

Exploring the Innovative Promise of Glycoscience

Seikagaku has achieved sustained growth as an R&D-based pharmaceutical manufacturer specializing in glycoscience. We have used our extensive resources of technology relating to glycosaminoglycans, such as hyaluronic acid and chondroitin sulfate, which are both structural components of glycoconjugates, to create a wide range of original pharmaceuticals and medical devices.

We aim to achieve growth and success as a “Global Category Pharma” by contributing to the health and well-being of people all around the world through our unique drug development capabilities, and by enhancing our international competitiveness through focused R&D in our fields of specialization.



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 controls 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.

Our Strengths

Source of Competitiveness

Seikagaku uses its unique technology development capabilities to create and supply high-quality pharmaceuticals and medical devices. It has also built a unique business model based on specialization in R&D and manufacturing.

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 25% to 30% of net sales, and that one-third of our employees are involved in R&D..

《Editorial Policy》

The Seikagaku Corporate Report 2018 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 2017 (April 1, 2017–March 31, 2018), but it also includes references to activities in fiscal 2018.

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The Evolution and Growth of Seikagaku Corporation

Early in its history, Seikagaku became aware of the potential of glycoscience. We are achieving global growth through the steady commercialization of glycoscience R&D advances spanning decades.

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~

Reaches a new stage with the launch of a treatment agent for lumbar disc herniation.

Major Product Timeline

1950



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

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

1992

Launch of ARTZ® in Sweden under the name "Artzal®," making the start of full-scale overseas marketing of ARTZ®

1993

Launch of ARTZ Dispo®

1995

Launch of OPEGAN Hi®

2001

Launch of ARTZ® in the U.S. under the name "SUPARTZ®" (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

Business Structure Timeline

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 (now the JASDAQ).

1997

Seikagaku Corporation acquires Associates of Cape Cod, Inc. (U.S.A.)

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

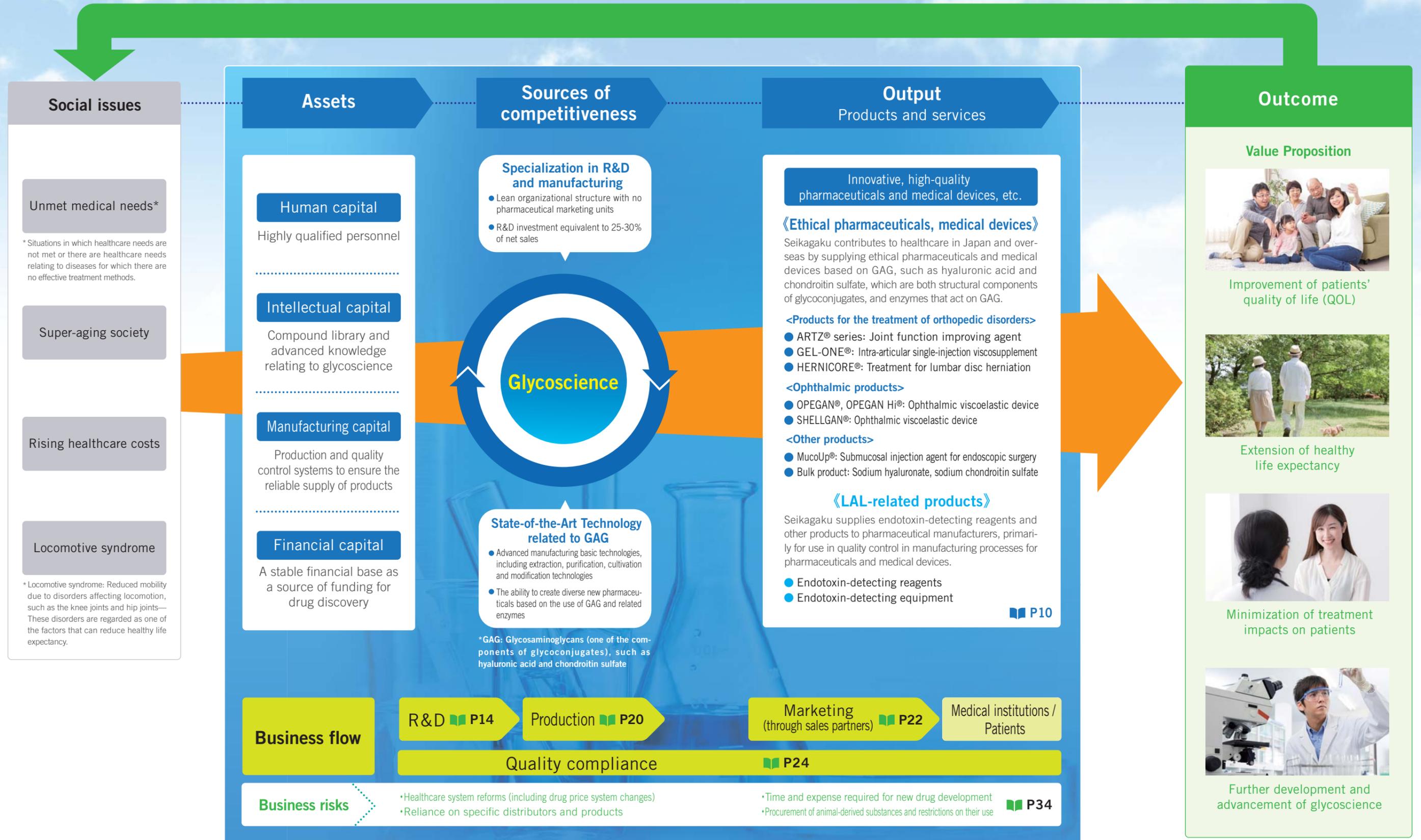
The CMC Research Laboratory is established in Higashiyamato City, Tokyo (on the same site as the Central Research Laboratory).

