CHUGAI

Roche Group

Annual Report 2016

Fiscal year ended December 31, 2016

INNOVATION BEYOND IMAGINATION

Innovation all for the patients

CHUGAI PHARMACEUTICAL CO., LTD.

Our

PROFILE

Chugai Pharmaceutical Co., Ltd. and its consolidated subsidiaries (“Chugai”) believe that achieving its mission will result in the creation and improvement of corporate value, and continue to take on new challenges based on the business philosophy of “Innovation all for the patients.”

The healthcare delivery environment is changing rapidly, and the needs of patients and healthcare providers are becoming more diverse and sophisticated, but Chugai will strive to be a company that delivers a high level of satisfaction to all of its stakeholders and receives their active support and trust.

Business Philosophy

Innovation all for the patients

drug discovery

Our

PROFILE

Chugai Pharmaceutical Co., Ltd. and its consolidated subsidiaries (“Chugai”) believe that achieving its mission will result in the creation and improvement of corporate value, and continue to take on new challenges based on the business philosophy of “Innovation all for the patients.”

The healthcare delivery environment is changing rapidly, and the needs of patients and healthcare providers are becoming more diverse and sophisticated, but Chugai will strive to be a company that delivers a high level of satisfaction to all of its stakeholders and receives their active support and trust.

Business Philosophy

Innovation all for the patients

drug discovery is for the benefit
of patients around the world.

Mission Statement

Mission

Chugai's mission is to dedicate itself to adding exceptional value through the creation of innovative medical products and services for the benefit of the medical community and human health around the world.

Core Values

- The primary focus of all our activities is patients and consumers.
- In all our activities we are committed to the highest ethical and moral standards.
- We value employees who develop profound expertise and broad perspectives and pursue innovation and challenges without fear of failure.
- Wherever we operate around the world we seek to understand and respect people and cultures and to behave as good corporate citizens.
- We promote an open and active corporate culture that respects individuality, ability and teamwork.
- We care about the global environment.
- We aim to achieve a fair return for our shareholders and to disclose information appropriately and in a timely manner.

Envisioned Future

As a most important member of the Roche Group, we aim to become a top Japanese pharmaceutical company by providing a continuous flow of innovative new medicines domestically and internationally.

Chugai Business Conduct Guidelines

- Responsibility to Patients and Consumers
- Strict Adherence to the Law
- Respect for Human Rights
- Fair Trade
- Management of Corporate Assets
- Disclosure of Information
- Social Contribution
- Protection of the Global Environment
- Relations with Governmental and Administrative Bodies
- Relations with External Bodies

Our products

Mission Statement

Mission

Chugai's mission is to dedicate itself to adding exceptional value through the creation of innovative medical products and services for the benefit of the medical community and human health around the world.

Core Values

- The primary focus of all our activities is patients and consumers.
- In all our activities we are committed to the highest ethical and moral standards.
- We value employees who develop profound expertise and broad perspectives and pursue innovation and challenges without fear of failure.
- Wherever we operate around the world we seek to understand and respect people and cultures and to behave as good corporate citizens.
- We promote an open and active corporate culture that respects individuality, ability and teamwork.
- We care about the global environment.
- We aim to achieve a fair return for our shareholders and to disclose information appropriately and in a timely manner.

Envisioned Future

As a most important member of the Roche Group, we aim to become a top Japanese pharmaceutical company by providing a continuous flow of innovative new medicines domestically and internationally.

Chugai Business Conduct Guidelines

- Responsibility to Patients and Consumers
- Strict Adherence to the Law
- Respect for Human Rights
- Fair Trade
- Management of Corporate Assets
- Disclosure of Information
- Social Contribution
- Protection of the Global Environment
- Relations with Governmental and Administrative Bodies
- Relations with External Bodies

Our products are the embodiment of
our innovation for patients.

Message from the CEO

We will raise our corporate value by continuing to innovate for the benefit of patients worldwide.

Osamu Nagayama
Representative Director,
Chairman & CEO

Our Growth Engine Is Innovation

"INNOVATION BEYOND IMAGINATION" Chugai's growth engine truly is innovation. Throughout our history of more than 90 years, we have achieved growth with numerous innovations, such as boldly reforming our business structure, initiating biopharmaceutical research, and entering into the strategic alliance with Roche. We have continued to innovate in recent years, including the establishment of next-generation antibody technologies. In 2016, two of our products, Actemra and Alecensa, received breakthrough therapy designation[1] (BTD) from the U.S. Food and Drug Administration (FDA). Chugai products have received this designation a total of five times over the past three years, and one-third of the Roche Group's BTDs have been for products created by Chugai – proof of the high level of our drug discovery capabilities and the strength of our innovation.

Ensuring That Our Innovations Are Properly Evaluated

Our mission is to make innovative drugs available to patients suffering from diseases with no effective treatment options, but creating a new drug is no easy task. Declining success rates and soaring costs associated with technological innovations have fueled fierce competition globally in new drug development. According to one study,[2] the investment necessary to develop a single new drug is $2.5 billion (approximately ¥300 billion), including the cost of unsuccessful projects.

Meanwhile, in response to rising social security costs and weakening financial foundations, which are common issues worldwide, many countries are implementing policies to contain healthcare costs, including controls on drug prices. Due to the specialized nature of drug development, the risks involved in the business and the process and cost of innovation are not necessarily well understood by the public. But if innovation is not evaluated properly, novel drugs to fight diseases that have no existing

1. A system introduced in July 2012 by the U.S. Food and Drug Administration aimed at expediting the development and review of drugs for the treatment of severe or life-threatening diseases or symptoms
2. In a study by the Tufts Center for the Study of Drug Development, it was estimated that development of a single drug requires investment of approximately ¥300 billion based on the clinical development success rate.

treatment options cannot be created. The pharmaceutical industry should initiate a discussion on the balance between innovation and cost. Chugai is a leader in the industry because of its innovation, and will devote efforts to promoting society's understanding of the necessity and importance of innovation.

A Unique Business Model Built Over the Past 15 Years

In this tough operating environment, Chugai has established unique strengths that have enabled it to achieve continuous innovation. The foundation supporting these strengths is the strategic alliance with Roche, a unique business model that enables us to maintain autonomy as a publicly traded company while also being a member of the Roche Group.

In terms of drug discovery, the Roche Group as a whole spends about ¥1 trillion a year on research and development, and has a framework that enables the three major Group companies – Roche, Genentech and Chugai – to focus on activities that make the most of their respective strengths. As a result, Chugai has established world-leading antibody engineering technologies, and in addition to acquiring infrastructure for small-molecule discovery, we have taken on the challenge of establishing next-generation technologies for creating middle-molecule drugs. In development and production, we now have the ability to quickly move multiple compounds through development. We have built a global development system that allows us to concentrate our resources on earlier stages of the development process up to early proof of concept (PoC),[3] with a view to late-stage global development in collaboration with Roche. In marketing, our efforts to promote personalized healthcare[4] and the coordination of community care are well recognized and have further increased our presence in the Japanese market.

We have achieved solid growth over the 15 years of the alliance: Chugai's revenues, operating profit and market capitalization have roughly tripled. In 2002, there was some concern over this alliance, which was an unprecedented arrangement at the time, but today the success of the alliance is shared with stakeholders, and I am very pleased that they appreciate its value.

Progress and Results of Our "Voyage into Uncharted Waters"

Now that we have built these unique strengths and the infrastructure for growth, our challenge is to generate further innovation. The environment surrounding the pharmaceutical industry is likely to become increasingly severe, and the emergence of disruptive technologies[5] such as artificial intelligence and the Internet of Things, as well as the entry of companies from other industries, could dramatically change approaches to drug discovery.

In IBI 18, our mid-term business plan that began in 2016, we are working to bring all of our functions to a world-class level of competitiveness. At the outset of IBI 18, I shared with all employees my decision to "embark on a voyage into uncharted waters." In the first year of the plan, we took on new challenges in many of our business activities.

We achieved significant results in 2016 despite an average 5.5 percent reduction of National Health Insurance (NHI) drug prices for our products. Development of future key growth drivers emicizumab (ACE910) and atezolizumab (RG7446) progressed smoothly, and we concluded agreements to out-license SA237 and CIM331, both of which Chugai had been developing globally. To support future growth, we acquired land in Yokohama, the first step in establishing a core base for research and development. We also concluded an agreement for comprehensive collaboration with Osaka University Immunology Frontier Research Center (IFReC).

Further Raising the Strength of Our Human Resources to Continue Innovating for Patients

We will continue to work on the priority agenda of IBI 18, but what we are emphasizing above all else is strengthening our human resources, the source of innovation that creates value. To achieve this, we are stepping up our diversity and inclusion initiatives, including providing opportunities for women, senior employees and non-Japanese employees to play active roles, and have established an organizational culture that encourages autonomous innovation. In addition, we formulated a new talent management strategy to expedite development of world-class talent.

Each and every employee continually pursuing innovation for patients to address areas of unmet medical need.[6] We believe that is the essence of a company that delivers a high level of satisfaction to all its stakeholders and receives their active support and trust – in other words, the "top pharmaceutical company" that Chugai is aiming to be.

By using innovation as the driving force to benefit patients worldwide, we will increase Chugai's corporate value and meet the expectations of our stakeholders.

3. PoC is a demonstration that the therapeutic effect conceived in the research stage is effective in humans. Early PoC means that in addition to safety, signs of efficacy or pharmacological effect have been confirmed in a limited number of cases.
4. A treatment approach designed and implemented according to each patient's unique molecular and genetic profile
5. New technologies that disrupt markets that use existing technologies and bring about dramatic changes and unprecedented value in people's lives, the economy and other aspects of society
6. Medical need that is not adequately met due to a lack of effective treatments

"Innovation all for the patients"
This business philosophy is
the driving force that
keeps us focused on
new challenges.

Chugai's Vision for a "Top

Chugai Is Aiming to Be a Top Pharmaceutical Company

Chugai has become what it is today by consistently carrying out patient-oriented innovation.

For insight into how Chugai will grow and the path it will follow, this section summarizes Chugai's vision, its history and its unique characteristics, all based on the theme of innovation.

Definition of a "Top Pharmaceutical Company"

(The company Chugai aims to become by the late 2010s)

Corporate Vision

A company that focuses on first-in-class[1] and best-in-class[2] products and services, and continuously provides new solutions to patients and medical communities around the world.

— Innovation all for the patients —

1. An original drug that is highly novel and useful, and will significantly change the therapeutic system
2. A drug that offers clear advantages over other existing drugs in the same category, such as those with the same molecular target

Quantitative Aspects

1. Among the top three Japanese pharmaceutical companies in the following:
- Domestic market share
- Ratio of consolidated operating profit to revenues
- Consolidated operating profit per employee
- Domestic sales per medical representative

2. No. 1 presence in strategic disease areas
- Oncology/Renal/Bone & Joint/RA: Top-class sales share and stakeholder satisfaction
- Establishment of top brand in hospital market by supporting medical liaison networks between medical professionals

3. Expansion of global presence
- Higher overseas sales ratio
- Number of large global products in lineup
- Number of global projects in late-stage development
- Continuous addition of first-in-class and best-in-class in-house projects to the portfolio

Qualitative Aspects

1. A company that satisfies all its stakeholders and receives their active support and trust

2. A company that works proactively on a global level
- Continuous creation, development, and domestic and overseas launches of products with a competitive advantage in clinical results
- Contribution to the Roche Group's results through product-appropriate fostering and sales
- Leadership in pharmaceutical industry activities
- Activities in which all employees have an awareness, sense of responsibility and pride as part of a top pharmaceutical company

Pharmaceutical Company”

Mid-Term Business Plan IBI 18

IBI 18

INNOVATION BEYOND IMAGINATION

In IBI 18, we are working to create value for patients around the world by further developing our strengths and tirelessly pursuing innovation to become a top pharmaceutical company. (See “Overview of Mid-Term Business Plan IBI 18” on pages 29-30 for details.)

"Innovation all for the patients" This business philosophy is the driving force that keeps us focused on new challenges.

Chugai's History

Founded in 1925, Chugai Pharmaceutical has continued to evolve over more than 90 years, overcoming drastic changes in the external environment. The Company has maintained its founding spirit of "creating drugs that benefit the world," and the innovations we have made for patients have enabled us to continuously generate new value.

The History of Chugai

1920s – 1950s

Founded in response to a post-earthquake medicine shortage and rebuilt following a war

In 1925, concerned by the acute shortage of medicines following the Great Kanto Earthquake, Chugai's founder Juzo Ueno established Chugai Shinyaku Shokai, Chugai's predecessor. Later, the Company rebuilt in the aftermath of the Second World War. Although it faced hurdles including a steep drop in demand for its mainstay products, Chugai broadened its value in ways such as bringing its global product Guronsan to patients in 31 countries.

1960s – 1970s

Restructured to specialize in prescription pharmaceuticals

Rapid change in the over-the-counter (OTC) drug market weakened Chugai's performance, so the Company restructured, shifting its business focus from OTC to prescription drugs, leading to a successful recovery. Meanwhile, Nippon Roche moved to reinforce its business foundation in the 1960s, and created a major product in the oncology field. It was the first foreign-affiliated pharmaceutical company to establish full-scale laboratories and manufacturing plants in Japan.

1980s – 1990s

Made large-scale investments in discovery and production of biopharmaceuticals, followed by successful formulation and launch

Chugai decided that establishing biotechnology was essential to its future, and began investing resources in research and development of biopharmaceuticals in the 1980s. The Company also worked to establish technology for the mass production of biopharmaceuticals, and in the early 1990s it launched a biopharmaceutical product created through genetic engineering, laying the foundation for what would become one of its core strengths.

Highlights of 2016

January	Obtained approval of Bonviva Tablet for osteoporosis
February	Received Excellence Award as a "company providing support to employees to keep a good balance between cancer treatment and work"
March	Decided to purchase land for construction of a core base for the future
March	Selected as a "Nadeshiko Brand" for the second consecutive year for exceptional efforts in promoting the success of women in the workplace
May	Concluded an agreement for comprehensive collaboration with IFReC
June	Concluded a license agreement with Roche for SA237[1] (worldwide except Japan, South Korea and Taiwan)
July	Concluded a license agreement with Galderma Pharma S.A. for nemolizumab (CIM331)[2] (worldwide except Japan and Taiwan)

1. Anti-IL-6 receptor recycling antibody from Chugai research
2. Anti-IL-31 receptor A humanized monoclonal antibody from Chugai research

# of Innovation

INNOVATION HISTORY

2000 – 2004

Entered strategic alliance with Roche and created unique business model

Chugai's strategic alliance with Roche, one of the world's leading pharmaceutical companies, started in 2002. With this alliance, Chugai made a fresh start and created a unique business model in which each company benefited from the other's strengths. Later, as the number of projects in-licensed from Roche increased, Chugai reorganized its research centers and manufacturing plants and transformed its earnings structure.

2005 – 2009

Launched the first therapeutic antibody created in Japan and set the goal of "top pharmaceutical company" to achieve greater innovation

Building on its experience in manufacturing biopharmaceuticals since the 1980s, Chugai launched Actemra, the first therapeutic antibody created in Japan, in 2005. Chugai also captured the top domestic market share in the field of oncology with a powerful product lineup. In 2009, to achieve even greater innovation, Chugai set the goal of becoming a "top pharmaceutical company" by the late 2010s.

2010s

Innovating further as previous innovations yield results

In 2013, Chugai launched mid-term business plan ACCEL 15. In addition to steadily generating innovative medicines and leading the world with its antibody engineering technologies, Chugai has become an industry leader in areas such as promoting personalized healthcare and initiatives to improve drug safety. In 2016 Chugai started IBI 18, a plan that will significantly advance its transformation into a top pharmaceutical company.

September	Selected as a constituent of the Dow Jones Sustainability Asia Pacific Index for the third consecutive year
September	Concluded a license agreement with Maruho Co., Ltd. for nemolizumab (in Japan)
October	ALK inhibitor Alecensa received BTD from the FDA for first-line treatment of ALK-positive non-small cell lung cancer
October	Actemra received BTD from the FDA for giant cell arteritis
December	Met primary endpoint in a phase III multinational study of emicizumab (ACE910)[3] for treatment of hemophilia A

3. Anti-factor IXa/X bispecific antibody from Chugai research

Chugai's Value

"Innovation all for the patients"
This business philosophy is the driving force that keeps us focused on new challenges.

Provision of Innovative Pharmaceuticals and Value for Society

Delivering value unique to Chugai

Leveraging the Roche Group's infrastructure

① High product potential that addresses unmet medical need

② One of the richest pipelines in Japan

③ Strategic alliance with the Roche Group

④ Cutting-edge drug discovery technologies, especially biotechnology

⑤ Knowledge and experience as a pioneer in personalized healthcare (PHC)

⑥ Commitment to safety management

⑦ Support for healthcare delivery

Chugai's Seven Strengths

Business Philosophy

Innovation all for the patients

Mission

Chugai's mission is to dedicate itself to adding exceptional value through the creation of innovative medical products and services for the benefit of the medical community and human health around the world.

Creation Model

INNOVATION VALUE CREATION MODEL

Additional Value for Society

Promotion of disease awareness and early treatment	Stable supply of high-quality medicines	Elimination of the drug lag
Promotion of personalized healthcare and multidisciplinary team care	Contribution to healthcare through scientific conferences and other means	Provision of cutting-edge research technology and materials

Business Processes

Management strategy/Corporate governance/Human resource management

Research → Development / Production → Marketing → Medical affairs / Drug safety

Intellectual property/Environmental protection and occupational safety/Social contribution

Two Revenue Bases

Products In-Licensed from Roche	Products from Chugai Research
Exclusive domestic sales of breakthrough therapies	Able to specialize in highly innovative drug discovery
Stable revenue base (Efficient product launches through collaboration with Roche)	Revenue base that drives growth (Out-licensing to Roche and global market development)

The strategic alliance with Roche allows Chugai to in-license and sell Roche's groundbreaking therapies on an exclusive basis in Japan. This stable revenue base allows us to concentrate investment on highly innovative proprietary technologies and drug discovery. Moreover, out-licensing our in-house products to Roche gives us access to global markets, which provides a revenue base that drives growth. Meanwhile, the alliance enables Roche to sell our products – which we create through highly innovative, specialized research – in global markets. It is a win-win relationship.

This is a corporate advertisement based on Chugai's slogan, "INNOVATION BEYOND IMAGINATION."

"Innovation all for the patients"
This business philosophy is the driving force that keeps us focused on new challenges.

The Seven Strengths That

① High product potential that addresses unmet medical need

No. 1

In Japan, Chugai maintains the number-one market share[1] in the oncology field and in the therapeutic antibody market, and has market-leading products for bone and joint and renal diseases. We also lead our industry peers in participation in multinational clinical studies, which enables us to simultaneously file applications for regulatory approval in Japan and other countries.

Chugai focuses on discovery and development of products that can provide new value, such as drugs that apply its proprietary antibody technologies. We will continue to create products that address areas of high unmet medical need, in addition to the disease areas of our core products.

1. Copyright © 2017 QuintilesIMS.
Source: JPM 2016. Reprinted with permission. The scope of the market is defined by Chugai.

③ Strategic alliance with the Roche Group

No. 3 Worldwide

Chugai has established a powerful network with Roche (the world's third-largest pharmaceutical company in terms of sales)[3] and Genentech, two of the pharmaceutical industry's global leaders. We also efficiently in-license many products and development projects from Roche for the Japanese market.

We are evolving our unique business model in which products in-licensed from Roche provide a stable revenue base that allows us to concentrate investment on highly innovative proprietary technologies and drug discovery. Meanwhile, we are promoting our win-win relationship under which Roche can market the innovative products from Chugai's research in global markets.

3. Source: Drug Maker/Sales Ranking 2015 Release issued by KEN Pharma Brain

④ Cutting-edge drug discovery technologies, especially biotechnology

5 BTDs

With more than three decades of experience in biopharmaceutical research and development, Chugai has developed a series of proprietary antibody engineering technologies. Our drug-discovery capabilities, including for small molecule drugs, have reached a world-class level. For example, five of our products have obtained BTD from the FDA.

4. Osaka University Immunology Frontier Research Center

⑥ Commitment to safety management

Industry Leadership

Chugai has conducted all-case registration surveillance and managed safety for over 20,000 cases. From this experience, we have established a global-standard, industry-leading system for collection, assessment and analysis of safety information.

Safety information is still not being fully utilized in Japan in clinical settings. We will contribute to improving the level of drug safety in Japan through innovative initiatives such as the adverse drug reaction database we have built as well as by collaborating with pharmacists and focusing on epidemiological studies.

Support Our Innovation

A SOLID FOUNDATION FOR INNOVATION

② One of the richest pipelines in Japan

Largest in Japan

The number of projects in Chugai's pipeline was 39 as of February 1, 2017. Our oncology pipeline is one of the richest in Japan, and we have many clinical candidates targeting areas of high unmet medical need.

To increase its development speed globally, Chugai is taking steps to obtain early proof of concept (PoC)[2] and establishing a production system that facilitates faster market launches. By understanding unmet medical need from a global perspective and reflecting it in development plans, we will maximize the value of our pipeline.

2. PoC is a demonstration that the therapeutic effect conceived in the research stage is effective in humans. Early PoC means that signs of efficacy or pharmacological action, as well as safety, have been confirmed in a limited number of cases.

In addition to accelerating drug discovery using its proprietary antibody engineering technologies, Chugai is working to establish middle-molecule discovery technologies as candidates for its next-generation core technology. Based on comprehensive collaboration with IFReC,[4] we will also contribute to society through further advancement of immunology research and the creation of innovative medicines.

⑤ Knowledge and experience as a pioneer in personalized healthcare (PHC)

More than 50%

The majority of projects in Chugai's pipeline are based on PHC, which tailors treatment to each individual patient. We also focus on the simultaneous development and approval of drugs and companion diagnostics to promote PHC.

