensive services in drug development and manufacturing to pharmaceutical companies, including contract drug manufacturing, pharmaceutical formulation planning at the development stage, manufacturing of investigational drugs, and optimization of manufacturing conditions

2022

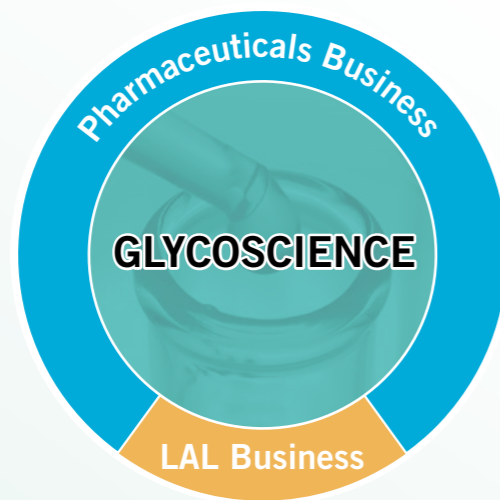
SEIKAGAKU NORTH AMERICA CORPORATION is established in Canada to manage pharmaceutical and medical device development in North America

Moved to the Tokyo Stock Market, Prime Market



Business Activities and Products

Seikagaku has two business segments. In the Pharmaceuticals business, we offer a range of original products that leverage technologies and knowledge cultivated over many years as a glycoscience pioneer. In the LAL business, we offer endotoxin-detecting reagents and other products.



LAL Business

Seikagaku engages in the LAL business, manufacturing and selling endotoxin-detecting reagents used in quality control of pharmaceutical and medical device manufacturing processes as well as a beta-glucan-detecting in vitro reagent for the diagnosis of deep fungal infections.

What are endotoxins?

Endotoxins are one of the major components of the outer membrane of gram-negative bacteria and exhibit strong pyrogenic activity even in minute amounts. Since serious side effects can be triggered by endotoxin contamination of injectable pharmaceuticals, biological products, or medical devices, they must be rigorously controlled, especially in directly administered injectable treatments.

What are glucans?

(1→3)-β-D-glucans are structural components of the cell walls of fungi, as typified by molds and yeasts. Measurement of the glucan concentration in blood is widely used in auxiliary diagnosis of deep fungal infections and judgment of the therapeutic effect of antifungal agents.

Endotoxin-detecting reagents and devices

■ ENDOSPECY®, TOXICOLOR®, PYROCHROME®, etc.

Endotoxin-detecting reagents are reagents that measure endotoxins. Made from limulus amoebocyte lysate (LAL), a substance extracted from the blood cells of horseshoe crabs, these reagents are used in quality control of injectable pharmaceuticals, biological products, and medical device manufacturing processes and water quality control of dialysate used in artificial dialysis.

■ PyroSmart NextGen™

PyroSmart NextGen is an endotoxin-detecting reagent manufactured using genetic recombination technology without the use of blood harvested from horseshoe crabs. Seikagaku has successfully developed the world's first product consisting of recombinant proteins of Factor C, Factor B, and a coagulating enzyme precursor, which are components of horseshoe crab blood cells. Developed together with overseas subsidiary Associates of Cape Cod, Inc., PyroSmart NextGen was launched in Europe and the U.S. in April 2021 and introduced in Japan in May of the same year.

■ Endotoxin-detecting Systems

Seikagaku provides a wide range of endotoxin-detecting solutions to meet customers' needs, such as fully automatic and simultaneous multi-analyte measurement.

Beta-glucan-detecting in vitro reagent

■ Fungitell®

Fungitell is an in vitro diagnostic reagent used in the selection of treatment methods for deep fungal infections and judgment of therapeutic effect. Fungitell was developed by Seikagaku Corporation as the first product of its kind in the world and it is manufactured and sold in markets outside Japan by Associates of Cape Cod, Inc.



Endotoxin-detecting reagents



Automatic endotoxin-detecting systems

Pharmaceuticals Business

The Pharmaceuticals business is Seikagaku Corporation's core business. Seikagaku manufactures and provides pharmaceuticals and medical devices made with GAG, as well as enzymes that act on GAG. GAG stands for glycosaminoglycans such as hyaluronic acid or chondroitin sulfate, the main ingredients in Seikagaku products. GAG is also a structural component of glycoconjugates. Seikagaku contributes to medical care in Japan and around the world by providing global-class high-quality products with its unique technologies.

Joint Function Improving Agents

■ ARTZ Dispo®, SUPARTZ FX®, VISCO-3®

ARTZ Dispo, a prefilled syringe product*1, is a multiple-injection version of ARTZ*2, a joint function improving agent containing hyaluronic acid as its main active pharmaceutical ingredient. When administered directly into the joint cavity, ARTZ Dispo is expected to reduce pain and inflammation. It has been approved and is supplied not only in Japan, but also in overseas markets, including the U.S., Asia, and Europe.

*1 A kit with an injectable syringe that has to be filled with solution.

*2 Delisted from the NHI drug price standard on March 31, 2022.

■ JOYCLU®

JOYCLU, a formulation in which hyaluronic acid and diclofenac (an anti-inflammatory drug) are chemically bound, is a joint function improving agent launched in May 2021. Improvement of symptoms of osteoarthritis of the knee joint and hip joint is expected from the administration of JOYCLU into the joint cavity once every four weeks. JOYCLU is the first joint function improvement agent in Japan indicated for the treatment of osteoarthritis of the hip joint.