Net Sales (Millions of yen)



Value Creation Process

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

Unmet medical needs*

* Situations in which healthcare needs are not met or there are healthcare needs relating to diseases for which there are no effective treatment methods.

Super-aging society

Rising healthcare costs

Locomotive syndrome

* Locomotive syndrome: Reduced mobility due to disorders affecting locomotion, such as the knee joints and hip joints—These disorders are regarded as one of the factors that can reduce healthy life expectancy.

Assets

Human capital

Highly qualified personnel

Intellectual capital

Compound library and advanced knowledge relating to glycoscience

Manufacturing capital

Production and quality control systems to ensure the reliable supply of products

Financial capital

A stable financial base as a source of funding for drug discovery

Sources of competitiveness

Specialization in R&D and manufacturing

- Lean organizational structure with no pharmaceutical marketing units
- R&D investment equivalent to 25-30% of net sales

Glycoscience

State-of-the-Art Technology related to GAG

- Advanced manufacturing basic technologies, including extraction, purification, cultivation and modification technologies
- The ability to create diverse new pharmaceuticals based on the use of GAG and related enzymes

*GAG: Glycosaminoglycans (one of the components of glycoconjugates), such as hyaluronic acid and chondroitin sulfate

Output Products and services

Innovative, high-quality pharmaceuticals and medical devices, etc.

《Ethical pharmaceuticals, medical devices》

Seikagaku contributes to healthcare in Japan and overseas by supplying ethical pharmaceuticals and medical devices based on GAG, such as hyaluronic acid and chondroitin sulfate, which are both structural components of glycoconjugates, and enzymes that act on GAG.

<Products for the treatment of orthopedic disorders>

- ARTZ® series: Joint function improving agent
- GEL-ONE®: Intra-articular single-injection viscosupplement
- HERNICORE®: Treatment for lumbar disc herniation

<Ophthalmic products>

- OPEGAN®, OPEGAN Hi®: Ophthalmic viscoelastic device
- SHELLGAN®: Ophthalmic viscoelastic device

<Other products>

- MucoUp®: Submucosal injection agent for endoscopic surgery
- Bulk product: Sodium hyaluronate, sodium chondroitin sulfate

《LAL-related products》

Seikagaku supplies endotoxin-detecting reagents and other products to pharmaceutical manufacturers, primarily for use in quality control in manufacturing processes for pharmaceuticals and medical devices.