Under a cooperative arrangement, Chugai actively collaborates from the early stages of research and development with the Roche Group, a world leader in diagnostics. With our work on biomarker discovery and research on disease and pathophysiology, we will also contribute further to expand the use of PHC.

⑦ Support for healthcare delivery

Advanced Expertise

With a high level of expertise in oncology and other therapeutic fields, Chugai provides full support for multidisciplinary team care and promotes the coordination of community care.

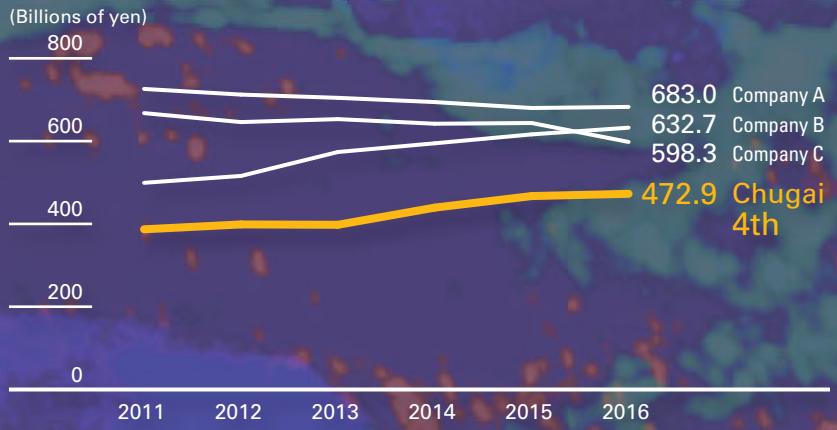
Chugai is creating a new system for providing solutions that can be precisely adapted for diverse needs in different regions. In addition to our highly specialized medical representatives (MRs), we are also developing people who can provide information from a broader, more comprehensive perspective covering all disease areas.

"Innovation all for the patients"
This business philosophy is the driving force that keeps us focused on new challenges.

A Position Built

Domestic Sales of Prescription Drugs (Reimbursement Price Basis)

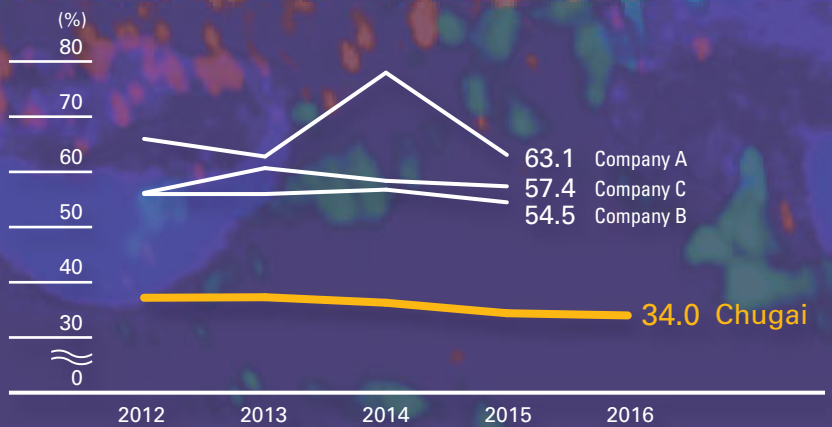
- Chugai has achieved continuous sales growth in Japan, rising to fifth place in 2012 and ranking fourth since 2014.
- The strategic alliance with Roche has allowed Chugai to build a stable revenue base because it can efficiently in-license and sell Roche's groundbreaking products on an exclusive basis in Japan.
- Sales of innovative products from Chugai research have steadily grown in recent years, in and outside Japan, and are now the main driver of sales growth.



Source: JPM 2016 (January-December, sales company level)

Ratio of Operating Expenses to Revenues

- Chugai has consistently maintained the ratio of operating expenses to revenues at a low level compared with its industry peers in Japan.
- By taking thorough cost-cutting measures to offset the rise in the ratio of cost of sales to sales with the increase in products in-licensed from Roche, we have reduced the ratio of operating expenses to revenues to a level comparable with the world's leading pharmaceutical companies.
- As a general principle, we keep the rate of increase in operating expenses within the rate of revenue growth.



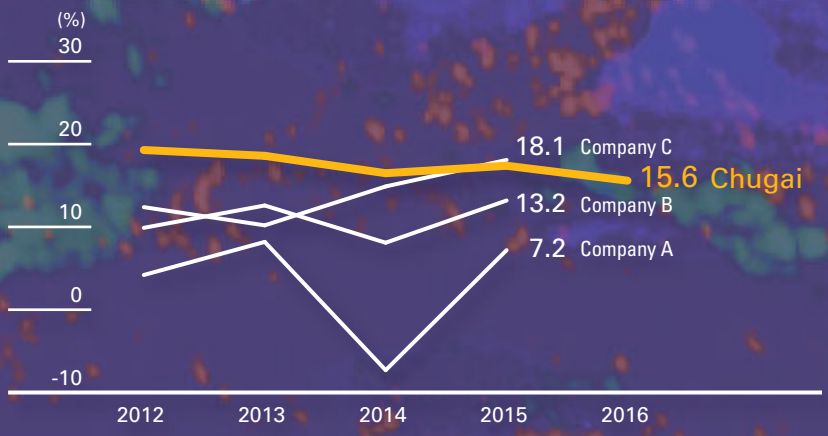
Source: Compiled from company financial reports (IFRS; consolidated)

by Innovation

INNOVATION REINFORCING OUR POSITION

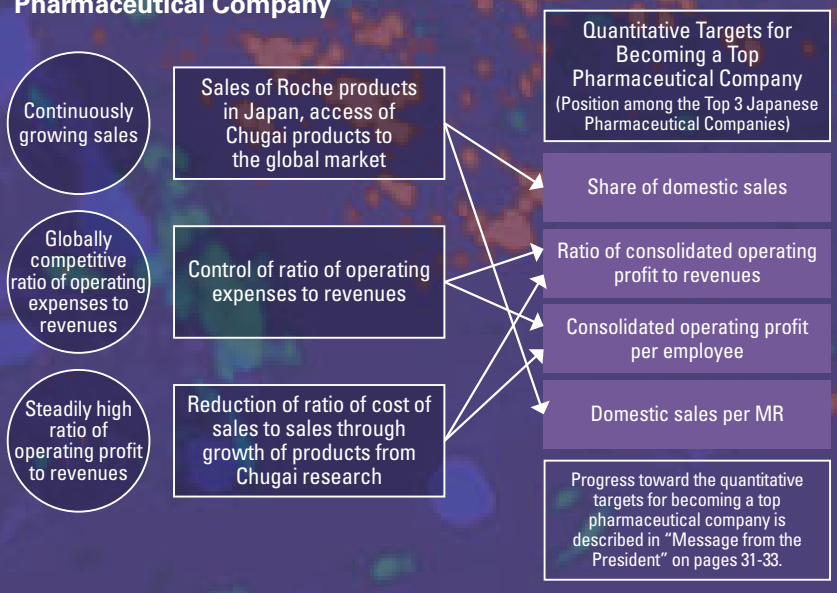
Ratio of Operating Profit to Revenues

- Chugai's ratio of operating profit to revenues is at a consistently high level, partly reflecting the low ratio of operating expenses to revenues.
- While we sell products in-licensed from Roche in Japan, we also out-license our own products, which have a lower cost of sales to sales ratio, to Roche. This gives us access to global markets and provides a revenue base that drives growth.
- In 2016, the ratio of operating profit to revenues decreased, largely because of a decrease in one-time income such as milestone income. However, the cost of sales to sales ratio is expected to improve due to steady growth in sales of products from Chugai research.



Source: Compiled from company financial reports (IFRS; consolidated)

Connections with the Quantitative Targets for Becoming a Top Pharmaceutical Company



Progress toward the quantitative targets for becoming a top pharmaceutical company is described in "Message from the President" on pages 31-33.

The effectiveness of the strategies Chugai is implementing is illustrated by the trends and levels of sales, the ratio of operating expenses to revenues and the ratio of operating profit to revenues. These indicators are closely related to the quantitative targets for becoming a top pharmaceutical company, and point to our steady progress toward that goal as we continue to innovate for the benefit of patients.

CONTENTS

Editorial Policy

Chugai has adopted integrated reporting to communicate both the financial and non-financial aspects of its corporate value by combining the traditional annual report with the print version of the corporate social responsibility (CSR) report.

Scope of This Report
This report presents information on Chugai Pharmaceutical Co., Ltd. and its consolidated subsidiaries. In some places, however, it gives data specifically pertaining to Chugai Pharmaceutical Co., Ltd.

Timeframe
The basic timeframe for this report is the financial reporting period of January to December 2016. However, in view of the importance of providing the latest information available, some information relating to activities that occurred in 2017 is included, mainly in research and clinical development data.

Information in This Report
The information presented in this report is information that Chugai believes to be important given its significance in building Chugai's corporate value over the short, medium and long term, and its degree of impact on stakeholders. More detailed CSR information is reported on the Chugai website.

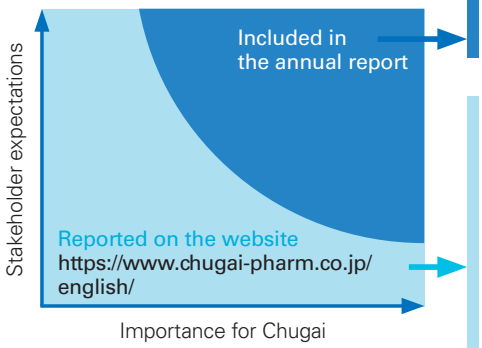
Reference Guidelines
The content of this report is focused on value creation, using as reference The International Integrated Reporting Framework issued by the International Integrated Reporting Council (IIRC).* This framework is designed to promote reporting on a company's short-, medium- and long-term value creation, underpinned by the seven guiding principles below, and is consistent with Chugai's integrated reporting objectives and fundamental thinking.

A) Strategic focus and future orientation, B) Connectivity of information,
C) Stakeholder relationships, D) Materiality, E) Conciseness,
F) Reliability and completeness, G) Consistency and comparability

CSR information was prepared with reference to the Environmental Reporting Guidelines (Fiscal Year 2012 Edition) of the Ministry of the Environment of Japan and the 2013 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI).

* Established in 2010 to provide an international corporate reporting framework, the IIRC is a global coalition of private corporations, investors, the accounting profession, government agencies, NGOs and others. The framework was released in December 2013.

Chugai CSR Information



Annual Report
https://www.chugai-pharm.co.jp/english/ir/reports_downloads/annual_reports.html

CSR Website
https://www.chugai-pharm.co.jp/english/csr/

Topics include:
- Chugai's Approach to CSR
- Chugai's Transparency Guidelines
- Initiatives for Stakeholders
- Environment and Safety
- Performance Data
- Diversity and Inclusion Initiatives

About CSR Information
Chugai reports its social responsibility activities in a printed report and on its website, taking advantage of the characteristics of each media type. The printed report covers Chugai's main initiatives in 2016, while the website includes more detailed information in addition to the information in the printed report.

Forward-Looking Statements
This annual report includes forward-looking statements pertaining to the business and prospects of Chugai. These statements reflect the Company's current analysis of existing information and trends. Actual results may differ from expectations due to risks and uncertainties that may affect the Company's businesses.

Note
The information regarding pharmaceuticals (including products under development) is not intended for advertising, promotion or medical advice. All trademarks are the property of their respective holders.

Archive of Published Information

2012 Edition

Explains strategies, strengths and CSR initiatives for achieving our mission. Covers the initial year of the mid-term business plan ACCEL 15 in depth in the feature section as well as in an interview with three senior management members. Received the Award for Excellence (equivalent to the current Second Prize) at the Nikkei Annual Report Awards in our first year of integrated reporting.

Key Points

Feature: Growth Driven by Behind-the-Scenes Value

(Commentary on the four strategic policies of the mid-term business plan by the corporate officers in charge)

- Increase of Marketing Productivity
- Acceleration of Global Development
- Continuous Generation of Innovative Projects
- Further Strengthening of Management Infrastructure

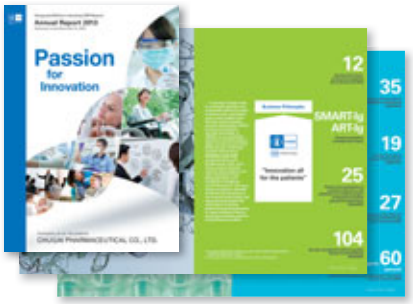
Focus

- Product descriptions of Actemra, Edirol and Mircera
- Detailed explanations of proprietary research technologies

Organization and Human Resources

- Descriptions of Chugai's initiatives for corporate social responsibility (CSR), research, drug safety and other areas

2013 Edition



Intended as a brochure that explains Chugai's Envisioned Future and the progress of its mid-term business plan as well as presenting Chugai's value creation process. Presents our business model for the first time, showing its overall composition and specific initiatives at each stage of operations. Also presents Chugai's unique set of "Seven Strengths" selected through repeated verification and analysis, and explains the process of creating value from these strengths.

(Second Prize, Nikkei Annual Report Awards)

Key Points

Feature: Creating Value from Chugai's Unique Strengths

(Commentary on demonstrating value through the seven strengths)

- Value Creation in the Lung Cancer Field
- Value Creation in IL-6 Inhibitors

Business Model

- Creation of our first business model, showing how our business philosophy is carried through each stage of operations, including research, development, production and marketing.

2014 Edition

Focuses on helping readers understand our approach to creating value through the strengths we have accumulated. Information is examined carefully and quantitative data is enhanced in ways such as presenting the significance of each financial and non-financial indicator and the relevance of its historical background.

(Grand Prize, Nikkei Annual Report Awards)

Key Points

Feature: Leadership and Increased Value Driven by Chugai's Unique Strengths

(Commentary on our approach to three key issues in the pharmaceutical industry and our seven strengths)

- Adoption of Personalized Healthcare
- Healthcare Compliance
- Enhancing Safety Management Systems

Discussion on Chugai's Value Creation

- A discussion with outside experts as stakeholder engagement

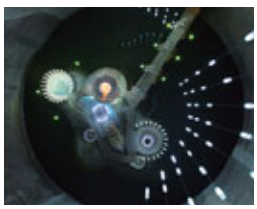
Research Column

- Detailed explanation of bispecific antibody technology and ACE910

Chugai Brand Story

TV commercials and newspaper ads based on the theme of "Innovation Beyond Imagination"

(From December 2014)



The first of the "Innovation Beyond Imagination" series of corporate advertisements. Depicts a new world engendered by unprecedented innovation.

"Life Moved by the Wind" (left)
Strandbeest, a work by Dutch kinetic artist Theo Jansen, walks using the power of the wind.

"A universe 120 meters underground" (right)
Salina Turda, a vast theme park created in an ancient salt mine in Romania

2015 Edition

Emphasizes ease of reader understanding for Chugai's 90th anniversary and the start of IBI 18, its new mid-term business plan. New design divides the material into sections for reading and for reference. Stakeholder engagement is covered in a conversation between the deputy chairman and the outside directors. The relationships between strategies and initiatives and Chugai's unique seven strengths are also explained.

(Grand Prize, Nikkei Annual Report Awards)

Key Points

Feature: Value Creation Driven by Our Strengths

(Commentary on how Chugai will refine and evolve its seven unique strengths to create value)

- Evolution of Chugai's Seven Strengths in New Mid-Term Business Plan IBI 18
- Examples of Outcomes from Chugai's Strengths: Breakthrough Therapy Designation from the U.S. FDA

The CFO Answers Frequently Asked Questions from Investors

- An interview with the CFO on the implementation and financial strategy of the mid-term business plan, as well as items on Chugai's engagement agenda such as common objectives with shareholders
- Commentary on raising the level of employee talent, the main source of value creation, also encompassing the results of employee surveys

Understanding Chugai

- An "Annual Report 2015 Digest" section that gives a general overview of Chugai's 90-year history and strategies

2016 Edition

Produced with an emphasis on ease of use for readers in addition to the previously emphasized ease of understanding. Detailed commentary on the progress of mid-term business plan IBI 18 as well as an Innovation-themed overview of Chugai and an explanation of measures for new advances. Columns about initiatives for environmental protection, providing value to society, human resources and raising productivity are featured for each stage of operations.

Key Points

Feature: Innovation in Chugai's Out-Licensing Strategy

(Commentary on measures for the evolution of our global development model using examples from our out-licensing strategy for products developed in-house)

- Global Development and Out-Licensing Strategy
- SA237 (Out-licensed to Roche)
- Nemolizumab (CIM331) (Out-licensed to Galderma Pharma S.A. and Maruho Co., Ltd.)

Opinions of Stakeholders

- Expectations for Chugai from experts on corporate ethics and diversity, a medical expert and a representative of a patient organization.

Messages from Directors

- Messages from each of the directors so that readers understand their respective management philosophies and views of their role as a director

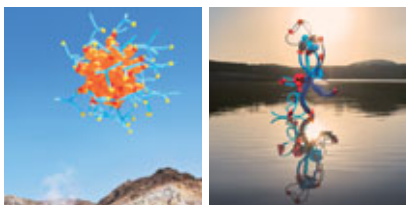
Chugai's annual reports have been integrated reports since the 2012 edition. Each year we aim to enhance the overall theme, composition and content quality. We also select important information, timely topics and other current content for more in-depth exploration and detailed commentary.

For the convenience of our readers, this page presents a five-year archive of published information. Please also refer to previous annual reports as necessary.

(From July 2015)

"Invisible Art: Surfer/Elephant"
"Trust," a "nano sculpture" by South African sculptor Jonty Hurwitz, has been recognized as the world's smallest sculpture of a human form by Guinness World Records. The surfer and elephant sculptures that appear in the commercial were created for the commercial.

(From March 2016)



"Discovery. Creativity in Pharma."
A balloon sculpture by U.S. artist Janice Lee Kelly symbolizes Chugai's innovative and unique approach of drug discovery to contribute to healthcare worldwide.

(From February 2017)

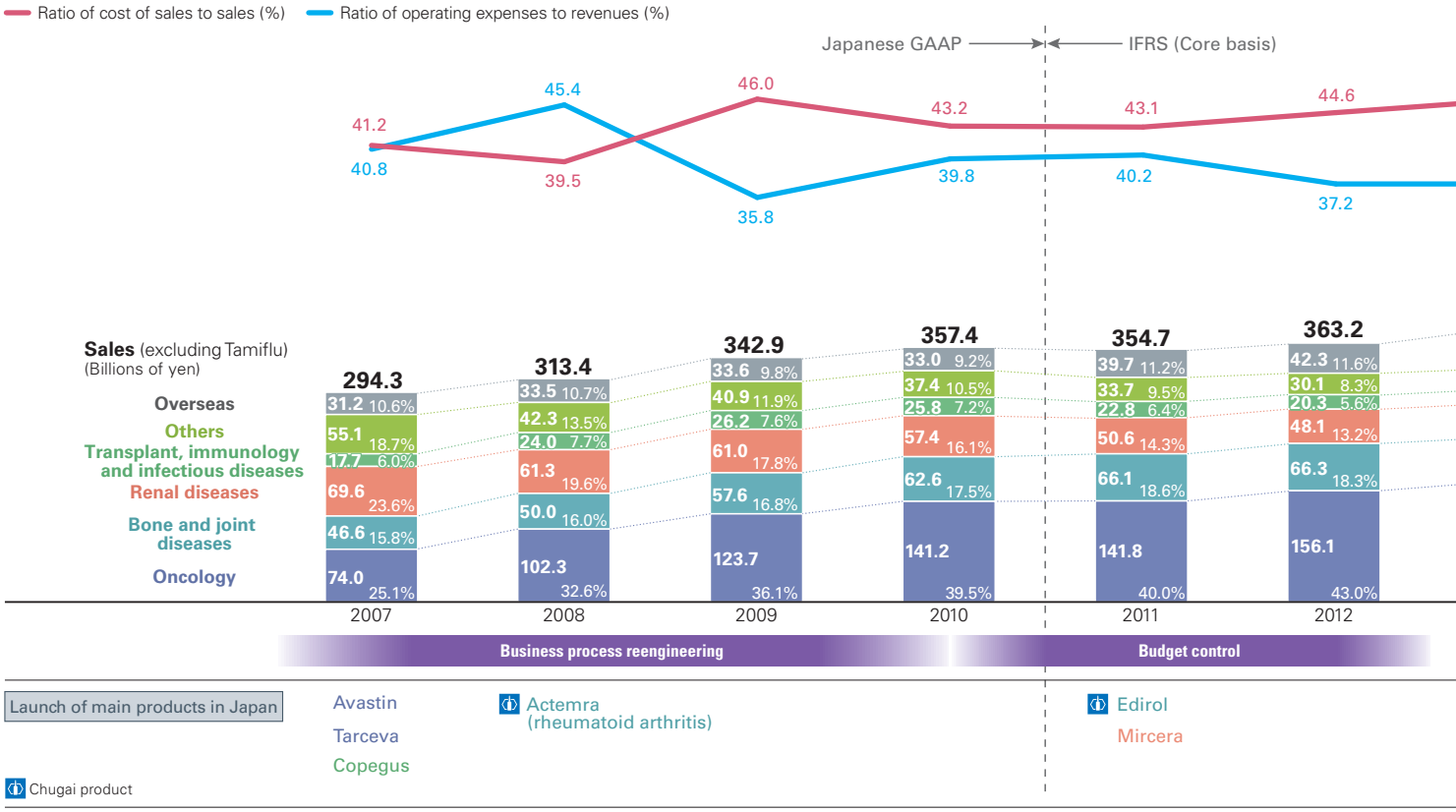
"Searching for the undiscovered in medicine"
With the slogan, "Discovering new treatments to transform the world," this commercial conveys Chugai's innovativeness and strong wish to be the first to discover new medicines and deliver them to patients around the world.