■ Gel-One®, HyLink®

Originally developed for the U.S. market, Gel-One is an intra-articular single-injection viscosupplement for the treatment of knee osteoarthritis that contains cross-linked hyaluronate hydrogel as its main ingredient. Administration of only 3mL provides long-lasting benefits. HyLink, an intra-articular single-injection viscosupplement for the treatment of knee osteoarthritis that, like Gel-One, contains cross-linked hyaluronate hydrogel as its main ingredient, is currently sold in Italy and Taiwan.

Treatment for Lumbar Disc Herniation

■ HERNICORE®

HERNICORE, which contains an enzyme named "condoliase" as its active pharmaceutical ingredient, is Japan's first product for the treatment of lumbar disc herniation (intradiscal enzyme injection therapy). It can be administered without general anesthesia, and the administration can be less invasive for the patient compared to surgical technique because of direct intradiscal injection.

Ophthalmic Viscoelastic Devices (OVD)

■ OPEGAN®, SHELLGAN®, Sodium Hyaluronate 0.4 Ophthalmic Viscoelastic Preparation 1% SEIKAGAKU

The OPEGAN series of products allows the creation of appropriate intraocular space by viscoelastic properties of hyaluronic acid in cataract surgery. The product range includes seven types of different volumes and viscoelastic properties to meet specific treatment needs.

Submucosal Injection Agent for Endoscopic Surgery

■ MucoUp®

MucoUp is an endoscopic surgical aid that utilizes the excellent viscoelastic properties of hyaluronic acid. By injecting MucoUp into the submucosa beneath the lesion during the endoscopic resection of tumors in the gastrointestinal tract such as esophagus, stomach and large intestine, it creates a durable tissue uplift and provides improved procedural maneuverability and efficiency for ESD/EMR.

Bulk Products

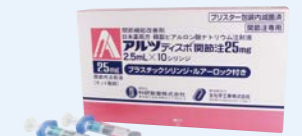
■ Sodium hyaluronate, sodium chondroitin sulfate

Based on our unique extraction and purification technology, we manufacture and sell high-quality, high-purity hyaluronic acid and chondroitin sulfate, which are mainly raw materials for pharmaceuticals and cosmetics.

CDMO

■ CDMO services (contract development and manufacturing)

Seikagaku provides services to pharmaceutical companies, including manufacturing of chemical synthetics and pharmaceutical products on a contract basis and manufacturing process development. Seikagaku entered this business by acquiring Dalton Chemical Laboratories, Inc. as a subsidiary in March 2020.



ARTZ Dispo®



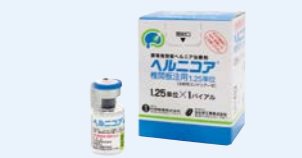
SUPARTZ FX®



JOYCLU®



Gel-One®



HERNICORE®



OPEGAN® series



MucoUp®



Bulk products

Message from the President & CEO



Seikagaku aims to achieve record-high business results during the term of the current mid-term management plan, positioned as “a period for achieving growth,” by steadily implementing key measures in the plan.

President & CEO Ken Mizutani

Strategic positioning of the mid-term management plan

Seikagaku continues to face an extremely adverse business environment due to factors including the progress of measures to control medical costs, notably drastic reform of the drug price system in Japan, and intensification of competition among pharmaceutical companies accompanying diversification of treatment options. In the area of research and development, the industry faces challenges including soaring costs and depletion of seeds for new drug development. Nevertheless, we are also seeing trends that propel new drug development, such as the emergence of regenerative medicine and other new therapeutic techniques and diversification of drug discovery modalities. We believe that a flexible response to these trends is necessary for Seikagaku to maintain a constant growth trajectory in this drastically changing business environment. Also, fulfillment of social responsibilities, starting with sustainability promotion, is increasingly important for the sustainable development of society and enhancement of corporate value. Responding to these

societal demands is an urgent priority for Seikagaku.

Accordingly, Seikagaku has instituted a mid-term management plan covering the four-year period beginning with the fiscal year ending March 31, 2023 (fiscal 2022), positioned as a period for achieving growth, and is implementing five key measures set out in the management plan: 1) Accelerate R&D utilizing unique drug-discovery technologies, 2) Maximize the product value of SI-6603 (treatment for lumbar disc herniation), 3) Maintain and enhance the business value of joint function improving agents, 4) Construct a global production system, and 5) Expand the LAL business through recombinant technologies. Building on a foundation solidified during the period of the previous management plan, we aim to achieve record-high business results in the final year of the plan by cultivating the ability to maintain a constant growth trajectory. Among the key measures, the market introduction of SI-6603 will be the focus of particular attention and effort.

Achievements versus mid-term management plan

Progress made in implementing the five key measures in the mid-term management plan is as follows.

1) Accelerate R&D utilizing unique drug-discovery technologies

New drug development is the source of growth for pharmaceutical companies. At Seikagaku, the aim of drug discovery is to create products that patients truly need, targeting glycosaminoglycans (GAG)* and GAG-related enzymes, substances that enable us to take maximum advantage of our original technologies and expertise.

Subject enrollment was completed in an additional Phase III clinical study in the U.S. evaluating SI-6603, a treatment for lumbar disk herniation that will provide a new therapeutic option for lumbar disk hernia patients in the U.S. In May 2023, we obtained topline results indicating statistically significant improvement in the primary endpoint of the study. Also, in a pivotal study in Japan of SI-449, an adhesion barrier that utilizes Seikagaku's own proprietary GAG cross-linking technology, in July 2023 we obtained topline results showing statistically significant adhesion prevention performance in both the primary endpoint and secondary endpoints of the study. We believe that SI-6603 is a new drug and SI-449 is a new medical device that meet unmet medical needs and will diligently proceed with preparations for an NDA submission to make possible delivery of products to patients at an early date.