- Endotoxin-detecting reagents
- Endotoxin-detecting equipment

P10

Business flow

R&D P14

Production P20

Marketing (through sales partners) P22

Medical institutions / Patients

Quality compliance

P24

Business risks

- Healthcare system reforms (including drug price system changes)
- Reliance on specific distributors and products

- Time and expense required for new drug development
- Procurement of animal-derived substances and restrictions on their use

P34

Outcome

Value Proposition



Improvement of patients' quality of life (QOL)



Extension of healthy life expectancy



Minimization of treatment impacts on patients



Further development and advancement of glycoscience

Through drug development activities focusing on glycoscience, we aim to grow sustainably, as we contribute to an improved quality of life for patients.

President & CEO Ken Mizutani



Contributing to healthcare globally as an R&D pharmaceutical company specializing in glycoscience

We, Seikagaku, aim to become an R&D Pharmaceutical Company that contributes to human well-being worldwide by supplying safe and sound pharmaceutical products

and medical devices based on our cutting-edge glycoscience knowledge.

In the process of doing this, we always place value on creativity, fairness, dreams and passion. Since the founding of the company in 1947, Seikagaku has consistently focused on research and development that leads to the creation of unique pharmaceutical products and medical devices, such

CORE VALUES

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.

as ARTZ, the world's first joint function improvement agent using hyaluronic acid.

In recent years, research in the field of glycoscience has shown that sugar chains and glycoconjugates are deeply involved in a variety of physiological processes, which further expands glycoscience's potential role in new drug development.

We will continue to make optimal use of the glycoscience knowledge and technology accumulated by Seikagaku over many years as we take up the challenge of helping patients everywhere to enjoy healthy and fulfilling lives by supplying new drugs to meet real needs.

Becoming a "Global Category Pharma"

The pharmaceutical industry is now facing various tough challenges such as soaring R&D costs, intensifying global competition and constraints on healthcare expenses. Responding flexibly to the above,

We formulated the Seikagaku Corporation Ten-Year Vision in March 2009. Under this vision, we aim to build Seikagaku into an internationally competitive "Global Category Pharma" by focusing our R&D activities on glycoscience as our core competence.

We aim to achieve sustainable growth by competing on a global basis and achieving leadership in glycoscience R&D, leading to the creation of a steady stream of new drugs and medical devices.

Overview of the mid-term management plan

Our current three-year mid-term management plan, which was launched in April 2016, will be the final step in accomplishing the Seikagaku Corporation Ten-Year Vision.

Titled "Act for the Vision— Achieving the Ten-Year Vision and Making a Further Leap Forward" the plan pursues four high-priority initiatives: Steady progress with SI-6603, a lumbar disc herniation treatment; Powering up as a leader in the knee osteoarthritis market; Enhancement of the development pipeline; and Pursuit of an optimal production and quality management systems.

On March 23, 2018, Seikagaku reached an important milestone in its evolution as a "Global Category Pharma" by acquiring production and marketing approval in Japan for the lumbar disc herniation treatment drug "HERNICORE® 1.25 Units for Intradiscal Injection" ("HERNICORE").

In the LAL business, there was growth in overseas sales of endotoxin-detecting reagents, led by our U.S.-based subsidiary, Associates of Cape Cod, Inc. (ACC).

We will now sum up the progress on our important steps, including the above mentioned four high-priority initiatives.

Production and marketing approval for HERNICORE in Japan

As mentioned above, we obtained approval for the production and marketing of HERNICORE in Japan and released it in August 2018 through our sales partner Kaken Pharmaceutical Co., Ltd.

HERNICORE is Japan's first treatment for lumbar disc herniation by prolapse of the posterior longitudinal ligament¹ for which sufficient improvement cannot be obtained through conservative treatment. One of the advantages of HERNICORE is that it is far less invasive to the patient than surgical procedures, which require excision or general anesthesia, because it can be administered by injection. In addition, symptoms can be expected to improve with a single dose of HERNICORE. For these reasons, we believe that HERNICORE will become the new treatment option. We are very pleased that the lengthy application process has now ended with an approval, allowing us to provide HERNICORE to patients suffering from lumbar disc herniation. We will continue to develop HERNICORE via post-launch monitoring and improvement² activities.

¹ Herniation by prolapse of the posterior longitudinal ligament: a type of herniation and its structure is that it is covered by the posterior longitudinal ligament, although the hernia extends beyond the outermost layer of the annulus fibrosus.

² Post-launch monitoring and improvement: The purpose of these activities is to enhance the ability of a drug to contribute to patient well-being through the improvement of effectiveness, safety, and administration methods, and the expansion of indication, using information gained through actual treatment.