Financial and Non-Financial Highlights

Chugai Pharmaceutical Co., Ltd. and Consolidated Subsidiaries/Years ended December 31

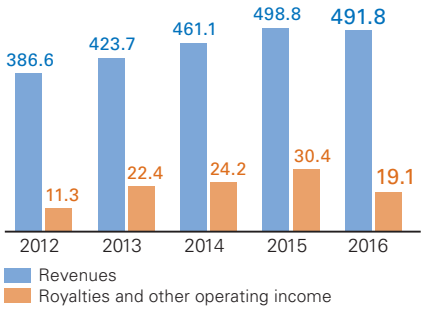
Financial Indicators (Core Basis)

Results



Revenues/ Royalties and Other Operating Income

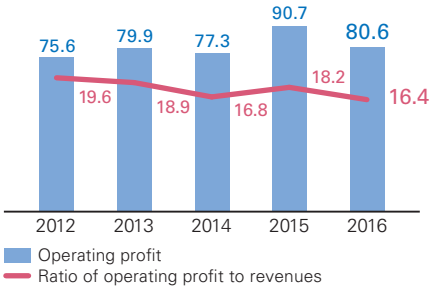
(Billions of yen)



Royalties and other operating income (ROOI) have been growing continuously due to an increase in royalties and other income linked to sales of Actemra outside Japan. In 2016, ROOI and revenues both decreased year on year due to a decrease in one-time income such as milestone income.

Operating Profit/ Ratio of Operating Profit to Revenues

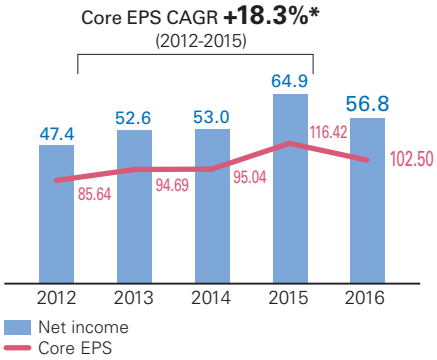
(Billions of yen/%)



Chugai's consistently high ratio of operating profit to revenues is attributable to its low ratio of operating expenses to revenues. In 2016, the decrease in ROOI was the main cause of the decline in the ratio of operating profit to revenues. In 2017, we expect an increase in operating profit due to growth of new and mainstay products as well as of ROOI.

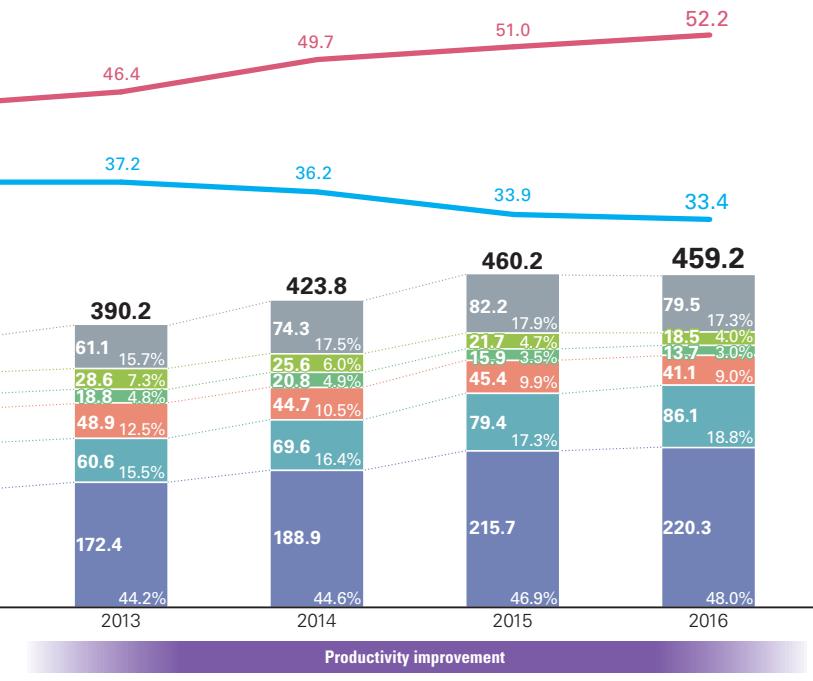
Net Income/Core EPS

(Billions of yen/Yen)



Under ACCEL 15, our previous mid-term business plan, we achieved a Core EPS compound annual growth rate (CAGR) of +18.3 percent. Under IBI 18, our current mid-term business plan, we have set a Core EPS CAGR of less than 4 percent as the quantitative outlook, with 2015 as the baseline and based on average exchange rates for 2015, and will use it as a key performance indicator shared both internally and externally.

* Based on average exchange rates for 2012

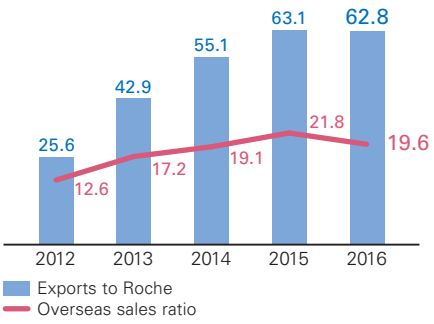


Chugai has been substantially improving its cost structure, given the rising cost of sales to sales ratio resulting from the increase in products in-licensed from Roche under a strategic alliance between the two companies. We have now secured high profitability by continuously achieving a ratio of operating expenses to revenues at a level that compares favorably with the world's leading pharmaceutical companies.

Sales have grown steadily in the field of oncology due to the launch in Japan of products in-licensed from Roche, and also continue to grow in the field of bone and joint diseases, driven by Chugai product Actemra, the first therapeutic antibody created in Japan, and by Edirol.

Exports to Roche/Overseas Sales Ratio

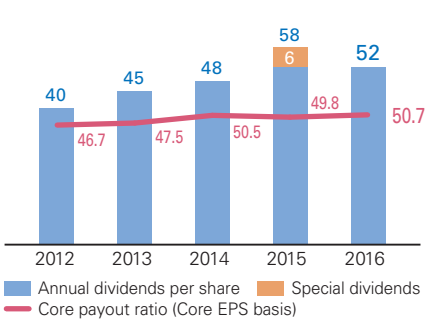
(Billions of yen/%)



Chugai product Actemra has become a blockbuster, with global sales (including Japan) surpassing 1 billion Swiss francs in 2013. Alecensa, another Chugai prduct, received approval in Europe in February 2017 in addition to Japan and the United States, and is expected to drive overseas sales.

Dividends per Share/Core Payout Ratio

(Yen/%)



Regarding shareholder returns, we target stable dividends with a Core EPS payout ratio of 50 percent on average, based on an approach of dividing core net income equally between the Company and our shareholders. This policy will continue unchanged under IBI 18, our current mid-term business plan.

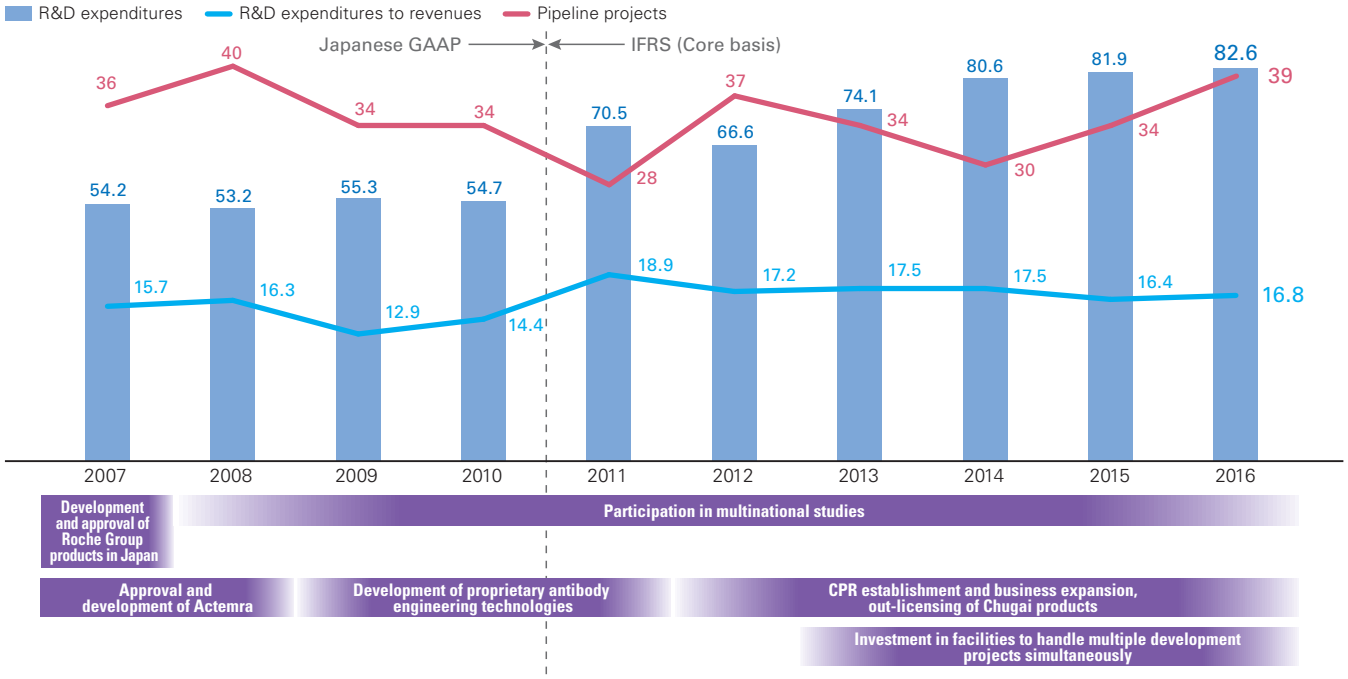
About Core Basis Results

Chugai reports its results on a Core basis from 2013 in conjunction with its decision to adopt IFRS. Core basis results are the IFRS basis results adjusted by excluding non-Core items, and are consistent with the concept of Core basis results disclosed by Roche. Core basis results are used by Chugai as internal performance indicators for representing recurring profit trends both internally and externally, and as indices for establishing profit distributions such as returns to shareholders. No items have been excluded from the IFRS balance sheet and cash flows, as the Core basis results concept only applies to the income statement.

Research, Clinical Development and Production

R&D Expenditures/R&D Expenditures to Revenues/Pipeline Projects

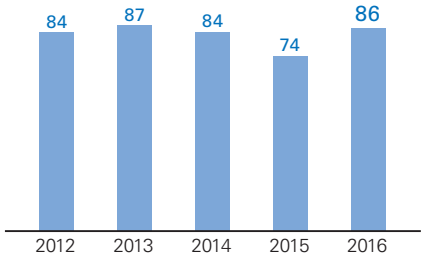
(Billions of yen/%/Projects)



As revenues grow, Chugai increases investment in research and development. In addition to the steady creation of innovative drugs, this leads to research findings that may contribute to the advancement of healthcare and the pharmaceutical industry worldwide. Our policy is to proactively conduct speedy research and development in light of the competitive environment, as well as upfront investment to acquire and enhance future competitiveness, while keeping growth in overall operating expenses within the rate of revenue growth as a general principle.

Under our strategic alliance with Roche, we have been promoting new drug development with higher success rates and greater efficiency by collaborating with Roche in ways such as examining and deciding on which Roche products to in-license based on the results of early-stage clinical trials. In recent years, we have maintained a robust pipeline, with numerous products from Chugai research having moved into the clinical phase, including in-house products from Chugai Pharmabody Reseach (CPR), which has expanded its operations to accelerate the creation of innovative therapeutic antibodies.

Publications in Academic Papers and Presentations at Scientific Conferences regarding Chugai Research Findings[1]

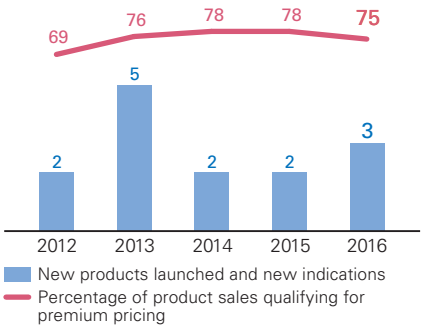


Chugai develops innovative medicines that allow it to differentiate itself from competitors by continuously establishing proprietary drug discovery technologies and applying them to development candidates while promoting research on industrialization for high quality and high added value. We will continue to generate research findings that may contribute to the overall advancement of healthcare, presenting those findings at scientific conferences and publishing them in academic papers.

1. Total of drug discovery and pharmaceutical technology

New Products Launched and New Indications/Percentage of Product Sales Qualifying for Premium Pricing

(Number/%)

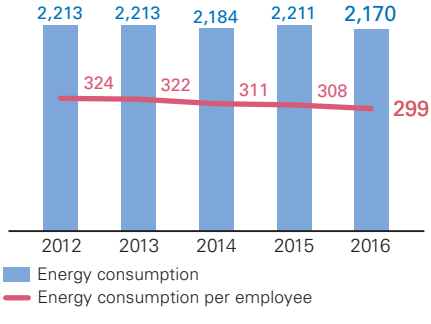


Products that qualify for premium pricing account for a consistently high proportion of Chugai's sales. With our stable revenue base from the efficient in-licensing of Roche products for the Japanese market, we will continue to concentrate on the creation of innovative medicines to provide new value to patients.

Note: Products subject to special market-expansion repricing (2012: Actemra, Avastin; 2016: Avastin) are counted as products qualifying for premium pricing because they met the conditions for such pricing in the relevant fiscal years.

Energy Consumption/ Energy Consumption per Employee

(Thousands of GJ/GJ per employee)

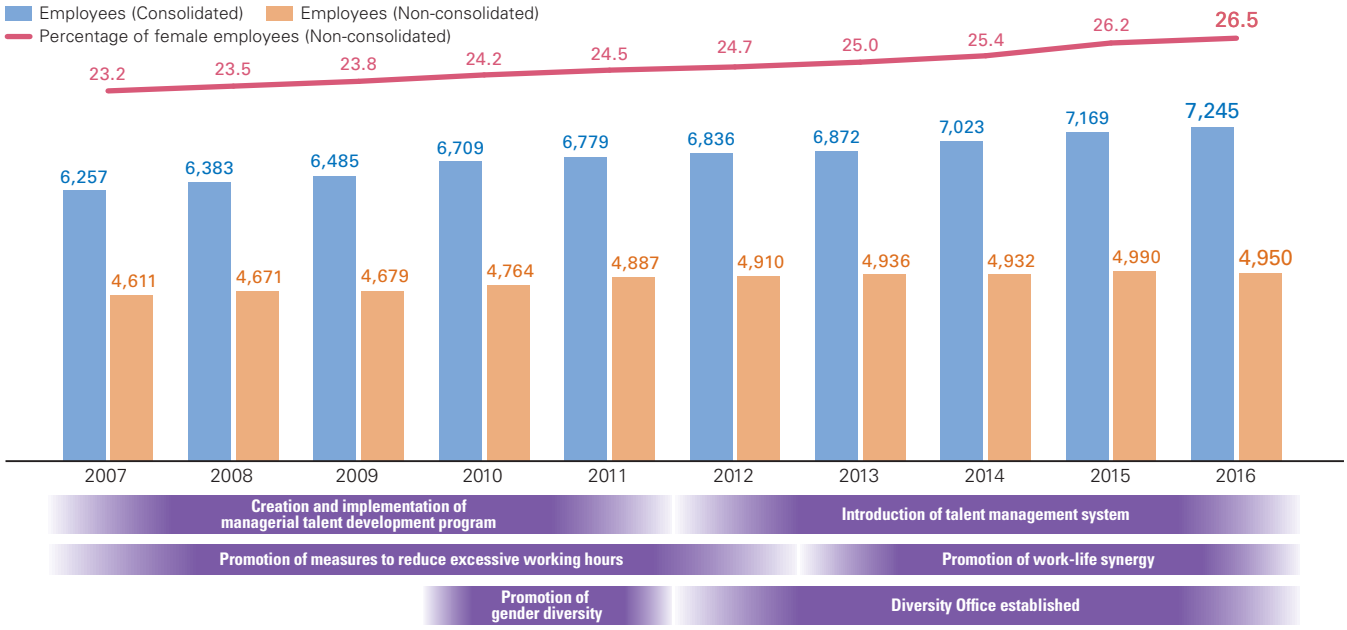


As it expands its production system for new drugs by introducing facilities, Chugai is also working to reduce energy consumption as one of its tasks based on its core value — "We care about the global environment." (See "Environmental Data" on pages 96-97 for details.)

Human Resource Management

Employees/Percentage of Female Employees

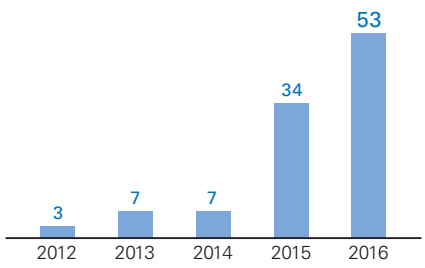
(Number of employees/%)



Chugai is working to enhance its management of human resources based on the belief that its people are the source of its contribution to patients in terms of providing greater value. We have introduced and implement a talent management system to develop and retain leaders and core personnel, and also promote diversity and inclusion and work-life synergy so our diverse human resources can generate new value. The percentage of female employees is rising, and women have been steadily making inroads not only in our systems but also in our organizational culture.

Male Employees Taking Childcare Leave

(Non-consolidated)

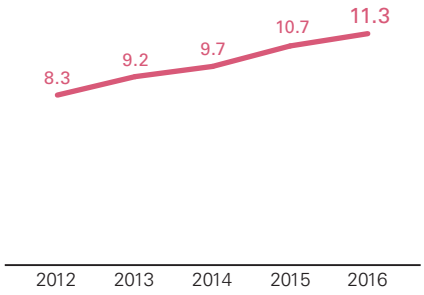


Chugai implements various measures to promote work-life synergy so that employees can choose work arrangements that fit their lifestyles. The number of male employees taking childcare leave is increasing.

Percentage of Female Managers

(Non-consolidated)

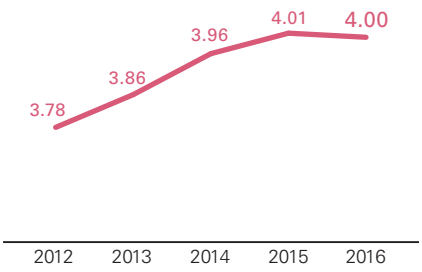
(%)



The percentage of female managers is increasing. We are aware that there is still room for improvement compared with global levels and plan to further accelerate our initiatives to develop female leaders.

Awareness of the "Top Pharmaceutical Company" Strategy (Based on results of Chugai employee surveys)

(On a 5-point scale)



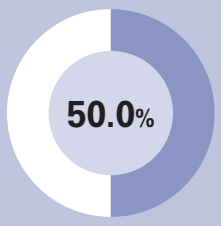
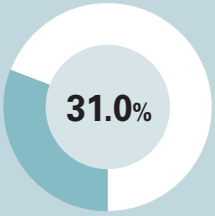
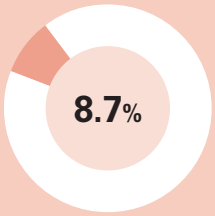
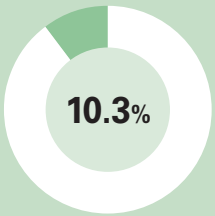
The increase in awareness of the top pharmaceutical company strategy is directly linked to a growing sense of autonomy among employees and higher productivity, and helps to raise corporate value. Awareness of activities aimed at becoming a top pharmaceutical company has already reached a high level, but we will continue efforts for further improvement.

Note: Results of overseas subsidiaries and affiliates are reflected from 2013.