*GAG: Glycosaminoglycans, such as hyaluronic acid and chondroitin sulfate, which are structural components known as glycoconjugates.

2) Maximize the product value of SI-6603 (treatment for lumbar disc herniation)

SI-6603, the previously mentioned treatment for lumbar disk herniation, is a new drug we expect to become Seikagaku's largest growth driver for the future, and we consider obtaining regulatory approval and launching the product in the U.S. an important management priority. To promptly accomplish this, we are making full use of Canadian subsidiary Seikagaku North America Corporation, our North American development site, and proceeding on the basis of preparation of a comprehensive system to make possible smooth communication with the U.S. Food and Drug Administration (FDA) and ensure that the approval application and response to regulatory review are prompt and accurate.

Also, to maximize product value through early penetration at medical institutions, we are focusing on preparations for a product launch soon after approval is obtained in close collaboration with licensee Ferring Pharmaceuticals.

3) Maintain and enhance the business value of joint function improving agents

We consider it necessary to maintain and enhance the business potential of our mainstay joint function improving agents as core products that provide a solid foundation for the business. In Japan, we are expanding the production system and maintaining a stable supply as sales volume increases. Because these products are greatly affected by NHI drug price reductions, cost structure reform is essential. Various measures to achieve rapid cost reductions through changes in product material specifications are progressing.

Seikagaku also continues to gather and provide safety information on the joint function improving agent JOYCLU and is conducting clinical research to identify the cause of reported side effects.

4) Construct a global production system

At Dalton Chemical Laboratories, Inc., which became a Seikagaku subsidiary in March 2020, we are proceeding with a switch to in-house production of chemical synthetics and the partial transfer of manufacturing of pharmaceutical ingredients, and certain synergies are being achieved. We are also making headway with consideration of production system restructuring to make the Seikagaku Takahagi Plant and Dalton dual production sites by means such as the transfer of manufacturing of some products, including new products. We will continue making appropriate investments in pursuit of production optimization and efficiency from a global perspective.

5) Expand the LAL business through recombinant technologies

We have seen progress with an initiative to increase awareness of PyroSmart NextGen (a recombinant LAL reagent) by accumulating and publishing related scientific data. Also, we are working to increase the number of countries where Fungitell (a beta-glucan-detecting in vitro diagnostic test) is sold and to further expand into the hospital market.

In collaboration with U.S. subsidiary Associates of Cape Cod, Inc., we will continue our efforts to position Seikagaku as a leading company in the industry by creating unique products and services that competitors are unable to provide.

In fiscal 2022, implementation of the key measures in the management plan progressed largely as planned. We will continue to diligently implement the key measures in order to achieve our targets for the final year of the plan.

Sustainability initiatives

Seikagaku also regards the pursuit of sustainability as an important priority, and we are devising and implementing effective measures that are based on the Basic Policy on Sustainability, instituted in 2021, and focused on six material issues, which give concrete shape to the policy. We are also expanding the scope of application of these measures to our subsidiaries.

In January 2023, Seikagaku established the Supply Chain Management Department with the aim of helping solve social problems by practicing sustainable raw procurement and providing a stable supply of products in cooperation with suppliers.

And, in March 2023, to further address environmental issues, we revised the CO₂ emission reduction target upward and began promoting new measures to achieve it.

Going forward, in addition to these measures, Seikagaku will promote initiatives to address

sustainability-related issues in areas including respect for human rights, consideration of the working environment for employees, fair and appropriate trading with business partners, and enhancement of corporate governance and will proactively disclose information to ensure sufficient communication with stakeholders.

Furthermore, Seikagaku considers the talents and skills of its employees to be an important corporate asset. As the importance of human capital further increases in the coming years, we will work to develop talented people capable of creating new value. And, to ensure that the contributions and successes of diverse employees are the driver of Seikagaku's sustained growth, we will proceed with preparation of an environment, systems, programs, and mechanisms to enable all employees to fully demonstrate their capabilities.

Seikagaku has identified and is focusing on six material issues related to the following eleven Sustainable Development Goals (SDGs). (For details, please refer to the section "Six Material Issues" beginning on Page 15.)



To our shareholders and other stakeholders

It is Seikagaku's mission to contribute to the health and well-being of people around the world through the wider provision on a global scale of new pharmaceuticals that patients truly need. By fulfilling this mission, we aim to enhance our value to society as a pharmaceutical company.

As mentioned above, we are steadily implementing the key measures in the mid-term management plan, which has been newly formulated on the basis of a foundation solidified during the period of the previous management plan. The entire Seikagaku Group will work to achieve the targets set out in the plan.

We will also strive to strengthen corporate governance on the basis of high ethical standards by rigorously

practicing honest corporate activities and ensuring management transparency and will work to achieve the sustainable development of the Earth and society.

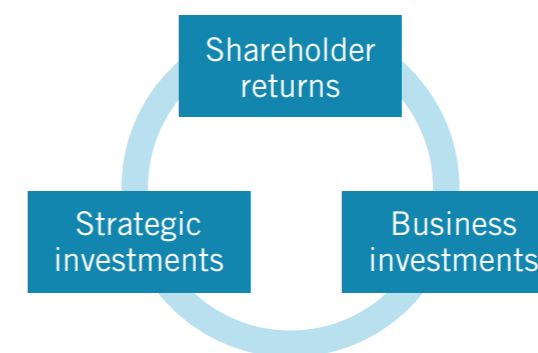
We request the continued understanding and support of our shareholders and other stakeholders.