Future development of HERNICORE—additional study in the U.S. for SI-6603

Currently, special requirements apply to physicians and facilities that use HERNICORE, because it's the first drug to be classified as intradiscal enzyme injection therapy in Japan. Seikagaku will work with its sales partner Kaken Pharmaceutical Co., Ltd. to achieve a gradual increase in the use of HERNICORE, while also ensuring that it is used properly and safely according to these requirements. In regards to the physician requirements, Seikagaku and Kaken will carefully examine the safety information about six months to a year after the launch upon agreement with the Pharmaceuticals and Medical Devices Agency in cooperation with the relevant societies.

Together with our overseas partner, Ferring Pharmaceuticals, we plan to introduce HERNICORE in other markets.

In the U.S, the pharmacologic effect and safety of SI-6603 have been proven through a Phase III clinical study, but unfortunately, its primary endpoint was not met.

We analyzed the results in detail and quickly made preparations for an additional Phase III clinical study, which began in February 2018. We have raised the probability of success by utilizing the knowledge gained through the previous study and we will continue to focus on obtaining approval in the U.S.

Initiatives in the knee osteoarthritis market

We are also making good progress in gaining leadership in the knee osteoarthritis market. Demand continues to expand in the United States, which is a key overseas market. However, business conditions remain challenging because of increased competition and the imposition of stricter reimbursement conditions by some insurance companies.

Despite these challenges, we have continued to achieve steady growth in U.S. sales of Gel-One, an intra-articular single-injection viscosupplement, through strategies focusing on the unique features of this product. The U.S. market still offers growth potential, and we will proactively support the marketing activities of our sales partners with the aim of strengthening the presence of three Seikagaku products: Gel-One, the five-injection product SUPARTZ-FX, and the three-injection product VISCO-3.

At the same time, we will actively roll out these products in new markets, while monitoring market potential, regulatory trends.

In Japan, reforms to the drug pricing system in April 2018 have caused an unprecedented decline in National Health Insurance (NHI) drug prices. This and other factors have created a challenging business environment for our joint function-improving agent ARTZ. Seikagaku will cooperate with its sales partner Kaken Pharmaceutical Co., Ltd. to implement measures, including usability improvements, in order to maintain and increase sales volumes.

Seikagaku is also making progress on the development of next-generation products. We are currently implementing clinical study in Japan and the United States for SI-613, a new osteoarthritis treatment agent. In September 2017, we established a development structure by signing an agreement with Ono Pharmaceutical Co., Ltd., providing for collaboration on the development and marketing of SI-613 in Japan. We see this as a major achievement. Under the agreement, we received an upfront payment of ¥2.0 billion from Ono Pharmaceutical, and we will also receive milestone royalties linked to progress in development and marketing.

We have positioned SI-613 as the next-generation ARTZ, and by accelerating its development we will build a solid position for Seikagaku as a leading company in the knee osteoarthritis market.

Enhancement and expansion of the development pipeline

Our third high-priority initiative is the enhancement of the development pipeline. In May 2018, we added a new development theme to the pipeline by initiating a pilot study of SI-449, a powdered adhesion barrier with cross-linked chondroitin sulfate as its main ingredient. SI-449, which has the property of absorbing moisture and swelling, is expected to prevent or mitigate post-operative adhesion formation by forming a barrier between the surgical wound site and surrounding tissues after application. The global market for adhesion barriers is estimated to be worth around ¥100 billion. We will continue to develop this product for its future introduction to the Japanese and global markets.

As this illustrates, we are making solid progress with our development themes. We will, however, further tighten our focus so that we can continue to expand and enhance our development pipeline through the discovery of innovative candidate drugs in the field of glycoscience.

overseas business activities, including the LAL business. We will also tighten our management of manufacturing costs with the aim of improving our income structure.

Pharmaceutical companies achieve growth by developing new drugs. Seikagaku will continue to focus on the continual creation of effective new drugs through efficient research and development activities based on clearly defined priorities.

We are determined to overcome the challenges in our business environment and ensure our future success as a “Global Category Pharma.” We are deeply aware of our social mission and responsibilities as a pharmaceutical manufacturer, and we are committed to management transparency backed by high ethical standards. We will continue to enhance our corporate governance and work toward sustainable improvement in our corporate value.