Review by Disease Area

	Situation for Patients	Opportunities and Risks for Chugai
Oncology	● Cancer is the largest area of unmet medical need (the leading cause of death in Japan). ● Recent advances in drug therapy are remarkable, and treatment outcomes have improved significantly for some types of cancer. ● Treatment methods vary according to cancer type and phase of treatment. ● Better efficacy and fewer side effects are expected with advances in personalized healthcare.	**Opportunities** ● Promotion of development and regulatory review of groundbreaking drugs (BTD, etc.) ● Rising expectations for cancer immunotherapy **Risks** ○ Intensifying global competition in cancer immunotherapy ○ Impact of expected overhaul of NHI drug pricing system ○ Impact of scheduled return of premium for new drug creation ○ Entry of large drug manufacturers into the biosimilars field
Bone and Joint Diseases/ Autoimmune Diseases	● The number of rheumatoid arthritis (RA) patients is increasing as the population ages. ● The emergence of biologics has dramatically improved treatment effectiveness, and the treatment goal is shifting to remission (a symptom-free state). ● The number of osteoporosis patients is increasing as the population ages. ● A low treatment rate and adherence are issues in osteoporosis. ● There are many autoimmune diseases with high unmet medical need (neuromyelitis optica, large-vessel vasculitis, systemic sclerosis, etc.).	**Opportunities** ● Promotion of development and regulatory review of groundbreaking drugs (BTD, etc.) **Risks** ○ Impact of expected overhaul of NHI drug pricing system ○ Intensifying global competition in the RA category ○ Concerns about the maturing of Actemra in the medium to long term
Renal Diseases	● The Japanese government is taking focused measures for chronic kidney disease (CKD), including a program to prevent the progression of diabetic nephropathy. Earlier intervention in potential patients is also expected to improve the treatment rate of renal anemia, a serious complication associated with CKD. ● Renal anemia is divided into the dialysis stage and the pre-dialysis stage, and the number of patients treated in the pre-dialysis stage is trending upward every year.	**Risks** ○ Impact of expected overhaul of NHI drug pricing system ○ Intensifying competition in renal disease field
Neurology/ Other Diseases	● Neurology is an area of extremely high unmet medical need, with many pathologies and syndromes. ● Influenza is an acute infectious disease that can confine over 10 percent of the population to bed with sudden high fever. ● For hemophilia, the burden of treatment and the occurrence of inhibitors are issues. ● In addition to skin deterioration due to the itch-scratch cycle, itching associated with atopic dermatitis reduces patients' quality of life by disrupting sleep.	**Opportunities** ● Promotion of development and regulatory review of groundbreaking drugs (BTD, etc.) **Risks** ○ Impact of expected overhaul of NHI drug pricing system

★★★ : Sales of ¥50 billion or more
★★ : Sales of ¥20 billion to ¥49.9 billion
★ : Sales of ¥10 billion to ¥19.9 billion
No symbol : Sales of less than ¥10 billion
Products from Chugai Research
Out-licensed products

2016 Sales and Percentage of Total Sales	Major Products	Development Pipeline
 **¥236.5 billion** (+2.2% YoY)	Avastin ★★★ Herceptin ★★ Rituxan ★★ Xeloda ★ Tarceva ★ Perjeta ★ Alecensa ★ Neutrogin ★ Kadcyla Zelboraf	AF802 (Alecensa) RG435 (Avastin) RG1273 (Perjeta) RG3502 (Kadcyla) GA101 RG7446 GC33 CKI27 RG7596 RG7604 RG7440 ERY974 RG6078
 **¥146.5 billion** (+2.4% YoY)	Actemra ★★★ Edirol ★★ Suvenyl Bonviva Alfarol	ED-71 (Edirol) MRA (Actemra) SA237
 **¥41.2 billion** (–9.5% YoY)	Mircera ★★ Oxarol Epogin	EOS789
 **¥48.5 billion** (–0.2% YoY)	Tamiflu ★ CellCept Copegus Pegasys Sigmart	RG1450 RG7412 RG7916 ACE910 RG3637 CIM331 URC102 PCO371 SKY59

Development Pipeline (As of February 1, 2017)

Development Code (*Additional Indication)	Indication	Status (Date) Phase Ⅰ	Phase Ⅱ	Phase Ⅲ	Filed	Approved
Oncology						
AF802 (RG7853)	◆ Non-small cell lung cancer (NSCLC) [post-crizotinib]				(Europe)	Sep. 2015
	◆ NSCLC [1st line]				(Overseas)	
RG435*	Renal cell carcinoma				(Multinational study)	
	Malignant pleural mesothelioma					
RG1273*	◆ Breast cancer (adjuvant)				(Multinational study)	
	◆ Gastric cancer				(Multinational study)	
RG3502*	◆ Breast cancer (adjuvant)				(Multinational study)	
GA101 (RG7159)	Indolent non-Hodgkin's lymphoma				(Multinational study)	
RG7446	◆ NSCLC				(Multinational study)	
	◆ NSCLC (adjuvant)				(Multinational study)	
	◆ Small cell lung cancer				(Multinational study)	
	◆ Urothelial carcinoma				(Multinational study)	
	◆ Muscle invasive bladder cancer (adjuvant)				(Multinational study)	
	◆ Renal cell carcinoma				(Multinational study)	
	◆ Renal cell carcinoma (adjuvant)				(Multinational study)	
	◆ Breast cancer				(Multinational study)	
GC33 (RG7686)	◆ Hepatocellular carcinoma		(Multinational study)*			
CKI27	◆ Solid tumors					
			(Overseas)			
RG7596	Non-Hodgkin's lymphoma					
RG7604	◆ Solid tumors					
RG7440	◆ Solid tumors					
ERY974	◆ Solid tumors		(Overseas)			
RG6078	◆ Solid tumors					
Bone and Joint Diseases						
ED-71	Osteoporosis				(China)	
Autoimmune Diseases						
MRA* (RG1569)	Large-vessel vasculitis					Nov. 2016
	Giant cell arteritis				(Overseas)	Nov. 2016
	Systemic sclerosis				(Multinational study)	
SA237 (RG6168)	Neuromyelitis optica				(Multinational study)*	
Renal Diseases						
EOS789	Hyperphosphatemia					
Neurology						
RG1450	◆ Alzheimer's disease				(Multinational study)	
RG7412	◆ Alzheimer's disease					
RG7916	Spinal muscular atrophy					
Others						
ACE910 (RG6013)	Hemophilia A (Inhibitor)				(Multinational study)	
	Hemophilia A (Non-inhibitor)				(Multinational study)	
RG3637	◆ Idiopathic pulmonary fibrosis			(Multinational study)		
CIM331	Pruritus in dialysis patients					
	Atopic dermatitis➡			(Multinational study)*		
URC102	Gout			(Overseas)		
PCO371	Hypoparathyroidism		(Overseas)			
SKY59 (RG6107)	Paroxysmal nocturnal hemoglobinuria			(I/II) (Multinational study)		

○○○○○ Designates change in status in 2016 and thereafter ◆PHC-based drug discovery ➡Development out-licensed to Galderma (Overseas) / Maruho (Japan)

* Multinational study managed by Chugai Pharmaceutical

Note: In principle, completion of first dose is regarded as the start of clinical studies in each phase.

Generic Name/Product Name	Origin (Collaborator)	Mode of Action
alectinib/Alecensa (Overseas name: Alecensa)	In-house (Roche)	ALK inhibitor (Oral)
bevacizumab/Avastin (Overseas name: Avastin)	Roche	Anti-VEGF (vascular endothelial growth factor) humanized monoclonal antibody (Injection)
pertuzumab/Perjeta (Overseas name: Perjeta)	Roche	HER2 dimerization inhibitory humanized monoclonal antibody (Injection)
trastuzumab emtansine/Kadcyla (Overseas name: Kadcyla)	Roche	Anti-HER2 antibody-tubulin polymerization inhibitor conjugate (Injection)
obinutuzumab/Product name undetermined (Overseas name: Gazyva/Gazyvaro (E.U.))	Roche (Nippon Shinyaku)	Glycoengineered type II anti-CD20 monoclonal antibody (Injection)
atezolizumab/Product name undetermined (Overseas name: Tecentriq)	Roche	Engineered anti-PDL1 monoclonal antibody (Injection)
codrituzumab/Product name undetermined	In-house (Roche)	Anti-glypican-3 humanized monoclonal antibody (Injection)
Generic and product names undetermined	In-house	Raf/MEK dual inhibitor (Oral)
polatuzumab vedotin/Product name undetermined	Roche	Anti-CD79b antibody-drug conjugate (Injection)
taselisib/Product name undetermined	Roche	PI3K inhibitor (Oral)
ipatasertib/Product name undetermined	Roche/Array BioPharma	AKT inhibitor (Oral)
Generic and product names undetermined	In-house	Anti-Glypican-3/CD3 bispecific antibody (Injection)
Generic and product names undetermined	Roche/NewLink Genetics	IDO inhibitor (Oral)
eldecalcitol/Edirol	In-house	Activated vitamin D_3 agent (Oral)
tocilizumab/Actemra (Overseas name: Actemra/RoActemra (E.U.))	In-house (Roche)	Humanized anti-human IL-6 receptor monoclonal antibody (Injection)
Generic and product names undetermined	In-house	Anti-IL-6 receptor humanized monoclonal antibody (Injection)
Generic and product names undetermined	In-house	— (Oral)
gantenerumab/Product name undetermined	Roche/MorphoSys	Anti-amyloid-beta human monoclonal antibody (Injection)
crenezumab/Product name undetermined	Roche/AC Immune	Anti-amyloid-beta humanized monoclonal antibody (Injection)
Generic and product names undetermined	Roche/PTC Therapeutics	SMN2 splicing modifier (Oral)
emicizumab/Product name undetermined	In-house (Roche)	Anti-factor IXa/X bispecific antibody (Injection)
lebrikizumab/Product name undetermined	Roche	Anti-IL-13 humanized monoclonal antibody (Injection)
nemolizumab/Product name undetermined	In-house	Anti-IL-31 receptor A humanized monoclonal antibody (Injection)
Generic and product names undetermined	In-house/JW Pharmaceutical (JW Pharmaceutical)	URAT1 inhibitor (Oral)
Generic and product names undetermined	In-house	PTH1 receptor agonist (Oral)
Generic and product names undetermined	In-house (Roche)	Anti-C5 recycling antibody (Injection)

Management Section

Overview of Mid-Term Business Plan IBI 18

INNOVATION BEYOND IMAGINATION

Quantitative Outlook

Core EPS CAGR
(2015-18)

Low single digit[1]

- In the three years of IBI 18, we will establish a solid foundation for dramatic growth in the 2020s.
- We will continue to target a Core EPS payout ratio of 50 percent on average.

1. Growth less than 4%, based on average exchange rates for 2015

External Environment

Opportunities

Global

> Increasing importance of pharmaceuticals due to growth and aging of the global population

> Expansion of opportunities to generate innovation based on advancements in life science and information and communications technology (ICT)

Japan

> Initiatives to promote development of breakthrough therapies, including establishment of the Sakigake (forerunner) designation system (fast-track review system) and the inauguration of the Japan Agency for Medical Research and Development

Risks

Global

> Progress of measures to curb healthcare costs in various countries

> Increasing competition in innovation among companies

> Declining success rates and rising costs in research and development

> Possibility that major pharmaceutical companies will launch biosimilars[2]

> Dramatic changes in the competitive environment due to disruptive technologies and new entrants from different industries

> Tightening of regulations for safety, quality assurance, marketing and other areas

Japan

> Strong pressure to contain drug costs with the rapidly aging population and financial difficulties (Revision of the NHI drug pricing system)

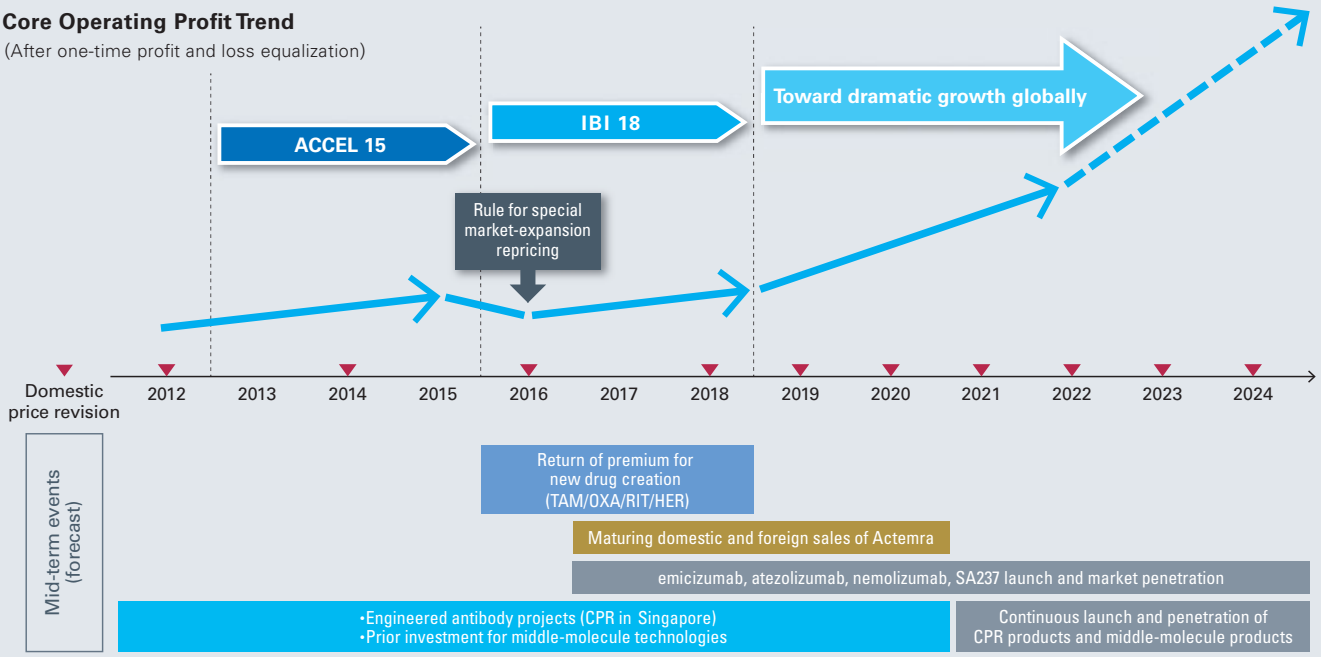
> April 2016 introduction of a rule for special market-expansion repricing

2. Successor products to biopharmaceuticals whose patent term has expired, made by manufacturers other than the manufacturer that developed the antecedent biopharmaceutical

Mid-Term Events and Performance Trend

Core Operating Profit Trend

(After one-time profit and loss equalization)



Priority Agenda of IBI 18

- Acquisition and implementation of competitiveness at a top global level
- Selection and concentration strategy for acceleration of growth

Drug Discovery	Development	Pharmaceutical Technology	Marketing & Sales/Medical Affairs/Drug Safety
● Continuous creation of engineered antibody projects ● Establishment of drug discovery technologies for middle molecules ● Strengthening of research base for oncology/immunology	● Acceleration of emicizumab and atezolizumab as a top priority ● Realization of early PoC with TCR[3] ● Strengthening process for proof of medical/economic value	● Enhancement of CMC[4] development infrastructure for early PoC acquisition ● Strengthening competitive advantages from late development to initial commercial production ● Strengthening QA, QC and regulatory functions	● Realization of sales growth by concentrating on sales driver products, emicizumab and atezolizumab ● Providing advanced solutions through cross-functional teams ● Establishment of system adapted to local characteristics
Company-wide			
● Acquisition, development and assignment of global top-class talent to lead value creation activities through innovation			

● Expansion of achievements through selection and concentration utilizing competitive advantage
● Strengthening competitive foundation for global top-class level

3. Translational clinical research: Clinical research during preclinical stage to PoC that clinically verifies the scientific concept that was developed through drug discovery operations.
4. Chemistry, Manufacturing and Controls: A concept that integrates API process research and pharmaceutical development research with quality evaluation research

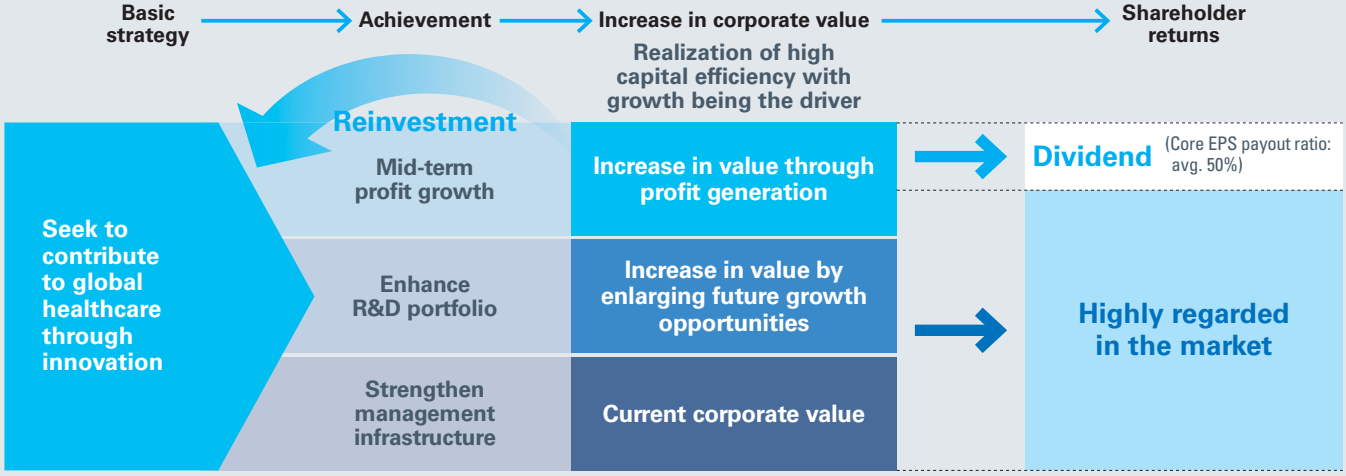
2017 Target: Priority Agenda of IBI 18

Continuous Creation of Innovative Projects → Acceleration of New Growth Driver Development → Sales Expansion of Growth Driver Products

Drug Discovery	Development/Pharmaceutical Technology	Marketing & Sales/Medical Affairs/Drug Safety
• Establishment of new antibody engineering technologies • Creation of early preclinical projects for middle molecules • Initiation of comprehensive collaboration with IFReC • Establishment and operation of collaborative lab in IFReC	• Global filing of emicizumab • Execution of atezolizumab/CIT[5] development • Development of SA237 targeting 2018 filing • Enhancement of cooperation with overseas/domestic collaborator of nemolizumab • Establish commercial production system for emicizumab	• Realization of sales expansion of growth driver products • Structure a system for new growth driver launches • Execution of domestic system reform to provide solutions • Structure an efficient system adapted to local characteristics
Company-wide		
• Expansion of requirement definition, selection and appointments for core positions		

5. Cancer Immunotherapy

Basic Principles of Increasing Corporate Value and Shareholder Returns



Message from the President

Mid-term business plan IBI 18 got off to a smooth start toward our goal of acquiring competitiveness at a top global level. We will execute a strategy of selection and concentration to further accelerate growth and become a globally successful top pharmaceutical company.

Tatsuro Kosaka
Representative Director, President & COO

Overview and First-Year Progress of IBI 18

Smooth Start to Achieving IBI 18

- Exceeded Core operating profit forecast by 113.5%
- 3 additional indications and 1 additional dosage form
- 4 filings
- 2 BTDs from the U.S. FDA
- 10 new project initiations
- Out-licensed SA237 and nemolizumab
- Agreement for comprehensive collaboration with IFReC

Mid-Term Business Plan for Becoming a Top Pharmaceutical Company

Mid-term business plan IBI 18 got off to a smooth start in 2016 as we steadily advanced measures based on the original strategies of the plan.

First, to summarize IBI 18, the priority agenda objectives are "acquisition and implementation of competitiveness at a top global level" and "selection and concentration strategy for acceleration of growth." By fulfilling these objectives, we aim to become a top pharmaceutical company.

Looking ahead, we project that our operating environment will change even more drastically than it has to date. The global pharmaceutical market is expected to continue growing as the importance of pharmaceutical products increases with the aging of the world's population. On the other hand, many countries are facing budget pressures due to rising social security costs. In Japan, a new rule for repricing based on market expansion went into effect in April 2016, and an overhaul of the drug pricing system is also on the horizon. Competition in innovation will intensify due to advances in science and technology including ICT, such as the use of artificial intelligence (AI) to develop innovative drugs, and as a result of the entry of players from other industries into the pharmaceutical industry. In addition, the full-scale participation of major pharmaceutical companies in the field of biosimilars is expected.

Chugai must further evolve its strengths and transform into a globally successful company to continue delivering value to patients and the medical community around the world. In IBI 18, we will enhance our competitive advantages and pursue continuous innovation in drug discovery, development, production, marketing and sales/medical affairs/drug safety, and Company-wide functions.

Solid Progress in Our Innovation Strategy

Next, I will go over our results and progress in the first year of IBI 18. The highlight was the accelerated advancement of our pipeline. We filed applications for four products, two of which received BTD from the FDA: Alecensa as a first-line treatment for ALK-positive non-small-cell lung cancer, and Actemra for giant cell arteritis. The decision to out-license SA237 and nemolizumab (CIM331), for which Chugai had been leading development globally, to Roche and partner companies paved the way to further their development.

Progress toward Quantitative Targets for Becoming a Top Pharmaceutical Company (2016)

1. Gain a position among the top three major Japanese pharmaceutical companies[1]

Domestic sales share	Ranked 4th[2]	△
Ratio of consolidated operating profit to revenues	Ranked 4th	△
Consolidated operating profit per employee	Ranked 4th	△
Domestic sales per MR[3]	Ranked 1st	○

2. Gain the top share in our strategic disease areas in Japan

Oncology	Ranked 1st[2]	○

Other main fields in 2015:
Renal (ESA): 2nd[2]
Osteoporosis: 2nd[2]
Rheumatoid arthritis: 3rd[2]

3. Increase overseas sales ratio

Overseas sales ratio	19.6%	○

○ = Achieved △ = Almost achieved

1. Financial results: Chugai: 2016, other companies: Years ended December 31, 2015 or March 31, 2016
2. Copyright © 2017 QuintilesIMS. Source: JPM 2015. Reprinted with permission. The scope of the market is defined by Chugai.
3. Calculated by Chugai, based on data from Fuji-Keizai Co., Ltd.

We also initiated 10 new development projects, including ERY974 and SKY59, which apply Chugai's proprietary antibody engineering technologies. As the first project that CPR in Singapore has been involved in from the early stages of discovery, SKY59 is a testament to the evolution of our antibody discovery platform. In addition to these initiatives, we concluded a comprehensive collaboration agreement for research in immunology with IFReC, and made smooth progress in implementing our capital investment plan, as well as production preparations ahead of the launch of emicizumab (ACE910). These and other efforts proceeded as planned or better than planned.

In terms of financial performance, the increase in product sales more than offset the impact of NHI drug price revisions. Core operating profit decreased because of a decline in one-time milestone income, but substantially exceeded the forecast at the beginning of the year. (See "About Core Basic Results" on page 21 for a detailed explanation of Core basis results.)

Strategies

Japan, a Source of Revenues – Outside Japan, a Source of Growth

To achieve the objectives of IBI 18, to realize our goal of becoming a top pharmaceutical company and to grow globally in the future, we must accelerate selection and concentration of our resources and further enhance our global competitiveness. We are making solid progress toward our quantitative targets for becoming a top pharmaceutical company, but as I mentioned earlier, changes to the drug pricing system and other factors are making the industry environment and competitive landscape increasingly unclear.

In these circumstances, Chugai has clearly positioned the Japanese market as a source of stable revenues and the market outside Japan as a source of growth through the global expansion of products from Chugai research. By enhancing each of these pillars, we will build a strong foundation for future growth.

Our priority agenda objectives for 2017 are "focus on global and domestic growth drivers," "creation of engineered antibody projects and development of middle-molecule technologies," and "execution of system reform to provide solutions."

For our growth drivers, we will continue to concentrate resources on emicizumab and atezolizumab (RG7446). We plan to file applications in and outside Japan for regulatory approval of emicizumab as a potential treatment for hemophilia A. Aiming for the speediest possible launch, we have started to set up of the production system for emicizumab and have begun construction of a biologic API production facility at the Ukima Plant to meet expanding global demand. Atezolizumab is a cancer immunotherapy, a category in which intensifying global competition is expected, and we will concentrate expenditures and personnel on this project to compete successfully in terms of speed.