President & CEO

Basic policy on profit distribution

Seikagaku believes that sustained profit growth and enhancement of corporate value contribute to the common interests of the shareholders. Management regards the return of profits to shareholders as an important priority and, while taking an annual dividend of ¥26 per share as the basis, will consider dividend increases, taking into account the trend in business performance, the financial position, and other factors. Also, while taking into consideration future business expansion and the total return ratio, Seikagaku will consider the purchase of treasury stock when appropriate. Seikagaku plans to pay an annual dividend of ¥26 per share, including the interim dividend, for the fiscal year ending March 31, 2024.

In addition, in order to solidify the business foundation and improve capital efficiency, the Company will make efficient and active business investments in R&D for creating new value, in production system development, and in sustainable activities and will flexibly make strategic investments offering prospects for future growth and synergy effects.



Shareholder returns

- Consider dividend increases, while taking an annual dividend of ¥26 per share as the basis, taking into account business performance and other factors.
- Consider the purchase of treasury stock when appropriate.

Business investments

- Continue efficient investments in R&D and production.
- Make active business investments in sustainable activities.

Strategic investments

- Flexibly consider strategic investments with prospects for future growth and synergy effects.

	Forecast for Fiscal 2023	Fiscal 2022 Results
2nd Quarter	¥13.00	¥13.00
Fiscal Year-end	¥13.00	¥13.00
Annual Total Dividend	¥26.00	¥26.00
Dividend Payout Ratio	54.6%	64.2%

Value Creation

Innovating Novel Contributions and Approaches

As a company specializing in glycoscience, Seikagaku works to find solutions to social issues, increase its corporate value, and contribute to the health and well-being of humanity by creating novel and effective pharmaceuticals and medical devices and providing them to the world.

Social issues and the external environment

- Response to unmet needs
- Increased incidence of locomotive syndrome
- Super-aging society
- Increased healthcare access
- Declining probability of success in new drug development
- Protracted new drug development periods and soaring costs
- Contraction of the Japanese market, expansion of the global market
- Aggravation of environmental problems, environmental consideration (ESG), environmental conservation initiatives

Forms of capital advantageous for R&D and domestic and international alliances

- Financial capital**
 - A stable financial base that provides the source of funds for continuous new drug creation
- Manufacturing capital**
 - Manufacturing and quality management systems for the stable provision of high-quality pharmaceuticals
- Intellectual capital**
 - Accumulated glycoscience-related chemical compound library
 - Drug creation capabilities focused on target substances and high-priority target diseases
- Human capital**
 - People capable of creating new value by applying a high level of expertise in a challenge-driven corporate culture
- Social capital**
 - Relationships of trust with stakeholders for realization of a sustainable society
- Natural capital**
 - Low-environmental-impact business activities as a life sciences company
 - Corporate management that gives consideration to biodiversity

An original business model of specializing in R&D and manufacturing

- Specialization in R&D and manufacturing**
 - Lean organizational structure with no pharmaceutical marketing units
 - R&D investment equivalent to 20–30% of net sales



- State-of-the-art technology related to GAG**
 - Advanced manufacturing basic technologies, including extraction, purification, cultivation, fermentation, and other technologies
 - The ability to create diverse new pharmaceuticals based on the use of GAG and related enzymes

Business flow



Material issues

- Creation of truly useful pharmaceuticals and medical devices
- Provision of a stable supply of pharmaceuticals and medical devices of guaranteed quality
- Expansion of healthcare access and appropriate provision of high-quality medical information
- Fair and ethical business activities and strengthening of corporate governance
- Promotion of diversity and development of human resources
- Engagement in environmentally-friendly corporate activities

Mid-term management plan

- I** Accelerate R&D utilizing unique drug-discovery technologies
- II** Maximize the product value of SI-6603 (treatment for lumbar disc herniation)
- III** Maintain and enhance the business value of joint function improving agents
- IV** Construct a global production system
- V** Expand the LAL business through recombinant technologies

Output

Provision of innovative, high-quality pharmaceuticals and medical devices, etc.

- Ethical pharmaceuticals, medical devices
- Bulk product
- CDMO services (contract development and manufacturing)
- LAL-related products



P17

Creation of economic value and social value

- Medical institutions and patients**
 - Contribution to QOL improvement
 - Creation of truly useful pharmaceuticals
 - Provision of a stable supply of pharmaceuticals and other products of guaranteed quality
- Shareholders**
 - Stable shareholder returns provided through sustained growth
 - Fair information provision
 - Enhancement of shareholder value
- Employees**
 - Provision of growth opportunities
 - Provision of an environment, systems, programs, and mechanisms to enable all employees to fully demonstrate their capabilities
- Society**
 - Contribution to realization of a sustainable society
 - Further development and refinement of glycoscience research technologies



Resolution of social issues and actualization of the management philosophy

Glycoscience for Human Well-being

P15

Six Material Issues

Seikagaku Corporation has identified six material issues on the basis of assessment of important issues that should be addressed on a priority basis in the interest of achieving sustainable development of society and enhancement of corporate value, in light of both their importance to the company and the expectations of society, including diverse stakeholders. By promoting initiatives related to these material issues, Seikagaku will contribute to achievement of the Sustainable Development Goals (SDGs) adopted by the United Nations.