We look forward to the continuing guidance and support of our stakeholders.

Enhancing production and quality management systems

Our fourth high-priority initiative is the pursuit of optimal production and quality management systems. We are implementing policies for both the maintaining of reliable product supplies, and also cost minimization through efficiency improvements. As part of these efforts, we have employed expert consultants to improve operational processes, especially at the Takahagi Plant. This work has already yielded measurable improvements in productivity.

Another priority is the establishment of systems to ensure reliable supplies of HERNICORE. Our production and quality management systems for existing products are based on global standards. As part of ensuring our continued ability to supply high-quality products, we are further strengthening those systems in anticipation of the release of SI-6603 to the U.S. market.

Aiming for success as a “Global Category Pharma”

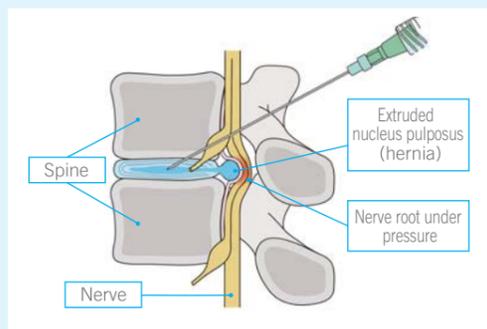
The fiscal year ending March 2019 will be the final year of both the Seikagaku Corporation Ten-Year Vision and our three-year mid-term management plan. Seikagaku will continue to implement its high-priority initiatives while also working to build foundations for further growth.

We anticipate that Seikagaku will face an increasingly challenging business environment in the future, in part because of moves to curb healthcare expenditure in Japan and overseas. Our priorities in this changing environment will be to expand sales of existing products, to promote the appropriate use of HERNICORE, and accelerate the expansion of our

President & CEO
Ken Mizutani



Lumbar disc herniations and HERNICORE's mechanism of action



Administration of HERNICORE



HERNICORE® 1.25 Units for intradiscal injection

Lumbar disc herniation is the partial protrusion of the nucleus pulposus at the core of each intervertebral disc or the annulus fibrosus, the disc's outer layer. The resulting pressure on the spinal nerve root causes pain and numbness. The nucleus pulposus includes glycosaminoglycans (chondroitin sulfate and hyaluronic acid), which have long been an area of specialization for Seikagaku.

The active ingredient of HERNICORE is condoliase, an enzyme that specifically targets and degrades chondroitin sulfate and hyaluronic acid. When HERNICORE is administered directly into the nucleus pulposus of the intervertebral disc, it reduces the volume of the intervertebral disc and shrinks the herniation. This reduces pressure on the spinal nerve and can therefore be expected to improve the symptoms of a lumbar disc herniation.

BUSINESS ACTIVITIES AND PRODUCTS

Seikagaku has two business segments, each with original and unique products: the Pharmaceuticals business, and the LAL business for endotoxin-detecting reagents.

Pharmaceuticals Business

The Pharmaceuticals business is Seikagaku's core business segment. Seikagaku manufactures pharmaceuticals and medical devices with glycoconjugates, specifically, glycosaminoglycans (GAG) such as hyaluronic acid, as their main ingredient, as well as enzymes that act on GAG. As a pioneer and leading company in glycoscience, Seikagaku provides high-quality products globally with its unique technologies and knowledge that has been developed for many decades.



LAL Business

Seikagaku manufactures and sells endotoxin-detecting reagents in Japan and overseas. They are primarily used to test for endotoxins in pharmaceuticals and medical devices.

What is the LAL business?

The main products of the LAL business are endotoxin-detecting reagents made from limulus amoebocyte lysate (LAL), which is extracted from the blood cells of horseshoe crabs.

What are endotoxins?

Endotoxins are one of the major components of the outer membrane of gram-negative bacteria. Serious side effects can be triggered by endotoxin contamination of injectable pharmaceuticals, biological products, and medical devices, even with extremely minute quantities, due to their strong pyrogenic activity.

Joint Function Improving Agents

● ARTZ®, ARTZ Dispo®, SUPARTZ FX®*1, VISCO-3™

ARTZ, a vial, containing hyaluronic acid as its main active pharmaceutical ingredient, became the world's first joint function improving agent. ARTZ Dispo is a pre-filled syringe product*2 that saves the step of aspirating the drug solution into a syringe. These products have been approved and are supplied not only in Japan but also in overseas markets, including the U.S., Asia, and Europe.