In discovery research, our goal is to move two engineered antibody projects based on our proprietary technologies into clinical development during IBI 18. In middle-molecule projects, as the creation of a candidate compound moves closer to becoming a reality, we will evolve our compound library and resolve technical issues with the aim of creating an early preclinical project. In basic research, a new laboratory will be established and begin operation from April 2017 at IFReC, our comprehensive collaboration partner.

As for system reform to provide solutions, it is important to establish a system for the global market that is efficient and adapted to conditions in each country. We will quickly implement reforms led by overseas subsidiaries. In Japan, healthcare system reforms will place the healthcare delivery system under the leadership of prefectural governments from 2018. Ahead of these reforms, we will make organizational changes in April 2017 in marketing and sales, medical affairs and drug safety to offer greater expertise while responding precisely to the different circumstances in each region. (See "About the New System to Provide Solutions in Japan" on page 35 for details about these new organizational reforms.)

In 2017, we are anticipating revenues of ¥520.5 billion and Core operating profit of ¥92.0 billion, both record highs, driven by the solid growth of our major products in Japan and worldwide, including new products such as Alecensa.

Ensuring Rapid Growth after IBI 18

Numerous regulatory filings are planned for 2017. Specifically, these will include filings for approval of emicizumab (for patients with inhibitors) in and outside Japan, for Alecensa in first-line treatment outside Japan, and for two expected indications for atezolizumab in Japan. Many more applications are planned for 2018 and later.

Our goal in IBI 18 is to transform into a globally successful company. The many products with regulatory filings scheduled during IBI 18 will begin contributing to sales after the plan is completed, but we will effect transformation in every facet of our business activities to make IBI 18 a rapid growth phase. With new drug candidates that can offer significant benefits to patients, such as emicizumab, atezolizumab, nemolizumab and SA237, as well as the steady generation of projects by CPR and the creation of middle molecule drugs, Chugai's path to future growth is already in sight.

Increasing Corporate Value

Innovation for Patients is the Foundation

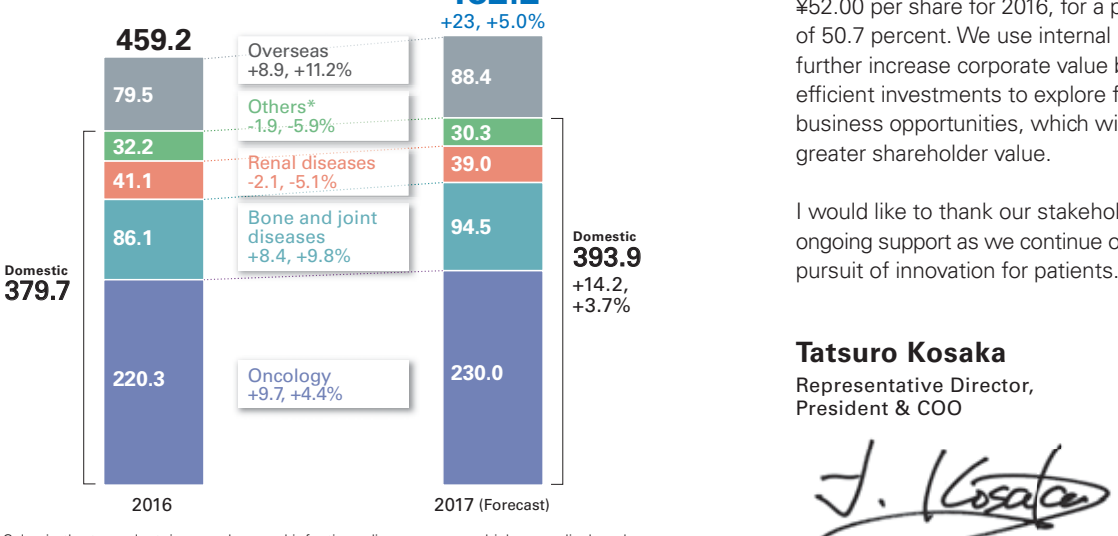
The key to accomplishing the objectives of IBI 18 and becoming a globally successful company is the acquisition, development and assignment of global top-level talent to lead value creation activities through innovation. We have already identified key positions that will be central to value creation, and are establishing the processes for acquiring, developing and assigning people to fill them, and plan to expand the scope of key positions. In addition, we will continue to focus on diversity and inclusion and on the pursuit of productivity improvements, both of which are essential to innovation, in a Company-wide effort to further accelerate growth.

Chugai is committed to innovation, and this commitment is the foundation for increasing Chugai's corporate value. We will strive to grow profits, maximize our presence in Japan and globally and expand our contribution to patients while steadily carrying out organizational reforms. We believe that concrete results such as these will lead to a positive evaluation in capital markets and stable dividends.

With respect to our dividend policy, we will continue to target a Core EPS* payout ratio of 50 percent on average based on stable dividends, after taking strategic funding needs and our results forecast into account. In line with this policy, we declared dividends of ¥52.00 per share for 2016, for a payout ratio of 50.7 percent. We use internal reserves to further increase corporate value by making efficient investments to explore future business opportunities, which will lead to greater shareholder value.

I would like to thank our stakeholders for their ongoing support as we continue our relentless pursuit of innovation for patients.

Tatsuro Kosaka
Representative Director,
President & COO



* Diluted net income per share attributable to Chugai shareholders after deducting items that Chugai defines as non-core items

2017 Sales Forecast (Excluding Tamiflu)
(Billions of yen)

* Sales in the transplant, immunology and infectious diseases area, which were disclosed separately until 2016, are included in "Others" from the 2017 forecast.

IBI 18 Results and Progress

Drug Discovery

Continuous creation of first-in-class and best-in-class projects based on innovative technologies

- Began phase I clinical trials of ERY974 and SKY59, two projects that apply Chugai's proprietary antibody engineering technologies
  - **ERY974:** Anti-glypican-3 (GPC3)/CD3 bispecific antibody (for solid tumors)
  - **SKY59:** Anti-C5 recycling antibody for potential treatment of paroxysmal nocturnal hemoglobinuria
- Made progress on platform technology development for middle-molecule discovery technology
- Concluded a comprehensive collaboration agreement for advanced research with IFReC. Findings of joint research with IFReC were published in scientific journals.

Going forward, we intend to establish new antibody engineering technologies and create middle-molecule projects in the pre-clinical phase.

Development

Promotion of early launch and quick market penetration based on global top-class TCR and development activities

- Made steady progress on emicizumab (ACE910)
  - Met primary endpoint in phase III study in patients with inhibitors
  - Began phase III multinational studies (three global studies) in non-inhibitor patients
- Simultaneously conducting multiple clinical trials of atezolizumab (RG7446)
  - Thirteen phase III multinational studies are in progress, including three that started in 2016
  - Began a phase I clinical trial in combination with cancer immunotherapy
- Concluded out-licensing agreements for Chugai products SA237 and nemolizumab (CIM331)
- Established the TCR structure and made progress in designing an IDCP[1] process to prove medical and economic value

Pharmaceutical Technology

Strengthening of pharmaceutical technology system for multiple and simultaneous global development, fast global launch and cost reduction

- Steadily made production preparations ahead of the launch of emicizumab, for which rapid global growth is expected
- Made progress in enhancing CMC development infrastructure
  - Advanced enhancements to QA, QC and regulatory functions, including functions to ensure robustness of data
  - Took steps to secure flexible production and supply functions
  - Made progress in strengthening the technology platform and designing production functions specifically for middle molecules
- Made progress in implementing capital investment plan
  - Smooth progress of facility construction at Utsunomiya Plant and Fujieda Plant
  - Capital investment to expand production capacity to handle high-mix, low-volume production for initial commercial products at Ukima Plant

Marketing & Sales/ Medical Affairs/ Drug Safety

Provision of advanced and diverse solutions through independent roles and cross-functional cooperation

- Sales growth in Japan exceeded the impact of NHI drug price revisions in 2016
- Rapid growth of Alecensa in and outside Japan
  - **Japan:** +48.8% year on year **Outside Japan:** +640.0% year on year
- Took steps to establish a system for providing solutions to regional needs in Japan
  - Initiated reorganization to enable independent roles and cross-functional cooperation toward the establishment of a system to execute area-based strategies for each prefecture
  - **Marketing & Sales Division:** Made progress in ascertaining and visualizing patient trends and the status of healthcare services in each area
  - **Medical Affairs Division:** Strengthened evidence generation and science communication[2] functions
  - **Drug Safety Division:** Advanced development and use of Chugai's own post-marketing surveillance and adverse event databases

Company-wide

Accelerate acquisition, development and assignment of talent who are key for innovation and for responding to environmental changes

- Defined and selected requirements and formulated human resource development plans for people in critical positions in the IDCP process, where urgency is particularly high
- Established a global compliance system and structure, and began initiatives to enhance compliance under the new structure, including the launch of a new committee in January 2017
- Continued autonomous activities in each division aimed at increasing productivity. Advanced initiatives to integrate these efforts with diversity and inclusion and work-life synergy.

About the New System to Provide Solutions in Japan

Shift to regional healthcare delivery system with healthcare reforms in 2018

In Japan, a new strategic healthcare plan will be launched in April 2018, and formulation of a community care concept is under way at the prefectural level. Under this plan, healthcare delivery will be overseen by prefectural governments.

Since there are variations in the demographics and number of hospital beds in each region, patient flow and the functional division of medical institutions are likely to become more diverse. In addition, treatment of specialty diseases will no longer be centered in advanced treatment hospitals, and it will be essential to provide care in cooperation with regional core hospitals and primary care physicians.

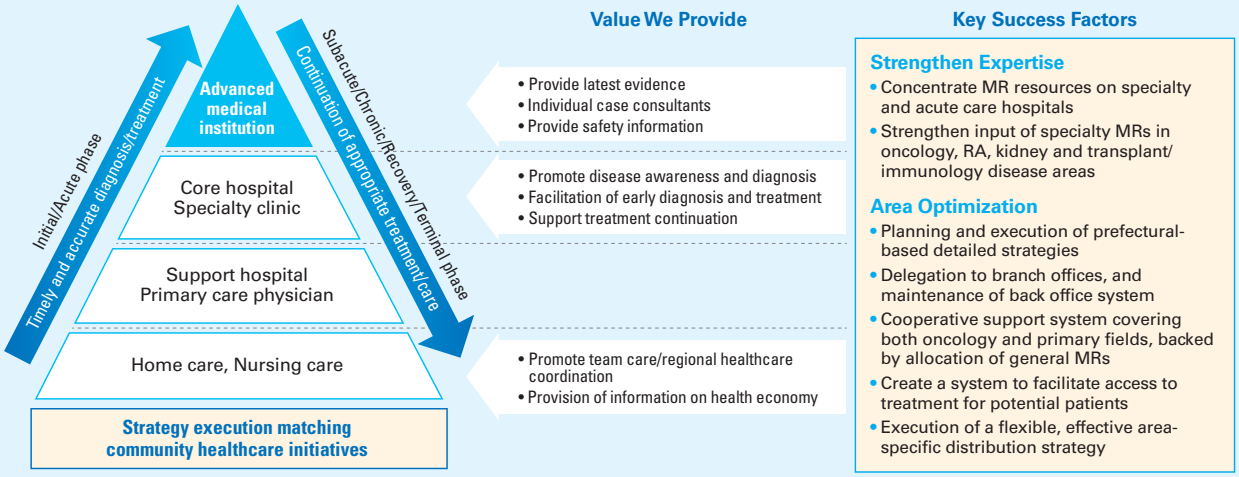
Reforms based on "area optimization" and "strengthening expertise"

Given the changes outlined above, Chugai has been reviewing its organization since 2015 to promote detailed area-based strategies according to local characteristics. In April 2017, we will establish a new cooperative structure for the Marketing & Sales, Medical Affairs and Drug Safety divisions and carry out reforms to our system for providing solutions in Japan.

The priority themes will be "area optimization" and "strengthen expertise." First, we will make fundamental changes to the marketing and sales organization. The current 11 branches will be subdivided into 36 branches, and seven Regional Management Offices (RMOs) will be established to coordinate execution of branch-based area strategies. The disease-area unit structure, which is divided into an Oncology Unit and Primary Unit, will be abolished. We will assign general MRs who cover all disease areas and can respond to core hospitals, and specialty MRs in charge of specialty care fields such as oncology and autoimmune diseases.

In connection with this reorganization, we will establish the new position of Medical Science Liaison in the medical affairs field to focus on evidence generation and science communication activities in each area.

In drug safety, the post-marketing surveillance database tool (PMS DB tool) and adverse event database tool (ADR DB tool) that Chugai developed in 2016 are attracting a great deal of interest from the medical community and the industry. Having MRs use these databases will enable us to provide high-quality information and assign safety experts to the RMOs. By providing safety consultation in each area and establishing networks with physicians and pharmacists, we will accelerate our efforts in immunology.



1. Integrated development and commercialization plan: A plan from development to launch that establishes a story showing the value of a clinical candidate.
2. Science communication refers to dialogue between experts and the general public, where experts explain specialized and advanced science and technology in lay terms to the general public, and the general public can ask questions and express opinions.

Board of Directors, Audit & Supervisory Board and Executive Committee Members (As of April 1, 2017)

Representative Directors

As a discovery-focused company, we seek to raise our corporate value through the continuous creation of innovative new drugs. We will continue to pursue innovation using our discovery platform and research technologies while collaborating with partners in academia and other sectors. To that end, I place priority on monitoring the appropriateness of management and resource allocation based on emerging trends in life science and changes in the business environment.

Osamu Nagayama

Executive Director

1978 Joined the Company
1985 Deputy General Manager of Development and Planning Div. and Director
1987 Director & Senior Vice President
1989 Representative Director & Deputy President
1992 Representative Director, President & CEO
2010 Outside Director, Sony Corporation (to present)
2012 Representative Director, Chairman & CEO (to present)

1984 Joined the Company
1991 General Manager of London Representative Office
1993 Director
1994 Director and General Manager of Medical Information Div.
1995 Director and General Manager of Clinical Research & Development Division
1996 Director and Deputy General Manager of Research and Development Division
1997 Director & Senior Vice President
1998 Senior Vice President
2000 Director & Senior Vice President
2002 Director & Deputy President
2003 Director & Deputy President, Vice President
2004 Representative Director & Deputy President
2006 Representative Director & President, Chugai Pharma Manufacturing Co., Ltd.
2012 Representative Director & Deputy Chairman (to present)

Based on the idea that corporate value is the comprehensive product of economic performance, social awareness and human development, we believe that generating innovation and fusing these three elements on a higher plane is a key priority for future growth. I place particular importance on collaboration with outside partners. By combining cutting-edge core technologies in other industries with our own discovery platform and technologies, we would like to generate unprecedented innovation.

Motoo Ueno

Executive Director

Our approach to value creation is to continue innovating to address areas of unmet medical need. As Representative Director and COO, in addition to setting the course for the Company to follow, I focus my efforts on optimizing allocation of resources and increasing employee motivation. With these efforts, along with the continuous evolution of Chugai's corporate governance, we will achieve sustainable growth and meet the expectations of all stakeholders.

Tatsuro Kosaka

Executive Director

1976 Joined the Company
1995 Deputy President, Chugai Pharma Europe Ltd. (U.K.)
2000 General Manager of Business Strategy Planning Office
2002 Vice President & General Manager of Corporate Planning Dept.
2004 Senior Vice President & General Manager of Corporate Planning Dept.
2005 Senior Vice President & Deputy Managing Director of Sales & Marketing Group
Senior Vice President & Head of Strategic Marketing Unit
2008 Senior Vice President & Head of Lifecycle Management & Marketing Unit
2010 Director & Executive Vice President, Head of Lifecycle Management & Marketing Unit
2011 Director & Executive Vice President
2012 Representative Director, President & COO (to present)

* **Independent** Independent officer pursuant to Article 436-2 of the regulations of Tokyo Stock Exchange, Inc.

Directors

The business philosophy of "Innovation all for the patients" is deeply embedded in the consciousness of Chugai employees, and is one of our strengths. By continuously innovating with an eye on the future and fostering an environment that enables employees to fulfill their potential, we strive earnestly to enhance qualitative and non-financial value as well as quantitative value. We also place importance on dialogue with investors, and will continue our efforts to ensure that Chugai is evaluated properly, and that our corporate value is reflected in shareholder value.

Yoshio Itaya

Executive Director

2003 Joined the Company
Senior Specialist of Finance & Accounting Div.
2006 Vice President and General Manager of Finance & Accounting Div.
2007 Vice President and General Manager of Corporate Planning Dept.
2010 Senior Vice President and General Manager of Finance Supervisory Div. and Finance & Accounting Dept.
2011 Senior Vice President, CFO, General Manager of Finance Supervisory Div. (to present) and Finance & Accounting Dept.
2012 Director, Executive Vice President & CFO (to present)

1979 Director, Keio University Hospital Blood Center
1991 Professor of Internal Medicine, Keio University School of Medicine
2001 Director, Keio University Center for Integrated Medical Research
2005 Dean, Keio University School of Medicine
2009 Professor Emeritus, Keio University (to present)
Professor, Department of Life Science and Medical Bioscience of Graduate School of Advanced Science and Engineering of Faculty of Science and Engineering, Waseda University
2010 Outside Director of the Company (to present)
2013 Vice-Chairman of the Board of Directors, Musashi Academy of the Nezu Foundation (to present)
2014 Specially Appointed Professor, Waseda University (to present)

As Chugai grows, it is important for the Company to continue putting patients first while remaining sensitive to the needs of medical providers. As a doctor myself, I will put my wealth of experience in research to work in providing strong support for the translational research that Chugai is advancing, including support for the cultivation of researchers with original ideas, so that the Company can continue to produce safe and innovative drugs from both basic research and clinical research.

Yasuo Ikeda

Vice-Chairman of the Board of Directors, Musashi Academy of the Nezu Foundation, Specially Appointed Professor, Waseda University, Professor Emeritus, Keio University

Outside **Independent** *

The strategic alliance with Roche is a unique arrangement that combines cooperation and competition. Development and deepening of dialogue between Chugai and Roche at every level is the source of our long-term competitive edge. My main role at Chugai is to perform my functions from the perspective of general shareholders, and to support a proactive stance toward sustained growth with sound business execution. But I also maintain a close watch to make sure that any concerns about these aspects are corrected without hesitation.

Masayuki Oku

Chairman, Sumitomo Mitsui Financial Group, Inc.

Outside **Independent** *

1968 Joined The Sumitomo Bank, Ltd. (SB)
1994 Director, SB
1998 Managing Director, SB
1999 Managing Director and Managing Executive Officer, SB
2001 Senior Managing Director and Senior Managing Executive Officer, SB
Senior Managing Director and Senior Managing Executive Officer, Sumitomo Mitsui Banking Corporation (SMBC)
2002 Senior Managing Director, Sumitomo Mitsui Financial Group, Inc. (SMFG)
2003 Deputy President, SMBC
2005 Chairman, SMFG (to present)
President and Chief Executive Officer, SMBC
2015 Outside Director of the Company (to present)

Directors

From my experience working and serving in management in the automotive and non-life insurance industries, I believe that raising the level of customer satisfaction and winning their trust by providing quality products and services is essential for the steady enhancement of corporate value. I'm a rank outsider in the pharmaceutical industry, but I will fulfill my role and responsibilities as an independent outside director to help Chugai achieve sustained growth through its contribution to patients.

Yoichiro Ichimaru

Executive Advisor, TOYOTA MOTOR CORPORATION
Representative Director,
Chairman, Aioi Nissay Dowa Insurance Co., Ltd.

Outside **Independent** *

1971 Joined Toyota Motor Sales Co., Ltd.
2001 Member of the Board of Directors, TOYOTA MOTOR CORPORATION ("TMC")
2003 Managing Executive Officer, TMC
2005 Senior Managing Director, TMC
2009 Representative Director, Executive Vice President, TMC
Corporate Auditor, Aioi Insurance Co., Ltd.
2010 Corporate Auditor, Aioi Nissay Dowa Insurance Co., Ltd.
2011 Senior Corporate Auditor, TMC
2015 Executive Advisor, TMC (to present)
Representative Director, Chairman, Aioi Nissay Dowa Insurance Co., Ltd. (to present)
2017 Director of the Company (to present)

1990 Joined Deutsche Lufthansa AG
1994 Member of the Executive Board and CEO of Passenger Transport Division, Deutsche Bahn AG
2004 CEO, Swiss International Air Lines AG
2009 Deputy Chairman of the Executive Board, Deutsche Lufthansa AG
2011 Chairman of the Executive Board and CEO, Deutsche Lufthansa AG
2014 Chairman of the Board of Directors, ROCHE HOLDING LTD (to present)
2017 Director of the Company (to present)

I believe that mutual respect, integrity and a long-term orientation are the basis of management, and that a culture that supports risk-taking and fosters passion in the business is also important.

With this in mind, as a newcomer to the Board I intend to promote new ways of thinking by asking "naïve" questions. I will strive to ensure that Chugai remains an innovative, science-driven company that provides value to patients and all other stakeholders.

Christoph Franz

Chairman of the Board of Directors, ROCHE HOLDING LTD
Member of the Board, Stadler Rail AG (Switzerland)
Member of the Board, Zurich Insurance Group Ltd.

Audit & Supervisory Board Members

Shunji Yokoyama
(full-time)

1981 Joined the Company
2002 General Manager of Clinical Research Dept. 1
2004 Vice President, General Manager of Clinical Research & Development Div.
2007 Vice President, Deputy General Manager of Corporate Regulatory Compliance & Quality Assurance Div. and Head of Drug Safety Unit
2009 Vice President, General Manager of Drug Safety Div.
2011 Vice President, Head of Quality & Regulatory Compliance Unit and General Manager of Drug Safety Div.
2013 Senior Vice President, Head of Regulatory & Quality Management Unit
2015 Audit & Supervisory Board Member (to present)

Mamoru Togashi
(full-time)

1982 Joined the Company
2004 President, CBS Co., Ltd.
2006 General Manager of Corporate Communications Dept.
2009 General Manager of Human Resources Management Dept.
2010 Vice President, General Manager of Human Resources Supervisory Div. and General Manager of Human Resources Management Dept.
2017 Audit & Supervisory Board Member (to present)

* **Independent** Independent officer pursuant to Article 436-2 of the regulations of Tokyo Stock Exchange, Inc.