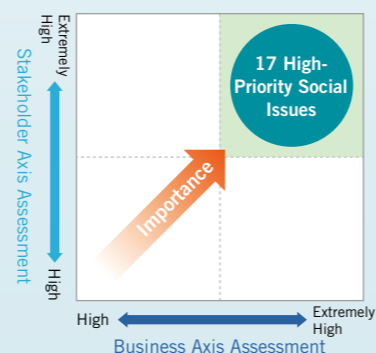
Material Issue Identification Process

Step 1 Identification and organization of social issues

To identify material issues, we identified social issues based on factors including non-financial information disclosure guidelines; international frameworks, principles, and guidelines; and survey items from ESG assessment organizations. Furthermore, we closely examined issues specific to the pharmaceutical industry. On that basis, we compiled a list of 39 social issues.

Step 2 Prioritization of social issues




Using the list of 39 social issues identified in Step 1, we assessed the importance of issues to Seikagaku in light of its Corporate Philosophy, management strategies, and financial situation. Also, an external consultant scored, analyzed, and organized the issues from an outside perspective to assess the expectations of society, including diverse stakeholders. Based on the results of this assessment process, we prepared a social issues assessment matrix and shortlisted 17 high-priority social issues of importance to both Seikagaku and society.



Step 3 Identification of material issues through validation and grouping of issues

To validate the social issues assessment matrix prepared in Step 2, following discussion and careful examination of the matrix together with involved Seikagaku divisions and departments and an external consultant, the Board performed grouping of the 17 high-priority social issues and identified six material issues relevant to Seikagaku. The Board articulated reasons for selection and a future vision and determined objectives, initiatives, and monitoring indicators for each identified material issue and organized and confirmed their relevance to SDGs. The material issues were then deliberated and approved by the Board.

Material Issues

Material Issues	Future Vision	Results (Fiscal 2022)*1
<p>1</p> <p>Creation of truly useful pharmaceuticals and medical devices</p>  	<p>Seikagaku increases its value to society by utilizing knowledge of glycoscience to continuously create pharmaceuticals and medical devices that are truly needed by society, and contribute to the health and well-being of people around the world. Seikagaku also considers intellectual property to be an important management resource and implements a global intellectual property strategy to contribute to the continuous creation of pharmaceuticals and medical devices.</p> <p>R&D P23</p>	<ul style="list-style-type: none"> SI-6603: Topline results indicating statistically significant improvement in the primary endpoint obtained in an additional Phase III clinical study in the U.S. (May 2023) SI-449: Results showing statistically significant improvement in both the primary endpoint and secondary endpoints obtained in a pivotal study being conducted in Japan (July 2023) SI-614: Follow-up observation completed in a Phase III clinical study in the U.S. (June 2023) Promoted creation of new research themes in disease areas with high unmet medical needs
<p>2</p> <p>Provision of a stable supply of pharmaceuticals and medical devices of guaranteed quality</p> 	<p>Seikagaku strengthens its compliance and production systems to ensure uninterrupted access to reliable pharmaceuticals and medical devices for patients and medical institutions. Also, we manage risks associated with raw materials procurement and other business processes and take all possible measures to prevent risks from materializing.</p> <p>Quality compliance P29 Production P33</p>	<ul style="list-style-type: none"> Conducted 20 audits (paper and on-site) of contract manufacturers, suppliers, and distributors Confirmed GMP compliance and development of a quality culture through periodic management reviews Implemented measures to prevent reoccurrence of equipment problems and strengthened preventive maintenance

Material Issues	Future Vision	Results (Fiscal 2022)
<p>3</p> <p>Expansion of healthcare access and appropriate provision of high-quality medical information</p> 	<p>Seikagaku promotes global distribution of pharmaceuticals and medical devices that address medical needs and, as a pharmaceutical manufacturer, strives to enhance information provision in order to achieve appropriate awareness of the safety and efficacy of our pharmaceuticals and medical devices and of diseases related to our products.</p> <p>Marketing P31</p>	<ul style="list-style-type: none"> Conducted a campaign to raise product awareness among patients in cooperation with a sales partner Conducted a total of five company-initiated clinical research and joint research projects and developed new evidence Gave two academic presentations and published three peer-reviewed papers for the purpose of enhancing product value Held seminars and briefings for medical practitioners in cooperation with sales partners and participated in exhibitions (total of 31 events) Published information on the Web for the purpose of providing information to physicians and increasing disease awareness among the general public
<p>4</p> <p>Fair and ethical business activities and strengthening of corporate governance</p> 	<p>Seikagaku engages in business management to ensure that each employee not only complies with laws and regulations, but also behaves on the basis of high ethical standards. Seikagaku also continuously works to develop a highly effective corporate governance system.</p> <p>Corporate governance P43 Compliance and risk management P53</p>	<ul style="list-style-type: none"> Passed a Board of Directors resolution on TCFD disclosure and complied with the principles of the Corporate Governance Code Zero serious compliance-related incidents; conducted continuous training to foster compliance awareness Engaged in systems development, including revision of internal regulations, in connection with revision of the Whistleblower Protection Act Revised the Basic Policy on Internal Controls in accordance with changes in the external environment Enhanced explanations of important matters for outside directors in light of the results of Board of Directors effectiveness evaluation
<p>5</p> <p>Promotion of diversity and development of human resources</p>   	<p>Seikagaku considers human resources to be an important corporate asset and works to develop people capable of creating new value. We develop an environment, systems, programs, and mechanisms to enable all employees to fully demonstrate their capabilities so that the contributions and successes of diverse employees are the driver of Seikagaku's sustained growth.</p> <p>Human Resources P41</p>	<ul style="list-style-type: none"> Disclosed human capital-related data, such as information on career training and employment diversity Introduced a new two-track HR system with the aim of organization building for maximization of resource value Began a review of the training curriculum for the purpose of developing autonomous employees Gathered and reflected in recruiting activities information on essential personnel in light of the medium-to-long-term and single-year business plans of each division and department (securing of diversity with regard to the proportion of mid-career recruits, gender classification, abilities, etc.)
<p>6</p> <p>Engagement in environmentally friendly corporate activities</p>   	<p>As a member of society, Seikagaku aims to achieve balance between environmental protection measures and business growth and engages in business activities with low environmental impact in addition to obeying environment-related laws and regulations.</p> <p>Environmental impact reduction initiatives P36 Initiatives for biodiversity P39</p>	<ul style="list-style-type: none"> Achieved continuous reduction in energy use (five-year average energy consumption per unit of 96.7% / equivalent to Class S energy conservation performance*2) Achieved a reduction in CO₂ emissions (2.8% reduction year on year) Disclosed environmental data on the Web, including CO₂ emissions, waste and recycling volumes, and water pollution load Continued horseshoe crab release and conservation activities at an overseas subsidiary