*1 SUPARTZ FX is sold in the U.S. under its brand name *2 A kit with injectable syringe that have the solution been filled.

● Gel-One®

Gel-One is an intra-articular single-injection viscosupplement developed for the U.S. market for the treatment of knee osteoarthritis. It contains only 3 mL of cross-linked hyaluronate hydrogel, which is Seikagaku's original technology, and provides long-lasting benefits with a single dose. The sales in the U.S. are growing steadily.

Treatment for Lumbar Disc Herniation

● HERNICORE®

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

Ophthalmic Viscoelastic Devices (OVD)

● OPEGAN®, OPEGAN Hi®, SHELLGAN®

OPEGAN series of products allows the creation of appropriate intraocular space 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*.

* Endoscopic Submucosal Dissection/Endoscopic Mucosal Resection

Bulk Products

● Sodium hyaluronate and Sodium chondroitin sulfate

Seikagaku manufactures high-purity and high-quality sodium hyaluronate and sodium chondroitin sulfate with its unique extraction and purification technologies. The bulk products are primarily used as raw materials for pharmaceuticals and cosmetics products.

Endotoxin-detecting Reagents

● ENDOSPECY®, TOXICOLOR®, Pyrochrome®, etc.

The Endotoxin-detecting reagents that Seikagaku produces with its own technologies are mainly used in quality control of injectable pharmaceuticals, biological products, and medical devices, manufacturing processes, and water quality control of dialysate used in artificial dialysis.

Endotoxin-detecting Devices

● 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.



ARTZ Dispo®



SUPARTZ FX®



Gel-One®



HERNICORE®



OPEGAN® series



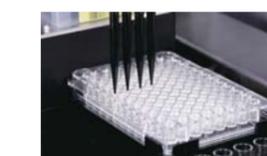
MucoUp®



Bulk products



Endotoxin-detecting reagents



Automatic endotoxin-detecting systems

REVIEW OF OPERATIONS (April 1, 2017 - March 31, 2018)

Overall net sales and income

In the fiscal year ended March 31, 2018 (fiscal 2017), net sales were ¥30,175 million, up 2.0% year on year. The result is attributable to higher sales volumes of pharmaceuticals to the U.S. and strong overseas sales in the LAL business, despite a decrease in sales of domestic pharmaceuticals.

With regard to earnings, operating income rose 10.9% year on year to ¥1,421 million, reflecting the sales increase as well as a decrease in the cost of sales ratio, which resulted in part from production efficiency improvement, despite an increase in selling, general and administrative expenses. These were mainly R&D expenses accompanying progress on development themes such as SI-613, an osteoarthritis treatment. Total R&D expenses in fiscal 2017 increased 7.3% year on year to ¥8,408 million, or 27.9% of net sales.

Ordinary income rose 115.1% year on year to ¥5,327 million, and net income attributable to owners of parent rose 119.4% year on year to ¥3,922 million, reflecting a substantial increase in royalty income, among other factors.

	FY2016	FY2017	Year on Year
Net Sales	29,589	30,175	+2.0%
Operating Income	1,282	1,421	+10.9%
Ordinary Income	2,477	5,327	+115.1%
Net Income	1,787	3,922	+119.4%
R&D Expenses	7,834	8,408	+7.3%

Net sales by segment

Pharmaceuticals business

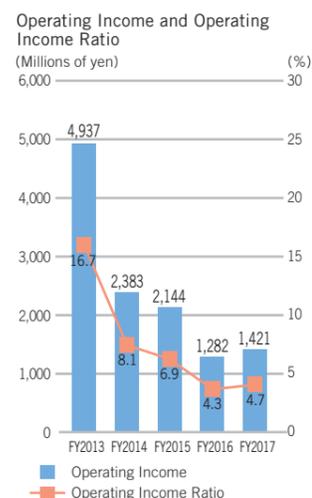
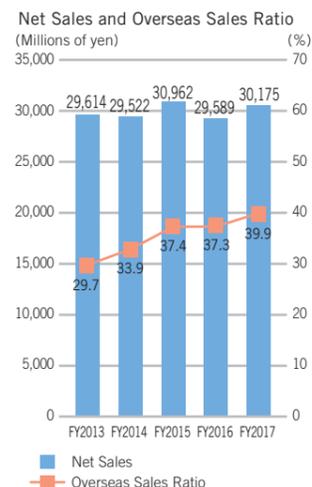
The Pharmaceuticals business is the core business of our company, which manufactures and sells pharmaceuticals and medical devices based on glycoconjugates such as hyaluronic acid. In the Pharmaceuticals segment, net sales increased 0.4% year on year to ¥24,244 million, accounting for 80.3% of total sales.