Chugai aims to create transformational medicines with genuine value and deliver them to patients without fail. To do so, we must continue to generate innovation with a willingness to push the boundaries of what is possible. I see my role as supporting innovation, expanding access to medicines and strengthening compliance, and I am constantly looking to provide the best returns to shareholders, including minority shareholders.

Daniel O'Day

CEO of Roche Pharmaceuticals Division,
Member of the Corporate Executive Committee,
Member of the Genentech (USA) Board of Directors

1987 Joined Roche Pharma USA
1995 Director Human Resources, Roche Pharma U.S.A.
1996 Director Product Marketing, Roche Pharma U.S.A.
1998 Business Unit Head, Arthritis and Respiratory, Roche Pharma Headquarters
1999 Lifecycle Leader Tamiflu, Roche Pharma Headquarters
2001 Head Corporate Planning, Nippon Roche K.K.
2003 General Manager, Roche Pharma Denmark
2006 President & CEO of Roche Molecular Diagnostics
2010 COO of Roche Diagnostics Division and Member of the Corporate Executive Committee
2012 COO of Roche Pharmaceuticals Division, Member of the Roche Corporate Executive Committee and Member of the Genentech Board of Directors (to present)
2013 Director of the Company (to present)
2016 CEO of Roche Pharmaceuticals Division, Member of the Roche Corporate Executive Committee and Member of the Genentech Board of Directors (to present)

1985 Abbott Diagnostic Division – Paris, France
Scientific Manager
1989 Abbott Pharmaceutical Products – Chicago, U.S.A.
Marketing Research Analyst
1990 Abbott Pharmaceutical Products – New York, U.S.A.
Neuroscience Sales Representative
1991 Sanofi Winthrop – New York, U.S.A.
Director of Strategic Marketing, Diagnostic Imaging
1994 Sanofi Winthrop – Paris, France
Director of Neuroscience Business Unit
1996 Merck Sharp & Dohme Paris, France
Director of Marketing Research and Strategic Planning
1997 Merck Sharp & Dohme Israel Managing Director
2000 Vice-President Arthritis and Analgesia Franchise, Merck & Co. Inc. U.S.A.
2002 Merck Sharp & Dohme Paris, France
Director of Rheumatology Division
2006 Merck Sharp & Dohme Paris, France
Director of Cardiovascular Division
2007 Roche Pharma, France
General Manager
2012 Head of Roche Partnering, Member of the Roche Enlarged Corporate Executive Committee (to present)
Director of the Company (to present)

Competition in global R&D is likely to intensify further, so I believe that in addition to thorough management of R&D investment, promoting an ambitious mindset toward innovation and close collaboration among organizations will be key. I will focus on selecting the best people for each role and on creating environments in which people are empowered and excel through teamwork.

Sophie Kornowski-Bonnet

Head of Roche Partnering and Member of the Roche Enlarged Corporate Executive Committee

Hisashi Hara

General Representative of the Asia-Pacific region, The Law Office of Nagashima Ohno & Tsunematsu

Outside

1975 Registered as an attorney-at-law (Dai-ichi Tokyo Bar Association)
Joined Nagashima & Ohno (currently, Nagashima Ohno & Tsunematsu)
1983 Partner, Nagashima & Ohno
1991 Managing Partner of Nagashima & Ohno
2006 Chairman, Nagashima Ohno & Tsunematsu
Administrative Council Member of the University of Tokyo
2008 Outside Corporate Auditor, JPMorgan Securities Japan Co., Ltd.
2012 Outside Audit & Supervisory Board Member (to present)
2013 General Representative of the Asia-Pacific region, The Law Office of Nagashima Ohno & Tsunematsu (to present)

Takaaki Nimura

Representative of Nimura Certified Public Accountant Office, Outside Director and Chairman of Audit Committee of Sony Corporation

Outside **Independent**

1974 Joined Arthur Young & Co., Tokyo Office
1980 Seconded to Asahi & Co., Osaka Office
1983 Seconded to Arthur Young & Co., Los Angeles Office
1989 Partner, Asahi Shinwa & Co.
1993 Joined Showa Ota & Co.
1997 Senior partner, Showa Ota & Co.
2008 Executive Board Member, Ernst & Young ShinNihon LLC
2010 Established Nimura Certified Public Accountant Office
2012 Outside Director, Sony Corporation (to present)
2016 Outside Audit & Supervisory Board Member (to present)

Executive Committee Members Not on the Board of Directors (As of April 1, 2017)









Yasushi Ito

Senior Vice President
Head of Project & Lifecycle Management Unit
In charge of Regulatory & Quality Management, Clinical Development, Drug Safety and Medical Affairs

2004 Joined the Company; General Manager of Development Planning Dept.
2005 General Manager of Targeted Disease Area Dept.
2007 General Manager of Clinical Research Planning Dept.
2009 General Manager of Medical Science Dept. and Clinical Research Planning Dept.
Vice President and General Manager of Clinical Development Div.
2015 Head of Project & Lifecycle Management Unit
2016 Senior Vice President and Head of Project & Lifecycle Management Unit (to present)

Hisafumi Okabe

Senior Vice President
In charge of Research and Translational Clinical Research

1991 Joined Nippon Roche K.K.
2002 Joined the Company; General Manager of Pharmaceutical Research Dept.
2007 Director, Forerunner Pharma Research Co., Ltd. (to present)
2009 General Manager of Research Div.
Head, C&C Research Laboratories (Korea) (to present)
2012 Director and COO, Chugai Pharmabody Research Pte. Ltd. (Singapore) (to present)
2017 In charge of Research and Translational Clinical Research (to present)

Susumu Kato

Senior Vice President
General Manager of Marketing & Sales Div.

1979 Joined the Company
2003 General Manager of Pharmaceutical Dept. 2, Hiroshima Branch
2006 General Manager of Branch Support Dept.
2007 General Manager of Sales Coordination Dept.
2009 Vice President and Supervisory Branch Manager of Osaka Branch
2011 Vice President and Supervisory Branch Manager of Tokyo Branch 1
2015 Senior Vice President and General Manager of Marketing & Sales Div. (to present)

Hitoshi Kuboniwa

Senior Vice President
In charge of Pharmaceutical Technology

1981 Joined the Company
2007 General Manager of Formulation Technology Research Dept.
2009 Department Manager of CMC Development Dept.
2011 Department Manager of PT Planning Dept.
2012 Vice President and Department Manager of PT Planning Dept.
Vice President and General Manager of Pharmaceutical Technology Div.
2014 Senior Vice President and General Manager of Pharmaceutical Technology Div.
2016 Senior Vice President (to present)

Shinya Unno

Senior Vice President
General Manager of Human Resources Supervisory Div., in charge of General Affairs and Secretarial

1999 Joined the Company
2005 General Manager of Corporate Planning Dept.
2006 Vice President and General Manager of Corporate Planning Dept.
2007 Vice President and Deputy General Manager of Sales Div.
2010 Senior Vice President, General Manager of Corporate Planning Supervisory Div. and General Manager of Corporate Planning Dept., in charge of Human Resources Supervisory Div., General Affairs and Secretarial
2013 Senior Vice President and General Manager of Corporate Planning Dept., in charge of Human Resources Supervisory Div., General Affairs and Secretarial
2014 Senior Vice President and General Manager of Corporate Planning Dept., in charge of Human Resources Supervisory Div., General Affairs, Secretarial and Legal
2016 Senior Vice President, in charge of Corporate Planning, Human Resources Supervisory Div., General Affairs, Secretarial and Legal
2017 Senior Vice President and General Manager of Human Resources Supervisory Div., in charge of General Affairs and Secretarial (to present)

Keiji Kono

Senior Vice President
Global Health Policy, External Affairs

2010 Joined the Company; Senior Advisor
Vice President and Deputy Head of Lifecycle Management Unit
Vice President, Deputy Head of Lifecycle Management & Marketing Unit and Department Manager of Lifecycle Management Dept. 2
2012 Vice President and Deputy General Manager of Marketing & Sales Div.
2013 Vice President and General Manager of IT Supervisory Div.
2015 Vice President in charge of Global Health Policy and General Manager of IT Supervisory Dept.
2017 Vice President, Global Health Policy, External Affairs
Senior Vice President, Global Health Policy, External Affairs (to present)

Osamu Okuda

Senior Vice President
General Manager of Corporate Planning Dept.

1987 Joined the Company
2009 Department Manager and Lifecycle Leader of Lifecycle Management Dept. 2
2011 President, Roche Products (Ireland) Limited
2013 Head of Oncology Unit of Marketing & Sales Div.
2014 Vice President and Head of Oncology Unit of Marketing & Sales Div.
2015 Vice President and General Manager of Corporate Planning Dept.
2017 Senior Vice President and General Manager of Corporate Planning Dept. (to present)

Junichi Ebihara

Senior Vice President
Head of Legal Department

2014 Joined the Company
Vice President and General Manager of Legal Dept.
2017 Senior Vice President and General Manager of Legal Dept. (to present)

Yoshiaki Ohashi

Vice President
Head of Quality & Regulatory Compliance Unit and General Manager of Drug Safety Div.

1988 Joined the Company
2004 Department Manager, Quality & Regulatory Compliance Dept.
2009 Department Manager, Drug Safety Coordination Dept.
2011 Global PV Head (to present), Pharmacovigilance Manager
2013 General Manager of Drug Safety Div.
2015 Vice President, Head of Quality & Regulatory Compliance Unit, General Manager of Drug Safety Div. (to present) and General Marketing Compliance Officer (to present)

Corporate Governance That Makes Our Corporate Philosophy a Reality

Message from the Board of Directors

Chugai's mission is to dedicate itself to adding exceptional value through the creation of innovative medical products and services for the benefit of the medical community and human health around the world. Chugai's basic management objective is to become a top pharmaceutical company. Even though a member of the Roche Group, Chugai maintains its managerial autonomy and independence as a separate listed company and will constantly strive to perfect its corporate governance to fulfill the mandate of its many stakeholders appropriately and fairly.

To clarify our corporate governance initiatives and policies and fulfill our obligation to explain them to shareholders and investors, in November 2015 the Board of Directors approved and instituted the Chugai Pharmaceutical Co., Ltd. Basic Corporate Governance Policy. Guided by this policy, we intend to review the status of our corporate governance and improve it on an ongoing basis. We are also implementing all principles of the Corporate Governance Code of the Tokyo Stock Exchange, and will periodically conduct verification to enhance our corporate governance.

We will continue to fulfill our responsibilities to all stakeholders while sustaining growth and increasing our corporate value. We request the support of our stakeholders in these efforts.

Detailed Report →Page 88

- Basic Approach
- Management Decision-Making, Execution and Oversight of Business Operations
- Reasons for Election of Outside Directors and Outside Audit & Supervisory Board Members
- Independence Standards
- Introduction of Outside Perspectives
- Support System for Outside Directors and Outside Audit & Supervisory Board Members
- Auditing System
- Officer Remuneration
- Maintenance and Management of Internal Controls
- Addressing the Corporate Governance Code
- Disclosure Policy
- Organization

Related Items

- Message from the CEO →Page 4
- Board of Directors, Audit & Supervisory Board and Executive Committee Members →Page 36
- Opinions of Stakeholders →Page 48
- Message from the Deputy Chairman →Page 50
- Interview with the CFO →Page 59

PDCA Cycle to Evolve Corporate Governance

Approach to Enhancing and Evolving Corporate Governance

Chugai is focusing on perfecting corporate governance. In keeping with our goal of increasing corporate value, we believe that raising effectiveness is important because simply creating systems and mechanisms is insufficient. While we believe that our current corporate governance is effective to a certain extent, we will constantly endeavor to strengthen it with a plan – do – check – act (PDCA) cycle.

For example, Chugai appoints at least two independent outside directors to introduce outside perspectives, and in November 2015 formulated and disclosed 12 Independence Standards for outside officers. The Board of Directors also seeks to revise its agenda from time to time, in ways such as sharing information from dialogue with shareholders and investors, and examining the voting results for proposals made at the General Meeting of Shareholders.

Improvements and Enhancements in 2016

Chugai Pharmaceutical Co., Ltd. Basic Corporate Governance Policy is our basis for verifying all the principles stipulated by the Corporate Governance Code of the Tokyo Stock Exchange. We announced that Supplementary Principle 4.11.3: Summary of the Results of Analysis and Evaluation of the Overall Effectiveness of the Board of Directors as of March 31, 2016 had not been fully implemented, but would be addressed during 2016.

In 2016, we therefore gathered the opinions of directors and outside directors, Audit & Supervisory Board members, and external experts (attorneys). These opinions formed the basis for a self-assessment survey of each director, which was used to evaluate the effectiveness of the Board of Directors. We identified issues, conducted multiple analyses and studies with external experts, determined how the Board of Directors could improve, and moved to implement enhancements.

External Recognition

In 2016, Chugai was selected as a constituent of the Dow Jones Sustainability Asia Pacific Index for the third consecutive year. A total of 600 leading companies in Asia applied for inclusion and 146 were selected, including 68 Japanese companies.

In addition, since 2003 Chugai has been continuously selected as a constituent of the FTSE4Good Index Series, an index for socially responsible investment (SRI). As of February 28, 2017, a total of 843 companies were listed, of which Chugai was one of 158 Japanese companies.

Chugai has been selected as a component of these global SRI indices in recognition of its proactive initiatives from the standpoint of corporate sustainability in areas including the environment, society and governance. Chugai will continue to fulfill its social responsibility as a healthcare company.

MEMBER OF
Dow Jones Sustainability Indices
In Collaboration with RobecoSAM

FTSE4Good

One main area of improvement was ensuring time for directors to study board meeting materials by making sure the materials were delivered at least four business days before meetings to enhance the ability of the board to deliberate. Another area was increasing opportunities to provide information for outside directors and Audit & Supervisory Board members, which we addressed with initiatives such as holding liaison meetings for outside officers and conducting a facility tour. The tour was of the Ukima Plant, following a board meeting at the facility, for which the board had allocated capital investment at a meeting in the previous year (October 2015). It was a good chance to follow up on the capital investment, and was also an effective means of providing information to outside directors and Audit & Supervisory Board members.

Main Initiatives for Analyzing and Evaluating the Effectiveness of the Board of Directors

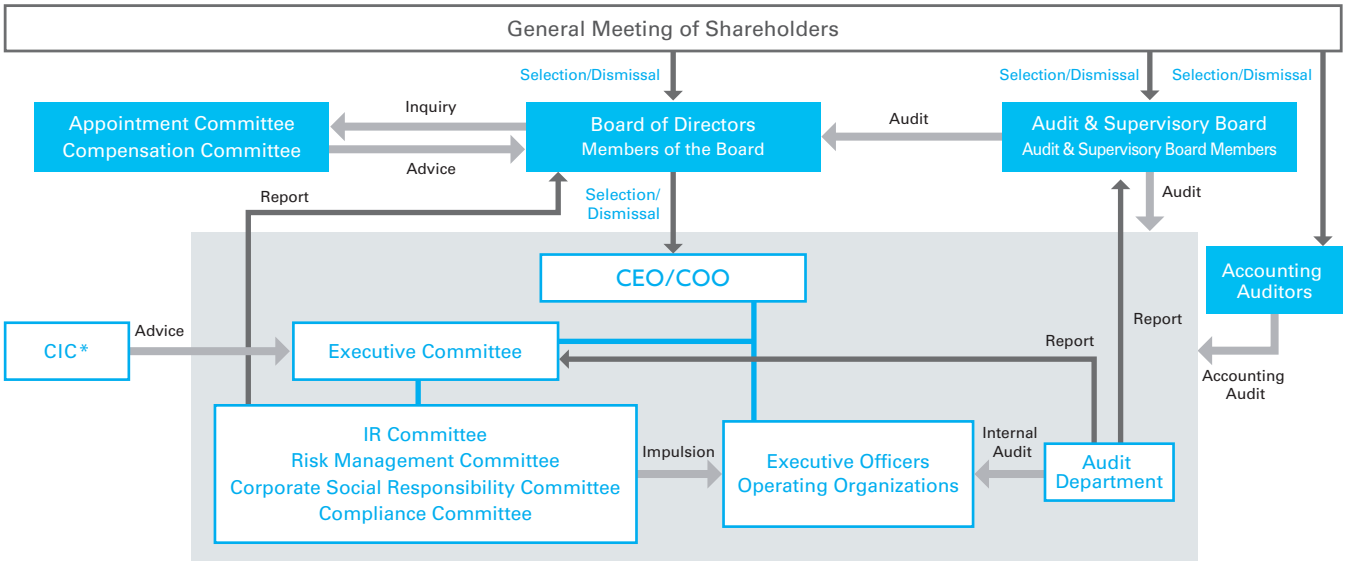
- Rigorously ensured the delivery of board meeting materials at least four business days before meetings
- Increased opportunities to provide information for outside directors and Audit & Supervisory Board members by holding liaison meetings for outside officers and conducting a facility tour
- Better explained our policy for strategic shareholdings by disclosing it in our Corporate Governance Report
- Enhanced review of dialogue with shareholders and investors by sharing information at board meetings

Chugai's Corporate Governance in 2016

Organizational form		Company with an Audit & Supervisory Board
Management and execution		Separated
Introduction of external perspectives		Implemented 3 outside directors (2 of whom are independent directors), 2 outside Audit & Supervisory Board members (1 of whom is independent), and 2 non-executive directors Appointment Committee and the Compensation Committee established as advisory boards CIC (Chugai International Council) established
Board of Directors	Composition	10 members (5 executive directors, 3 outside directors (2 of whom are independent) and 2 non-executive directors)
	Number of meetings in 2016	9
Executive Committee	Composition	Management Strategy Committee:[1] 14 members (5 directors, 7 executive officers (excluding directors) and 2 Audit & Supervisory Board members) Business Operation Committee:[2] 12 members (3 directors, 7 executive officers (excluding directors) and 2 Audit & Supervisory Board members)
	Number of meetings in 2016	Management Strategy Committee: 33 Business Operation Committee: 16
Appointment Committee	Chairperson	Outside director
	Composition	5 members (1 director, 3 outside directors and 1 person with experience sitting on an appointment committee)
	Number of meetings in 2016	2
Compensation Committee	Chairperson	Person with experience as an outside director of Chugai
	Composition	3 members (1 outside director, and 2 persons with experience as an outside director of Chugai)
	Number of meetings in 2016	3
Audit & Supervisory Board	Composition	4 members (2 full-time Audit & Supervisory Board members and 2 outside Audit & Supervisory Board members including 1 independent Audit & Supervisory Board member)
	Number of meetings in 2016	12 (including 2 extraordinary meetings)
Internal committees		Established IR Committee, Risk Management Committee, Corporate Social Responsibility Committee and Compliance Committee

1. Management Strategy Committee agenda items: Largely fundamental strategies and policies relevant to overall management
2. Business Operation Committee agenda items: Specific policies and other items that are important for business execution

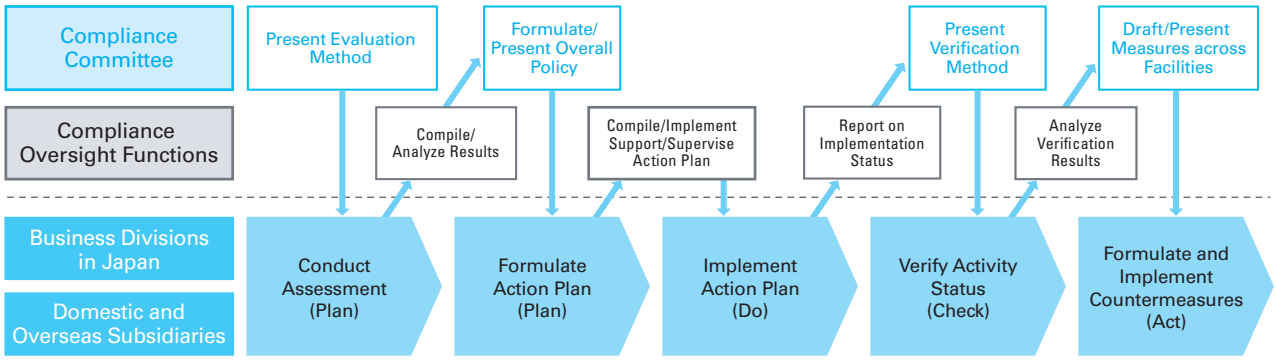
Chugai's Corporate Governance System



* Chugai International Council (CIC): Chugai established the CIC as an advisory body composed of Japanese, American and European industry leaders and professionals in various sectors to respond accurately to changes in the global business environment and conduct business in an appropriate manner, and to provide advice to further enhance decision-making.

Initiatives to Establish a Global Compliance System

Accelerating globalization is diversifying businesses and the people they employ. Compliance is more than just following laws and regulations. It is also essential that the judgment and actions of pharmaceutical companies be proper and appropriate based on societal norms and values. Chugai Pharmaceutical urgently needed to rebuild its compliance system on a global level to properly and appropriately address increasingly diverse and stringent regulatory regimes including the extraterritorial application of anti-monopoly and antitrust laws. Therefore, we began restructuring our system in 2016. We have been promoting self-directed compliance in each of our departments and divisions, and are now implementing more broadly applicable global policies than before at all Chugai Group subsidiaries. In addition, we integrated the compliance functions that had been distributed among several committees and reorganized them as the Compliance Committee within the corporate management committees for a compliance management system more directly linked to management. Under this system, the Compliance Committee and the compliance oversight functions will be the driving force in conducting the instruction, support and education required in each division or department, and will implement a standardized PDCA cycle throughout the Chugai Group. We aim to foster and establish a compliance culture throughout the Group during the three years of our mid-term business plan.