*1 Results for fiscal 2022 and beyond are partly included.

*2 Business operators are classified according to their energy conservation results as Class S (superior energy conservation performance), Class A (average energy conservation performance), or Class B (energy conservation not progressing). Class S business operators are recognized on the Ministry of Economy, Trade, and Industry website as excellent business operators.

Mid-term Management Plan FY2022 to FY2025

Seikagaku has positioned the four-year period beginning with the fiscal year ended March 31, 2023 (fiscal 2022) as “A period for achieving growth” and formulated a new mid-term management plan. By implementing key measures set out in the plan on the basis of a profit foundation solidified during the period of the previous management plan, Seikagaku will aim to maintain a constant growth trajectory and achieve record-high business results in the final year of the plan.



Summary of Previous Mid-term Management Plan

Seikagaku was able to achieve positive results with respect to important measures set out in the management plan and solidified the foundation for returning to a growth trajectory by achieving the numerical targets in the plan.

I Accelerating new drug discovery to become the pillar of new profits

- Joint function improving agent JOYCLU launched
- SI-722 (treatment for interstitial cystitis) and SI-449 (adhesion barrier) advanced to the next stage of development
- Enrollment for SI-6603 (treatment for lumbar disc herniation) completed
- SEIKAGAKU NORTH AMERICA CORPORATION established

II Solidifying the profit foundation through market expansion of new products

- HyLink (intra-articular single-injection viscosupplement for the treatment of knee osteoarthritis) launched in Taiwan
- Alliance agreement concerning SI-613 concluded with Eisai (China, South Korea)
- PyroSmart NextGen Recombinant LAL Reagent launched

III Productivity improvement reforms

- DALTON CHEMICAL LABORATORIES, INC. made a subsidiary
- Business continuity system developed in response to the impact of COVID-19
- Progress with review of procurement costs and sales-related expenses

Numerical Targets

	FY2021 results*1	FY2021 target	Percentage achievement
Net sales	¥31.2 billion	¥28.3 billion	+10.5%
Ordinary income	¥5.39 billion	¥4.5 billion	+19.9%
SKK EBITDA*2	¥5.54 billion	¥5.0 billion	+10.9%
Overseas sales ratio (excluding royalty income)	56.6%	50.0%	+6.6pt

*1 Converted to previous presentation categories

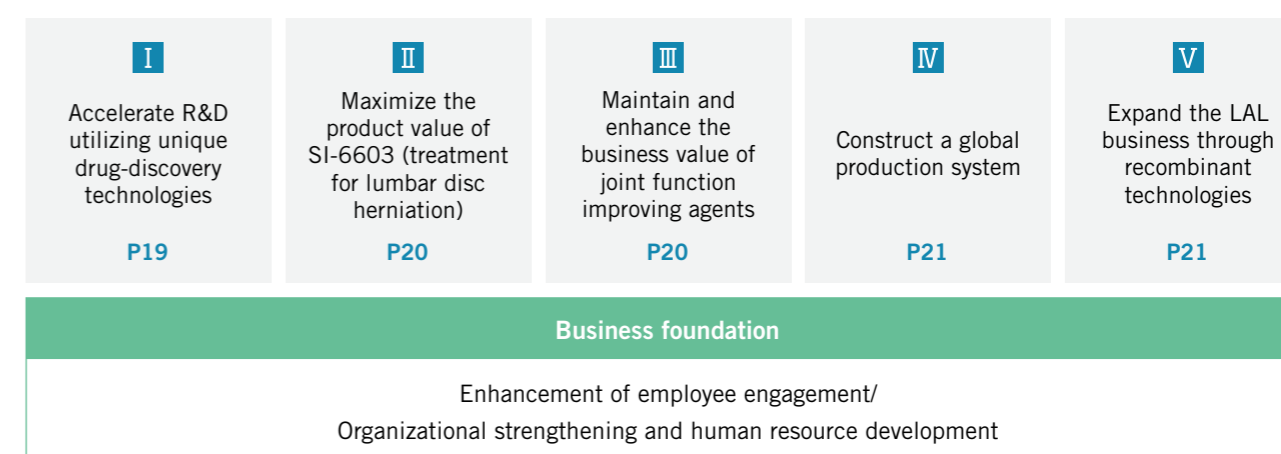
*2 SKK EBITDA: A profit indicator that adds depreciation to operating income

Overview of Key Measures

We expect the business environment to remain uncertain due to rapid changes in the pharmaceutical industry, such as National Health Insurance drug price reductions in Japan, healthcare system changes in overseas markets, the increasingly sophisticated demands of new drug development, rising development costs, and innovations in medical technologies. Also, fulfillment of social responsibilities, starting with sustainability promotion, is increasingly important for the sustainable development of society and enhancement of corporate value, and responding to this societal trend is a matter of urgent importance. (Information on sustainability initiatives is available in the section beginning on page 34.)