● Domestic pharmaceuticals (¥16,125 million, down 0.9% year on year)

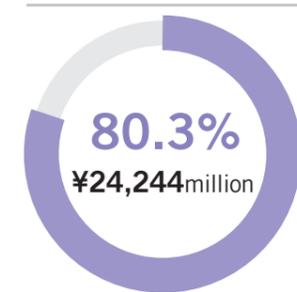
Deliveries to medical institutions and the Company's sales of ARTZ, a joint function improving agent, declined, partly as a result of the impact of restrained purchasing by medical institutions in connection with National Health Insurance (NHI) drug price reductions implemented in April 2018.

Deliveries to medical institutions and market share of the OPEGAN series, ophthalmic viscoelastic devices, rose sharply as a result of vigorous sales promotion activities for SHELLGAN, and the Company's sales increased as well.

The Company's sales of MucoUp, a submucosal injection agent for endoscopic surgery, were at the prior-year level.



Pharmaceuticals Business Sales Composition



● Overseas pharmaceuticals (¥7,113 million, up 5.0% year on year)

U.S. sales of Gel-One, an intra-articular single-injection viscosupplement for the treatment of knee osteoarthritis, increased as a volume increase compensated for the impact of a decline in local selling unit prices accompanying price adjustments for some major customers.

The Company's sales increased due to the local sales increase coupled with the impact of yen depreciation. U.S. sales of SUPARTZ FX, an intra-articular 5-injection viscosupplement for the treatment of knee osteoarthritis, fell, reflecting a preference in the U.S. market for products that require a low number of injections, such as single-injection and 3-injection products. The Company's sales increased due to a sales partner inventory buildup.

The impact of a Chinese government price-curbing policy is running its course, and sales of ARTZ in China (P.R.C.) returned to growth. The Company's sales decreased, following a concentration of shipments in fiscal 2016 accompanying a local inventory buildup.

● Bulk products (¥1,005 million, down 9.6% year on year)

Sales decreased due to fierce competition in the market for hyaluronic acid.

LAL business

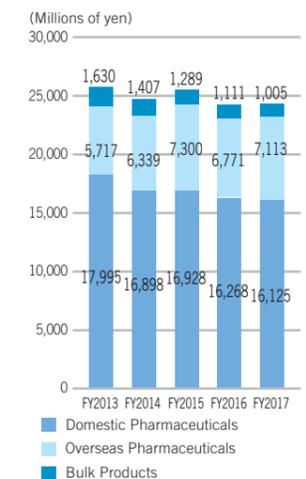
We manufacture and sell endotoxin endotoxin-detecting reagents used for quality control testing for endotoxin in pharmaceuticals and medical device in Japan and overseas. Sales of LAL business for the fiscal year under review were ¥5,931 million, up 9.1% from the previous fiscal year.

● LAL business (¥5,931 million, up 9.1% year on year)

Sales of the LAL business rose 9.1% year on year to ¥5,931 million as a result of strong overseas sales of endotoxin-detecting reagents and other products, mainly at the U.S. subsidiary, despite a decrease in sales to dialysis facilities in Japan.

Sales by Segments	FY2016	FY2017	Year on Year
Pharmaceuticals Business	24,152	24,244	+0.4%
Domestic Pharmaceuticals	16,268	16,125	-0.9%
Overseas Pharmaceuticals	6,771	7,113	+5.0%
Bulk Products	1,111	1,005	-9.6%
LAL Business	5,437	5,931	+9.1%
Total	29,589	30,175	+2.0%
(Overseas Sales)	11,029	12,051	+9.3%

Sales of Pharmaceuticals Business



LAL Business Sales Composition



Sales of LAL Business