Relationship with Roche and Ensuring the Rights and Equal Treatment of Shareholders

Roche, the parent company of Chugai, owns 59.89 percent of Chugai's outstanding shares based on the strategic alliance agreement between the two companies. Roche and Chugai have agreed to cooperate in maintaining the listing of Chugai's common stock on the First Section of the Tokyo Stock Exchange.*

* The Tokyo Stock Exchange requires delisting if the ratio of tradable shares to listed shares is less than 5 percent.

The aim of this alliance is to establish a new business model that differs from conventional corporate acquisitions and joint ventures. Although ROCHE HOLDING LTD includes Chugai in its consolidated accounts, Chugai functions as an independent listed company and makes all of its own management decisions based on the principle of self-governance. Chugai believes that autonomy and diversity are key to generating innovation, that maintaining its independent management brings diversity to the Roche Group, and that the pharmaceuticals it creates as a result contribute to all stakeholders, including patients and minority shareholders. In its business dealings with the Roche Group, Chugai conducts all transactions fairly using third-party prices to protect the interests of minority shareholders.

As of April 1, 2017, three of Chugai's ten directors are from the Roche Group. However, they do not comprise a majority of the Board of Directors, and thus Chugai considers its management independence to be secure. Chugai will continue to manage its business with autonomy and independence as a publicly listed company.

Chugai believes that securing substantially equal treatment of shareholders is very important. We therefore emphasize giving due consideration to minority and foreign shareholders and to maintaining an environment that allows them to exercise their rights.

Therefore, recognizing that business plans are a commitment to shareholders, Chugai promotes the disclosure of a variety of information and constructive dialogue with shareholders and investors. Directors and executive officers make every reasonable effort to meet requests for interviews from shareholders and investors.

Restrictions on Roche's Shareholding

Period	Maximum Shareholding
Oct. 1, 2002 – Sep. 30, 2007	50.1%
Oct. 1, 2007 – Sep. 30, 2012	59.9%
Oct. 1, 2012 and thereafter	Cooperate in maintaining Chugai's listing

Dr. Severin Schwan,
Roche Group CEO

Together, Chugai and Roche deliver value to patients and stakeholders around the world

In 2017, we celebrate the 15th anniversary of the strategic alliance between Roche and Chugai. The value delivered by both companies since 2002 demonstrates the success of our partnership.

A unique business model that respects the independence of Chugai's management and research activities adds diversity to the Roche Group and delivers tremendous value to patients around the world. Over the past five years, Actemra, a blockbuster product created by Chugai, became one of the key growth drivers for Roche globally. Also notable is that Chugai contributes with 5 breakthrough therapy designations to the industry-leading number of 14 such designations obtained by the Roche Group.

As the environment in which we operate changes dramatically and competition intensifies, focus on science and breakthrough innovation is becoming more important than ever. I am confident that together, Chugai and Roche, will continue to deliver new hope to patients worldwide through continuous innovation, and create value for all stakeholders including the minority shareholders under the current business scheme.

Making the Most of Employee Talent

Detailed Report →Page 94

- Human Resource Strategy
- Diversity Management
- Talent Management System
- Personnel Systems
- BCG and Human Rights Training

Related Items

- Interview with the CFO →Page 59

* The Chugai Group upholds its mission statement – consisting of its mission, its core values and its envisioned future – in order to be a business that meets a diverse array of stakeholder expectations as it realizes its corporate responsibility to society. It is on the basis of this mission statement that the Chugai Group conducts its business operations.

Chugai's Human Resource Strategy

Based on our conviction that people are an invaluable asset in generating a company's growth and development, we have identified the type of people Chugai is seeking and have been creating the various measures and systems that form our human resource strategy for becoming a top pharmaceutical company.

As we carry out these activities, we see two critical factors for Chugai's growth. First, as the foundation, all employees must embody Chugai's mission statement (corporate philosophy)* and act in line with the Chugai Business Conduct Guidelines (Chugai BCG), a set of specific standards for judgment and behavior. Second, in addition to planning and discussing management policies and strategies, Chugai must achieve full understanding of and support for the plans it has made so that they are implemented and take root.

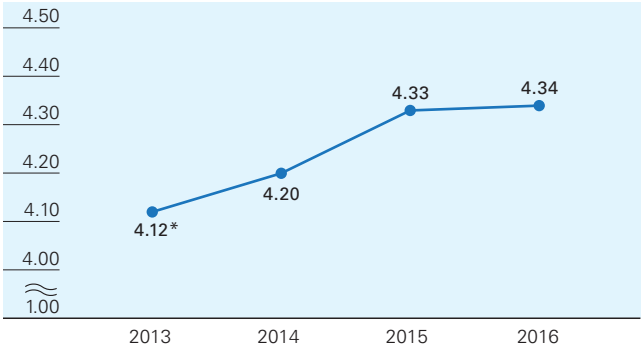
Consequently, among the various surveys we conduct, we use employee surveys to determine the degree of penetration of Chugai BCG and our strategies, which we consider important indicators directly linked to growth, and carry out a variety of initiatives to further improve the penetration.

In fact, these indicators have risen steadily in recent years. In particular, the figure for the degree of understanding in the first year of IBI 18 was high compared with the first year of ACCEL 15, our previous mid-term business plan. We consider this achievement the result of measures implemented in 2016, including the effective use of various in-house media to enhance sharing of and strategic commentary on the background of IBI 18's formulation, as well as improved workshops at each workplace that led to specific actions.

Human Resource Strategy under IBI 18

In IBI 18, which aims for further innovation to transform Chugai into a globally successful company, we foresee drastic changes in the external environment, including technological innovations and shifts in the industry's structure, and recognize that a key task will be to create an organization that leverages

Degree of Penetration of Chugai BCG
(On a 5-point scale)

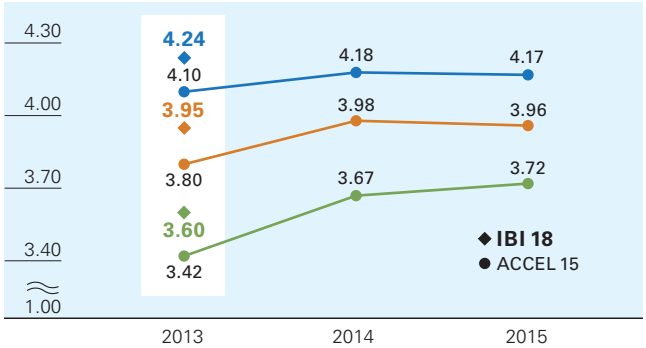


Evaluation Item

- I believe the Chugai Group is practicing CSR appropriate for a top pharmaceutical company through decisions and actions based on the Chugai BCG

* The figure for 2013 is for Japan only.

Degree of Promotion of Strategies
(On a 5-point scale)



Evaluation Item

- I understand why it is necessary to achieve the targets of ACCEL 15/IBI 18 (Understanding)
- I am doing what I must to carry out ACCEL 15/IBI 18 (Action)
- My workplace has started to change for the better due to activities for ACCEL 15/IBI 18 (Realization)

PDCA Cycle to Share and Establish Chugai's Envisioned Future, and Raise HR Capabilities

Plan	Do	Check	Act
Planning of medium-to-long-term and single fiscal year policies	Sharing/discussion at management-level meetings and individual organization meetings	Assessment	Feedback/implementation of improvement measures

A Diversity Promotion Forum is held each year for employees in charge of diversity in each department. The main theme of the December 2016 forum was "Achieving Innovation by Practicing Diversity and Inclusion."

the potential of each employee to continuously generate innovation. As Chugai's scope for providing value broadens, the level of work carried out by each employee is rising significantly, and new roles are coming into existence in line with our strategy. As such, we are focusing more strongly on human resources and accelerating our efforts to secure, develop and deploy world-class talent.

In securing and developing human resources who can function on a global level, we have begun to redesign our hiring and training policies by identifying the critical positions and personnel requirements for generating innovation and responding to environmental changes at the global top level. At the same time, we are working to build a foundation for flexible, optimal deployment of human resources throughout Chugai.

Evolution of the Productivity Improvement Project

In conjunction with these developments, under IBI 18 we have begun evolving the Productivity Improvement Project, which we have been working on since 2013 to transform the mentality in the Company to one of constant self-generated innovation. As productivity is determined by balancing inputs as the denominator and outputs as the numerator, the basic concept stressed by IBI 18 is to continue to increase the efficiency of resource inputs while using our strengths to raise both the quality and quantity of outputs.

The productivity of our marketing operations (sales per MR) in Japan has improved by more than 20 percent compared with 2013, putting us in the top tier of the domestic industry. In production, we shortened throughput time and raised efficiency in indirect operations. We are also transforming into an organization that instinctively and continuously seeks ways to improve productivity.

Next, we will focus on raising corporate value by organically linking these productivity gains with diversity and inclusion (D&I) and work-life synergy. We believe that by promoting D&I and work-life synergy to establish an environment in which everyone can maximize their potential, we can improve Chugai's organizational productivity and thus increase corporate value over the medium to long term.

While advancing these interconnected efforts, we also plan to rationally test and analyze the relationship between each productivity measure and D&I and work-life synergy.

Approach to Raising Productivity under IBI 18

Envisioned Future for the Entire Company

Output ↗↗↗

Resource inputs →

Promotion Pattern

Output ↗↗↗↗

Resource inputs ↗↗

Output ↗↗

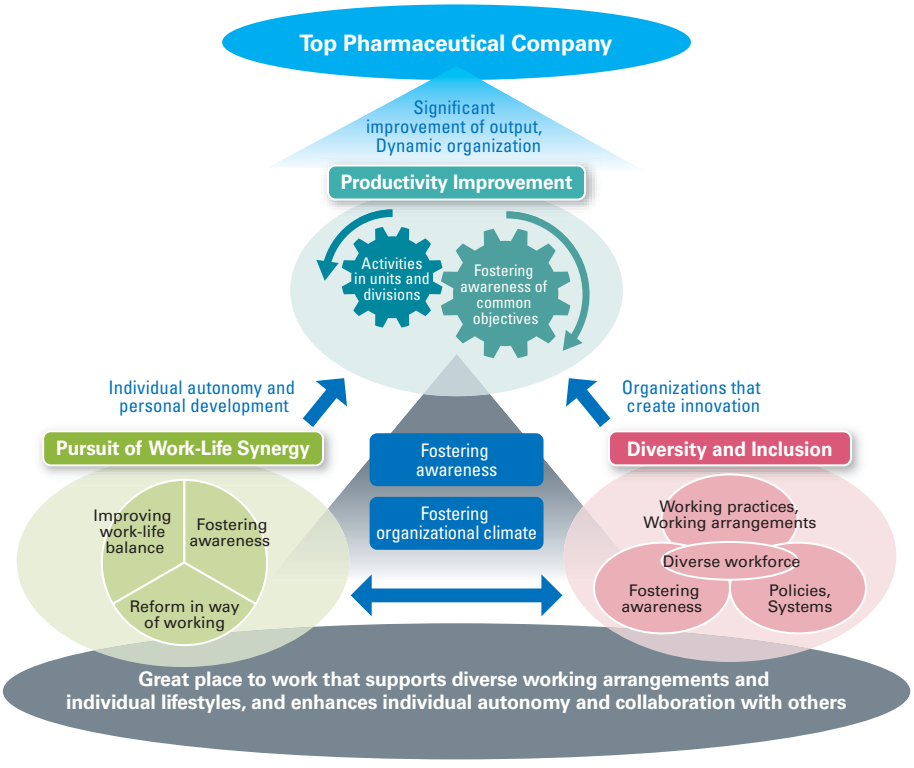
Resource inputs →

Output →

Resource inputs ↘↘

Reduction of operations, Cancellation of theme

Productivity Improvement, Work-Life Synergy and Diversity and Inclusion



Innovating in Tandem with Society

Related Items

• Research →Page 77

Creating Social Value by Pursuing Innovation

Looking at the medical community and human health around the world, there are still many areas of unmet medical need, such as infectious diseases in developing countries. However, as the difficulty of creating new drugs increases, the use of innovation to create value for society is considered crucial for effectively carrying out the long-discussed task of building a bridge from basic research to clinical development to improve access to medicines among patients in low and middle-income countries.

In these conditions, Chugai believes that continuing to create innovative medicines with its proprietary drug discovery technologies will help to improve the quality of medical care. We are working to establish a technology platform for the creation of therapeutic antibodies with world-class technologies, as well as for small and middle molecules. Backed by its outstanding drug discovery technologies, Chugai has been actively cooperating with academia and other parties as part of its open innovation, which has led to the creation of numerous innovative drugs through joint research (see pages 35-37 of Annual Report 2013 for industry-academia cooperation on Actemra).

At the same time, knowledge obtained through many years of basic research is important for identifying suitable molecular targets for drug discovery, and various initiatives for the further development of advanced research and new drug creation are being conducted cooperatively among industry, academia and government. Progress in areas such as genome research and biotechnology has substantially changed drug discovery issues. This has necessitated a new approach to industry-academia-government collaboration. Under these circumstances, Chugai's contributions to the medical community and human health around the world now include collaboration with IFReC and participation in the Global Health Innovative Technology (GHIT) Fund and Access Accelerated. (See "Social Contribution Activities" on page 84.)

At the press conference announcing the collaboration agreement with Osaka University. From left: Chugai Chairman Nagayama, IFReC Director Dr. Akira and Osaka University President Dr. Nishio

Comprehensive Collaboration with Osaka University in a New Form of Industry-Academia Cooperation

To establish a new format for open innovation, Chugai concluded a comprehensive collaboration agreement in May 2016 for advanced research in immunology with IFReC. Starting from April 2017, Chugai will provide a total of ¥10 billion to IFReC over 10 years. IFReC is a leading international research institution with many of the world's top-class principal investigators in the fields of immunology, live imaging and bioinformatics. It has been selected for the World Premier International Research Center (WPI) Initiative Program initiated by the Ministry of Education, Culture, Sports, Science and Technology of Japan (MEXT).

This comprehensive collaboration will maintain an academic environment that allows researchers at IFReC to take a long-term viewpoint in focusing on basic research originating from their own ideas, with the aim of giving back to society through the results of advanced immunology research. Chugai will have access to information on results relating to independent basic research projects at IFReC and the right of first refusal for joint research. IFReC and Chugai aim to have five to ten joint research projects in progress at all times. The collaboration is expected to elucidate the mechanism of diseases associated with immunological disorders and to identify innovative new target molecules.

This collaboration is a new form of industry-academia cooperation toward creation of social value under the concept of "university-industry co-creation" promoted by Osaka University. Combining the global top-class research in immunology at IFReC and Chugai's expertise in drug discovery research, accumulated through its innovative proprietary technologies, will eliminate the obstacles between basic research and clinical application research. We believe that this will enable us to provide patients with many innovative new drugs.

Collaboration Scheme

1. IFReC researchers will continue academic basic research without restriction.
2. Research outcomes of independent research projects[1] conducted at IFReC will be regularly disclosed (reported) to Chugai twice per year.
3. Chugai will select research projects[2] for joint research on the basis of the reports.
4. IFReC researchers will engage in joint research with Chugai.
5. During and after the final stages of non-clinical research, Chugai may engage in translational research projects independently.

1. Excluding research projects already under contract with a third party.
2. The number of joint research projects to be engaged in will be decided through discussions between IFReC and Chugai.

Opinions of Stakeholders

Message from an Expert on Corporate Ethics and CSR

Strategic CSR with a View toward the Future is Key to Rapid Growth

I believe that Chugai is steadily gaining public support through its social contribution activities such as educational and school assistance, contributing to local communities and championing para-sports, as well as through its core business.

Universities are facing the "2018 problem" of a dramatic drop in the population of 18-year-olds, and four years later corporations will be caught up in the ripple effect of a "2022 problem." Securing capable human resources will become extremely difficult, so companies will likely need to alter their forward-looking activities – such as endowed university courses and science classes for elementary, junior high and high school students – by restructuring them as strategic projects linked to publicity and hiring with an awareness of the 2022 problem. The ideal situation would be one in which prospective employees are naturally attracted to the company because contacts have been established from an early stage.

Chugai recently announced that it will build a business base in Totsuka Ward, Yokohama. Before its opens, Chugai should also consider promoting exchange activities with the local community through collaboration with local high schools and universities. I think that kind of farsighted strategic CSR will support Chugai's rapid growth on a global scale.

Yoshinari Koyama
Vice-President and Professor,
College of Economics, Kanto Gakuin University

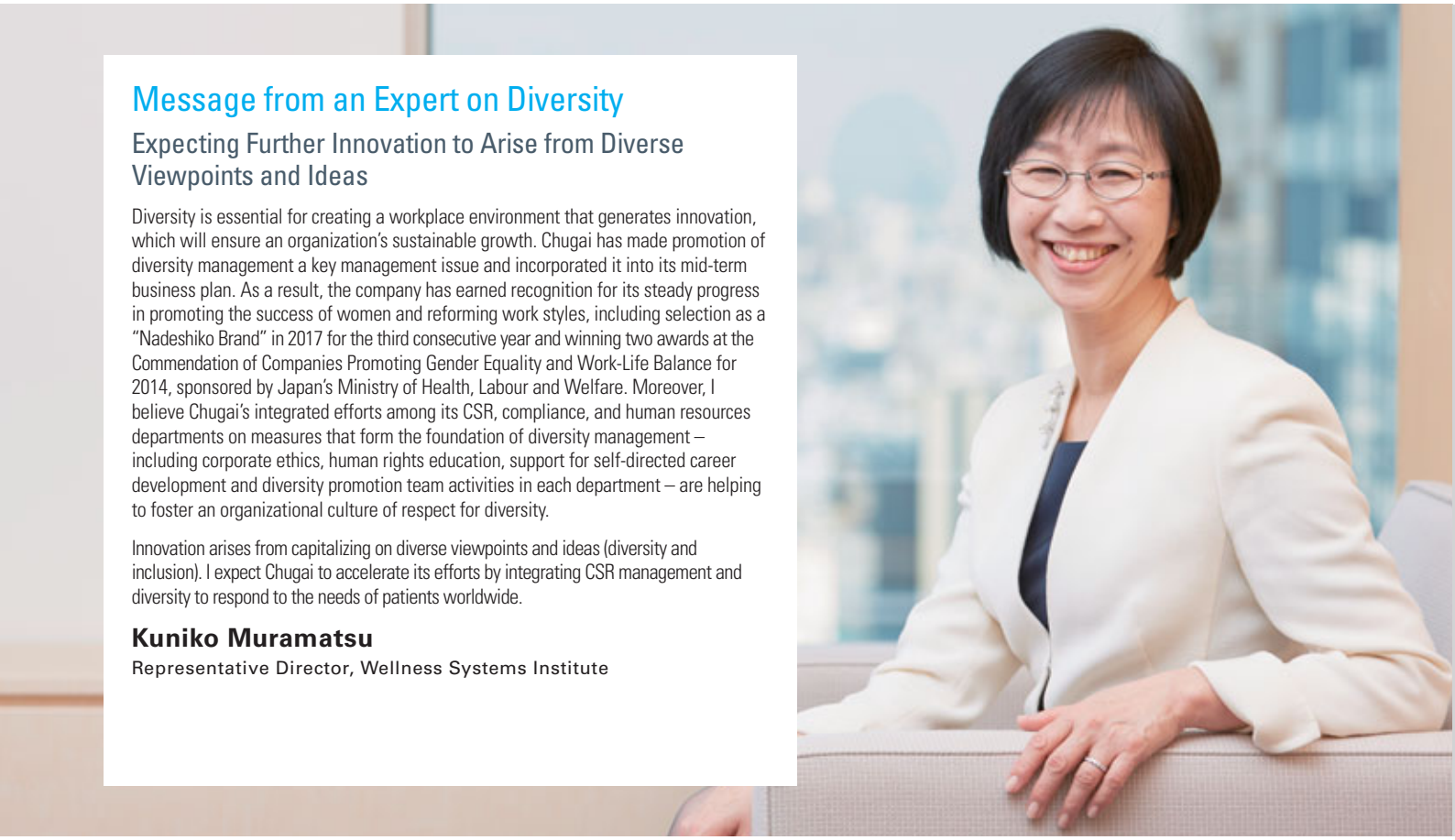
Message from an Expert on Diversity

Expecting Further Innovation to Arise from Diverse Viewpoints and Ideas

Diversity is essential for creating a workplace environment that generates innovation, which will ensure an organization's sustainable growth. Chugai has made promotion of diversity management a key management issue and incorporated it into its mid-term business plan. As a result, the company has earned recognition for its steady progress in promoting the success of women and reforming work styles, including selection as a "Nadeshiko Brand" in 2017 for the third consecutive year and winning two awards at the Commendation of Companies Promoting Gender Equality and Work-Life Balance for 2014, sponsored by Japan's Ministry of Health, Labour and Welfare. Moreover, I believe Chugai's integrated efforts among its CSR, compliance, and human resources departments on measures that form the foundation of diversity management – including corporate ethics, human rights education, support for self-directed career development and diversity promotion team activities in each department – are helping to foster an organizational culture of respect for diversity.

Innovation arises from capitalizing on diverse viewpoints and ideas (diversity and inclusion). I expect Chugai to accelerate its efforts by integrating CSR management and diversity to respond to the needs of patients worldwide.

Kuniko Muramatsu
Representative Director, Wellness Systems Institute



Message from a Medical Expert

Demonstrate Global Leadership and Innovate Continuously

Looking at the development of medical care, industry-academia cooperation is absolutely essential, because the work of academic research institutions only has value when it benefits patients. Moreover, the role of new drug manufacturers is to innovate continuously and create breakthrough therapies while fulfilling their serious responsibilities to life and health. They also need to allocate returns from these new therapies to further innovation.

In this context, Chugai Pharmaceutical brings great value to healthcare worldwide. For example, Chugai was first in the world to create a medicine that inhibits IL-6, and contributes to progress in treating rheumatoid arthritis by collecting a massive amount of post-marketing safety data and by promoting high-quality clinical research.