In this business environment, Seikagaku will implement the five key measures in the management plan to develop the ability to maintain a constant growth trajectory.

In addition, enhancement of employee engagement along with organizational strengthening and human resource development will be critical factors for carrying out the above five key measures. Seikagaku will work to solidify and improve the foundation for achieving sustained growth by stepping up investment to create an environment that promotes development and growth of human resources, the heart and soul of the Group's businesses.



Numerical Targets

Seikagaku aims to achieve record-high business results in fiscal 2025, the final year of the management plan.

	FY2022 results	FY2025 target
Net sales	¥33.4 billion	¥40.0 billion
Operating income	¥2.1 billion	¥7.0 billion

<Assumptions>

- U.S. market introduction of SI-6603 (treatment for lumbar disc herniation)
- Profit expansion from joint function improving agents in Japan
- Expansion of the overseas pharmaceutical and LAL business
- Ratio of R&D expenses to sales (excluding royalty income): target of 25%
- Exchange rate: ¥135/US\$1

Summary of the Key Measures

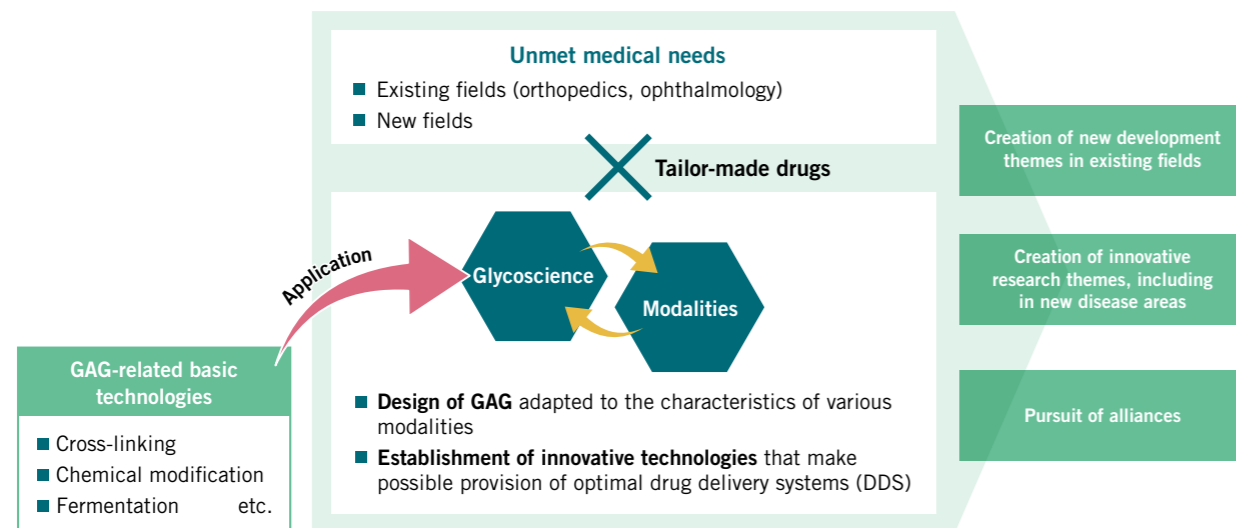
I Accelerate R&D Utilizing Unique Drug-discovery Technologies

Create products that patients need utilizing Seikagaku's own GAG-related technologies and aim for steady advancement of the pipeline list.

Apply Seikagaku's own GAG*-related basic technologies to create new drugs that patients truly need, with an emphasis on unmet medical needs, by focusing on creation of new development themes in existing fields and creation of innovative research themes, including in new disease areas. Also, to increase the probability of success

of these efforts, pursue various alliances aimed at making early progress.

* GAG: Glycosaminoglycans, such as hyaluronic acid and chondroitin sulfate, which are structural components known as glycoconjugates.



Pipeline List (Research and Development themes)

Advance existing pipelines with the aim of obtaining approval and introducing in the U.S. SI-6603 (a treatment for lumbar disc herniation), completing a Phase III clinical

study in the U.S. of SI-614 (a treatment for dry eye), and obtaining approval in Japan and initiating a clinical study in the U.S. of SI-449 (an adhesion barrier).

[Pharmaceuticals]

(As of September 30, 2023)

Development code/Product name	Indication	Developed in	Phase I	Phase II	Phase III	Application	Market approval
SI-6603 Condoliase	Lumbar Disk Herniation	USA					
SI-614 Modified Hyaluronate	Dry eye	USA					
SI-613 Diclofenac etalhyaluronate sodium	Knee Osteoarthritis	USA					
SI-613-ETP Diclofenac etalhyaluronate sodium	Enthesopathy	Japan					
SI-722 Steroid compound sodium chondroitin sulfate	Interstitial cystitis and bladder pain syndrome	USA					

[Medical Devices]

Development code/Product name	Product name	Developed in	Pilot study	Pivotal study	Application	Market approval
SI-449 Cross-linked Chondroitin Sulfate	Adhesion Barrier	Japan				
SI-449 Cross-linked Chondroitin Sulfate	Adhesion Barrier	USA				

→ Planned progress as of the end of fiscal 2025

State of progress

- SI-449 (adhesion barrier): Results showing statistically significant improvement in both the primary endpoint and secondary endpoints obtained in a pivotal study being conducted in Japan (July 2023)
- SI-614 (treatment for dry eye): Follow-up observation completed in a Phase III clinical study in the U.S. (June 2023)

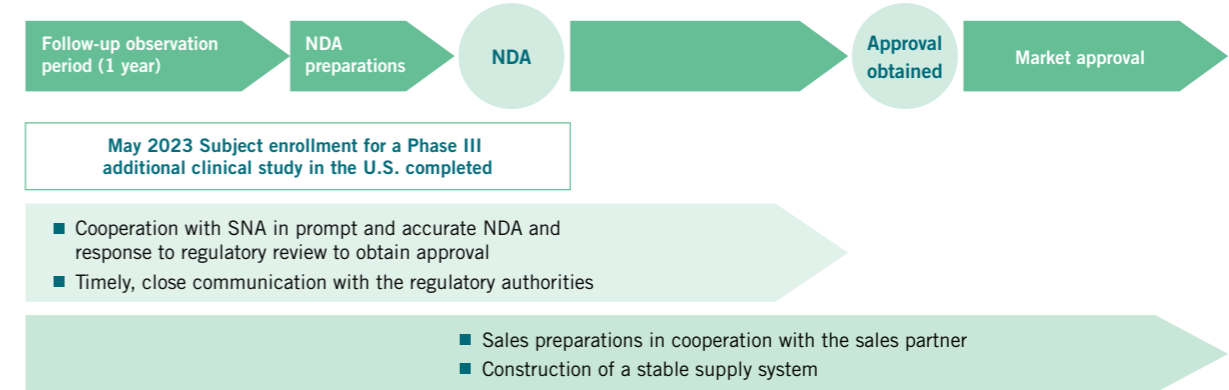
II Maximize the Product Value of SI-6603 (treatment for lumbar disc herniation)

Aim for an NDA, approval, and market introduction during the period of the mid-term management plan.

Take maximum advantage of SEIKAGAKU NORTH AMERICA CORPORATION, established in Canada for the purpose of obtaining approval in the U.S. and launching SI-6603, a treatment for lumbar disc herniation, to ensure a prompt and accurate NDA and response to regulatory review. Also proceed with sales preparations and pursue

maximization of product value through early penetration at medical institutions in close cooperation with the sales partner. (For information on the development status and characteristics of SI-6603, please refer to the section "Research and Development" beginning on page 23.)

<Steps leading up to market introduction>



State of progress

- Topline results indicating statistically significant improvement in the primary endpoint obtained in an additional Phase III clinical study in the U.S. (May 2023)
- Preparing for an NDA submission towards market introduction in the final year of the mid-term management plan, as originally planned

III Maintain and Enhance the Business Value of Joint Function Improving Agents

Seek to enhance business value through maximization of Seikagaku products in the market for joint function improving agents and cost structure improvement.

Strive to maintain and enhance the business potential of the core products that support business management by increasing the presence of Seikagaku products in the mainstay domestic market for joint function improving agents. Since the domestic pharmaceuticals business is greatly affected by NHI drug price reductions, cost structure improvement is essential. Seikagaku will further

proceed with product material specification changes, which help ensure continuity of product supply, manufacturing process efficiency improvement, and other measures. Seikagaku will also continue gathering and providing safety information on the joint function improving agent JOYCLU with the aim of contributing to appropriate prescription on the basis of clinical research findings.

Maximization of Seikagaku products in the market for joint function improving agents

Cost structure improvement

Maintenance and enhancement of business value that supports business management

State of progress

- Proceeding with production system expansion and a change of product materials for the purpose of further cost structure improvement due to a rapid market share increase for ARTZ
- Continued to gather and provide safety information on JOYCLU and conducted clinical research

IV

Construct a Global Production System

Undertake construction of a global production system with Japan and North America as dual production bases, including transfer of production of some products.

Further reinforce a stable supply of products on the basis of an appropriate and efficient production system by

making Dalton Chemical Laboratories, Inc. and the Seikagaku Takahagi Plant dual production bases.



Seikagaku Corporation Takahagi Plant
(Ibaraki Prefecture, Japan)

▶ Please refer to “Overview of Production Sites” on page 33.



DALTON CHEMICAL LABORATORIES, INC.
(Toronto, Canada)

▶ Please refer to “Overseas Subsidiaries” on page 60.

State of progress

- Proceeding with construction of a manufacturing system at Dalton to create dual formulation sites, in Japan and overseas

V

Expand the LAL Business Through Recombinant Technologies

Accomplish a transformation necessary from a long-term perspective in addition to continuation of current businesses and product improvement.

Further reinforce a stable supply of products on the basis of an appropriate and efficient production system by making Dalton Chemical Laboratories, Inc. (Toronto, Canada) and the Seikagaku Takahagi Plant (Ibaraki Prefecture, Japan) dual production bases, including transfer of production of some products.

▶ Please refer to “Overseas Subsidiaries” on page 60.



Endotoxin-detecting reagent
PyroSmart NextGen®

State of progress

- Continued gathering scientific data relating to PyroSmart NextGen (a recombinant LAL reagent) and co-authoring of academic papers with ACC
- Increased the number of countries where Fungitell (a beta-glucan-detecting in vitro diagnostic test) is sold and entered the hospital market

For details on the mid-term management plan:

 <https://www.seikagaku.co.jp/en/ir/management/midtermplan.html>