Chugai's technologies and knowledge of antibodies are exceptionally sophisticated, even from a global perspective, and the Company is well-known and trusted among healthcare providers worldwide for its track record in IL-6 research and development. I expect Chugai to leverage these valuable assets while focusing on industry-academia cooperation even more intensely to demonstrate leadership and contribute to healthcare and patients worldwide.

Tsutomu Takeuchi

General Director, Keio University Hospital
Professor of Internal Medicine, Division of Rheumatology,
School of Medicine, Keio University

Message from a Patient Organization Representative

Looking Forward to Innovative New Drugs for Refractory and Rare Cancers

The Pancreatic Cancer Action Network Japan was established in 2006 with the goal of creating hope for those affected by pancreatic cancer, which has had a single-digit five-year survival rate over the past 40 years. Our organization works continuously for the approval of international standard therapies in Japan to address the drug lag problem. We have submitted three petitions calling for the elimination of the drug lag, signed by a total of 100,000 people, to the Minister of Health, Labour and Welfare. As a result, the lag in new pancreatic drugs has decreased from six years, when erlotinib (Tarceva) was launched, to two today.

Ten years have passed since the Cancer Control Act was promulgated and cancer hospitals were established. Cancer treatment has made remarkable progress over that time. Treatments for refractory and rare cancers, however, have been left behind. The new Revised Cancer Control Act clearly calls for research into refractory and rare cancers, and the establishment of a consortium to promote genomic medicine was announced by Health, Labour and Welfare Minister Yasuhisa Shiozaki at Genomic Medicine for Cancer Forum 2016. Genomic medicine that selects treatments based on genomic analysis of pancreatic cancer cells will begin in 2017. I expect Chugai Pharmaceutical, a leader in biologics in Japan, to make even greater efforts to create innovative new drugs.

Yoshiyuki Majima

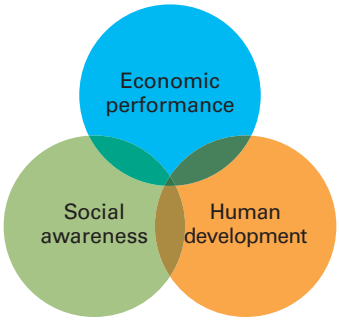
Director
Pancreatic Cancer Action Network Japan

Message from the Deputy Chairman

In an age of increasing uncertainty, we will meet the expectations of stakeholders by fusing economic performance, social awareness and human development on a higher plane.

Motoo Ueno
Representative Director & Deputy Chairman
Corporate Social Responsibility, Audit

Chugai's Concept of Corporate Value



One of the qualitative objectives of Chugai's fundamental goal of becoming a top pharmaceutical company is to be a "company that satisfies all its stakeholders and receives their active support and trust."

We have received messages from experts in various fields. I am very grateful for their comments, which showed me first-hand the rising expectations and requests that people have for Chugai. At the same time, I recognize that further innovation and value creation will be necessary for us to fulfill our mission of contributing to the medical community and human health around the world. The wide-ranging expectations for Chugai include creation of innovative new drugs, leadership in healthcare and the pharmaceutical industry, development of the next generation of young people and leaders, and co-existence with communities. In a nutshell, we are expected to be a partner in resolving society's problems. As we strive for further innovation, it is important that we collaborate with all our stakeholders and deliver value to society.

Looking at the operating environment ahead, we will enter an age of extreme uncertainty marked by such trends as a declining birth rate and aging population, the growing need to contain healthcare costs, and the emergence of disruptive technologies. In such conditions, businesses should focus in particular on the qualitative aspects of management. Corporate growth is no longer defined by profit growth alone – it is also defined by its processes and quality. At Chugai, we have developed and implemented management strategies based on the belief that our corporate value is a comprehensive product of our economic performance, social awareness and human development. We will place priority on fusing these three elements on a higher plane as we go forward.

In 2016, we established a global compliance system, enhanced the level of our human resources, took steps to advance healthy management, and promoted the linkage of productivity gains with diversity and inclusion* and work-life synergy. These are all initiatives aimed at furthering the integration of economic performance, social awareness and human development. Our management team has visited all our business sites to share our envisioned future, strategies and values. We will remain focused on efforts such as these to help our organizations become more autonomous.

Chugai will continue to create value through its own evolution and through innovation to address a higher level of unmet medical need. We appreciate your ongoing support.

* Raising the value of an organization by diverse employees accepting each other, respecting each other's opinions and following their advice.

Feature

Innovation in Chugai's Out-Licensing Strategy

51

Chugai will continue to innovate for patients, even in its out-licensing strategy, as it strives to become a top pharmaceutical company.




Global Development Led by Chugai Enables Out-Licensing That Will Maximize Value.

The first 10 years since Chugai began the strategic alliance with Roche in 2001 were the so-called first stage. During that period, to help eliminate the drug lag we focused on bringing numerous in-licensed Roche products already on the market overseas to patients in Japan as quickly as possible. Meanwhile, we steadily built global development infrastructure for providing our own products to patients around the world. We decided to conduct Chugai-managed global development of SA237 and nemolizumab in conjunction with the previous mid-term business plan, ACCEL 15. It was tough going for both development projects, on which we focused our efforts for approximately three years, but we successfully completed global clinical studies and out-licensed the compounds, which will lead to maximization of product value.

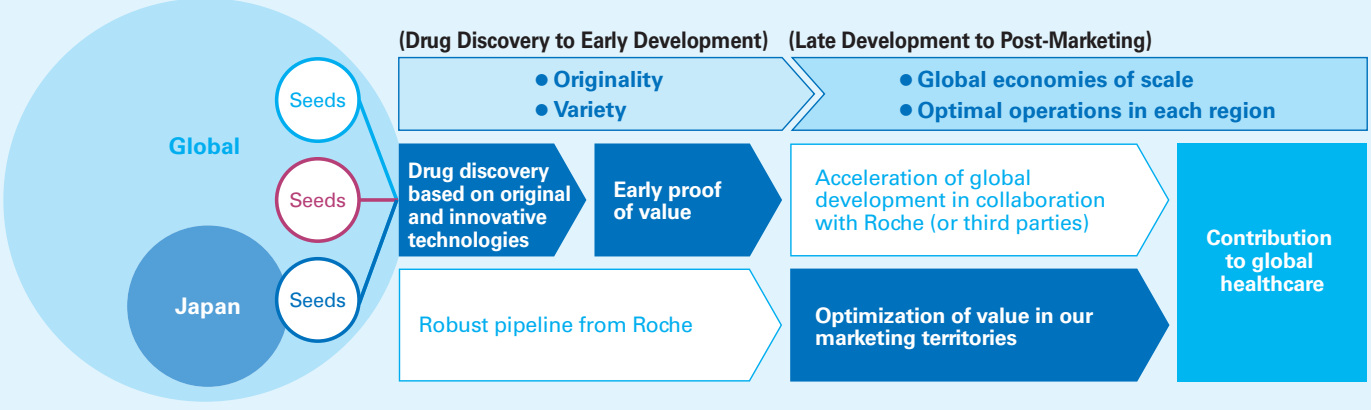
Striving for Speed and Further Value Maximization

We learned a lot through the first Chugai-managed global development projects spanning Asia, the United States and Europe. Recently, in an effort to quickly obtain early PoC[1] for products from Chugai research, we appointed a Chief Medical Officer (CMO),[2] established the Translational Clinical Research (TCR) Division,[3] and strengthened overseas operating bases by hiring local talent, among other measures, to evolve our development system globally.

Under IBI 18, Chugai is focused on improving the process for proving medical and economic value. We concentrate resources on the phase leading up to PoC. In addition to PoC data, if we can generate added value that leads to proof of medical and economic value, our licensees can assess the value of our medicines more precisely and smoothly execute more effective phase III clinical trials. Based on that idea, we have launched a specialized unit that is currently advancing initiatives for proving value in the early stages of development. Even in our out-licensing strategy, we want to contribute to patients around the world by maximizing the value of our medicines through innovative approaches.

1. PoC is a demonstration that the therapeutic effect conceived in the research stage is effective in humans.
2. In March 2014, Athos Gianella-Borradori, M.D. was appointed CMO of Chugai Pharma USA, Inc.
3. Established in 2015 to specialize in and solidify functions for early clinical development to rapidly achieve PoC globally for development projects from in-house research and quickly move them into late-stage development

Our Business Model for Generating Continuous Innovation



The difficulties of leading global development are changing our business schemes.





SA237

We Believe in the Potential of Our Medicines, and Will Never Give Up on Global Development.

SA237 is an anti-IL-6 receptor antibody, and was created using Chugai's innovative proprietary recycling antibody technology. Unlike ordinary antibodies, which bind to a target antigen once and then are cleared from the body, the recycling antibody is designed to bind to the antigen repeatedly. Since the serum level of recycling antibodies is maintained for a longer time than that of ordinal antibodies, effects can be expected for the recycling antibody with a longer dosing interval and smaller doses. With this technology, Chugai created the anti-IL-6 receptor antibody, SA237. A sustained effect with subcutaneous injection of small doses was confirmed, in line with the assumptions in basic research. Based on that finding, Chugai started full-scale clinical development of SA237.

Lifecycle Leader (currently Lifecycle Strategic Leader) Dr. Higashi recalls, "When we thought about the value that SA237 can bring to patients and its potential as a future growth driver, we wanted to conduct its global development. We had an obligation to bring this revolutionary new drug to the world." Thus began a new challenge for SA237.

Neuromyelitis Optica Selected as Indication

In 2011, a paper presented by Dr. Takashi Yamamura of the National Center of Neurology and Psychiatry influenced SA237's destiny.

Neuromyelitis optica (NMO) is designated as a rare and incurable disease for which no viable treatment options have been established. Dr. Yamamura demonstrated that since an antibody against a protein called aquaporin-4 (AQP4) is expressed at high levels in NMO patients, blocking the function of IL-6, which is essential for production of the AQP4 antibody, could improve the symptoms. Clinical studies of administration of an anti-IL-6 receptor antibody also started,

We want to help patients through drug discovery.

Sayumi Higashi, Ph.D.
Lifecycle Strategy Leader
Primary Lifecycle Management Dept.
Project & Lifecycle Management Unit

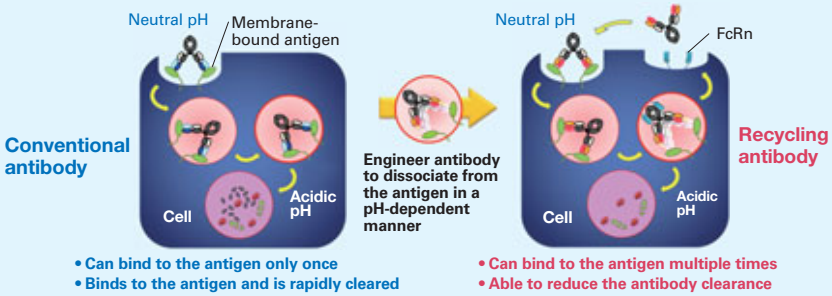
NMO

NMO is a neurological autoimmune disorder characterized by severe optic neuritis and transverse myelitis. It occurs in about 0.3 to 4.4 out of every 100,000 people, and many patients experience repeated relapses and develop visual loss and gait impairment, along with chronic pain. In Japan, NMO had been equated with multiple sclerosis (MS), but in 2005 the overexpression of the anti-AQP4 antibody was confirmed, and an anti-IL-6 receptor antibody was subsequently found to be effective.

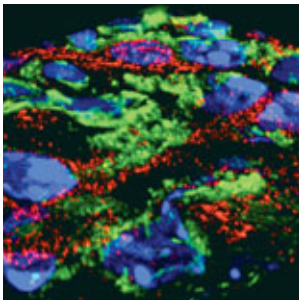
Recycling Antibody and SA237

Chugai's proprietary recycling antibody technology, applied in SA237 is designed to dissociate from the antigen under acidic conditions, and can bind to the antigen multiple times. As a result, it shows significantly longer plasma persistence and effective duration. SA237 is receiving increasing attention worldwide as a potential treatment for NMO, which does not yet have any approved remedies.

Effect of Recycling Antibody on Membrane-Bound Antigen






4. Integrated development and commercialization plan: A plan from development to launch that establishes a story showing the value of a clinical candidate.
5. Proteins necessary for the normal functioning of the body. Among the many types of cytokines, those related to immune response and inflammation are the most numerous.

We want to bring SA237 to patients in need around the world.

Takahito Yamada

Lifecycle Leader
Primary Lifecycle Management Dept.
Project & Lifecycle Management Unit

and in 2013 data showing clinical efficacy was reported for the first time. In the same year, two research groups in Germany reported the effectiveness of inhibition of IL-6 signal transduction in NMO patients. Dr. Higashi and her team deepened their contact with Dr. Yamamura, who had an existing cooperative relationship with Chugai in the neurology field, and explored the possibility of applying the higher added value of SA237 to the treatment of NMO, an area of unmet medical need. This drastically changed the direction of global development to bringing SA237 to patients worldwide.

At the time, Chugai did not have sufficient experience for the trilateral development among Japan, the United States and Europe. The team began studying the idea of boldly conducting phase III clinical trials globally, and immediately went to work preparing a clinical trial protocol and creating the structure for implementation. The team also prepared meticulously for consultation with regulatory authorities in close cooperation with subsidiaries Chugai Pharma USA and Chugai Pharma Europe. However, different trial methods were specified by U.S. and European regulatory authorities, and after much agonizing, it was decided to conduct two trials to meet the requirements of both.

To promote patient enrollment, the countries covered by the clinical trials were expanded beyond the United States and Europe to include more than 20 countries overall.

New Business Schemes Accelerate Innovation Company-wide

In June 2016, Chugai and Roche concluded a license agreement for SA237 with a focus on the CNS field. With this overseas out-license, Chugai gained positive recognition for its global development and created a path for delivering SA237 to patients around the world.

The SA237 project team accumulated valuable experience in overcoming a series of challenges and struggles. The project not only deepened knowledge in conducting Chugai-managed multinational studies, but also presented a good opportunity to directly understand global development by conducting clinical trials in various countries beyond the United States and Europe. The knowledge we have gained is already spurring change in various business schemes in the Company, and is a driving force accelerating the enhancement of Chugai's efforts in translational clinical research. Moreover, we reconfirmed the importance of explaining business value objectively at the early PoC stage to facilitate out-licensing overseas. Therefore, in IBI 18 we are working from the discovery stage to strengthen the integrated development and commercialization plan (IDCP)[4] process for proving medical and economic value.

"IL-6 is a very important cytokine[5] related to a variety of pathologies. We will continue to consider adding new indications for SA237," says Dr. Higashi. The team is continuing global development and is already looking toward the next stage. In retrospect, Dr. Higashi and Mr. Yamada (currently Lifecycle Leader) believe that they were able to overcome the project's numerous issues because they constructively faced the need to overcome those issues regardless of difficulty, supported by their commitment to bringing SA237 to patients around the world.

An unprecedented effort to deliver medicines to more patients sooner





nemolizumab (CIM331)

Chugai's First Foray into the Dermatological Field Based on a New Mode of Action

Nemolizumab is unique among Chugai's pipeline projects. An anti-IL-31 receptor A humanized monoclonal antibody targeting atopic dermatitis, it is Chugai's first foray into global development in the dermatological field.

Dr. Michiaki Tanaka was appointed global project leader for nemolizumab in September 2008. Originally a researcher in one of Chugai's laboratories, he expressed strong interest in IL-31 from the very beginning. He says he intuitively felt that "IL-31 was a very interesting cytokine because its major physiological function was to cause itching. Unlike other anti-cytokine antibodies, nemolizumab did not appear to suppress immunity. I thought it would be a medicine that could be used safely."

With the start of the project, all team members began to learn about dermatology to sharpen their expertise, which gave them a renewed understanding of the significance of atopic dermatitis, a refractory chronic disease for which no effective new treatments had been launched in a long time. Severe pruritus can significantly reduce quality of life in various ways, such as by disrupting sleep, and the skin lesions caused by the itch-scratch cycle may adversely affect a patient's physical appearance. Since many patients are children or teenagers, the condition may also interfere with studies. Because of these effects, the disease places a significant burden on patients and their families.

"There was an unmet medical need, and people's desire for a new treatment was strong. It was an unknown area for us, but listening to the views of dermatologists deepened our recognition that this was a challenge we had to take on," says Dr. Tanaka. Given that just about everything in the project was a first for the team, he set an unprecedented development policy by considering global studies from the very beginning.

An Unprecedented Development Policy Enabled a Unique Phase I Clinical Trial

At almost the same time as they transitioned to development research (see page 78 for details), Dr. Tanaka's team began to consult

We have overcome many difficulties with enthusiasm and the devoted efforts of our team members.

Michiaki Tanaka, D.V.M., Ph.D.
Lifecycle Leader
Primary Lifecycle Management Dept.
Project & Lifecycle Management Unit

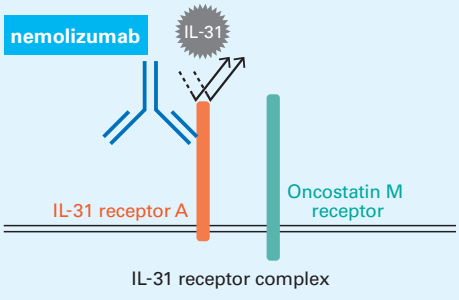
Atopic Dermatitis and Nemolizumab

Atopic dermatitis (AD) is a complex multi-factorial disease combining two types of anomalies: alteration of the epidermal barrier and hypersensitivity to allergens. It is a chronic, pruriginous, inflammatory dermatitis manifesting itself in the form of flares. Pruritus in hemodialysis patients causes systemic severe itching unassociated with inflammation, and like atopic dermatitis, causes a significant reduction in patients' quality of life.

Chugai Research Institute for Molecular Medicine searched for new molecules that could potentially be candidate targets of new drugs, and in 1999 was first in the world to succeed in cloning the IL-31 receptor. The physiological function was not well understood at the time, but in 2004, it was found that IL-31 is the cytokine that causes itching. Chugai then created nemolizumab using its proprietary antibody engineering technology ACT-Ig.[6] There are expectations worldwide for nemolizumab as an innovative new treatment that suppresses the activity of IL-31 by competitively blocking binding with its receptor.

6. Antibody half-life extending technology: pI lowering engineering of the variable region improves antibody PK by repulsion with negatively-charged vascular endothelial cell surface.

Mode of Action of Nemolizumab (IL-31 Receptor A Antibody)







7. The results from Part A were published in the *New England Journal of Medicine Online* on March 2, 2017 (EST).
8. The results from Part B were presented at the annual meeting of the American Academy of Dermatology on March 4, 2017 (EST).

Nemolizumab is a new innovative biotherapy candidate in dermatology, developed as a clearly differentiated first-in-class solution for patients with moderate-to-severe atopic dermatitis.

Thibaud Portal

Vice President
Prescription Global Business Unit
Galderma S.A.

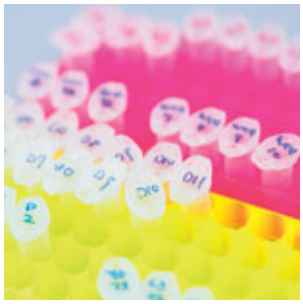
with physicians in Europe and the United States. There was little precedent for this at Chugai in early-stage projects, but the team set up an advisory panel made up of dermatology experts, and conducted market research not just in Japan, but globally. In addition, Dr. Tanaka decided to bring in patients as subjects for the phase I clinical trial in Japan. That decision was questioned inside the Company, as the standard practice until then had been to include patients from phase II of clinical development for indications other than cancer. "Since the drug had a novel mode of action, of course it was very important to fully consider safety, but because the cytokine is specifically linked to itching, no side effects appeared in animal studies," says Dr. Tanaka. In the course of internal discussions on consultation with regulatory authorities, the team received strong support from members of the Regulatory Affairs Department, who said that we should proceed since Chugai has nothing to lose by doing so. The whole nemolizumab project team then embarked on this great challenge.

"We were assuming out-licensing to third-party companies that specialize in the dermatological field," says Dr. Tanaka, who was working out a strategy to keep development of nemolizumab, a potential breakthrough drug, on track. The phase I clinical trial, which started in September 2011, was conducted in a form that anticipated phase II. The trial was divided into three parts, with healthy Japanese adults in Part A, healthy Caucasian adults in Part B, and patients in Part C. Preliminary efficacy was demonstrated with a single dose. Based on that positive result, out-licensing activities were initiated. This approach would eventually become common at Chugai, and became the basis of a new model for development in which early PoC is obtained in phase I.

Chugai's First Independent Phase II Multinational Study

The principal purpose of phase II clinical trials is to set the dosage and administration. Dr. Tanaka's team presumed that if this new drug was to be marketed globally, health authorities in other countries would want to see clinical results in European and American subjects. In addition, authorities in Japan were also starting to push for greater participation in international clinical studies. So the team embarked on Chugai's first independent multinational study.

In Europe, it was necessary to file an application in each country in which a clinical trial was to be conducted, and clinical trial plans specific to each country were also required. This meant the team had to revise the clinical trial plan repeatedly, and the study period gradually became longer. Recalling the difficulty of conducting the study in three regions, Dr. Tanaka says, "Since it was all new to us, everything was challenging. There were major differences between countries and between medical facilities, and they were hard to predict at the time, so the study ended up taking eight months longer than we had planned." Another impediment was that Chugai was not well known by local physicians, as it had no clinical trial experience in dermatology overseas. However, because the blocking of IL-31 was then a new discovery in the dermatological field, doctors eventually expressed interest and the phase II multinational study got off to a smooth start. In Part A, the main therapeutic effect was confirmed after 12 weeks of observation, and in Part B, efficacy and safety were confirmed in administration for one year. Part B has ended, and the team has published a paper[7] and has delivered a conference presentation.[8]


Bringing Nemolizumab to Patients Worldwide by Out-Licensing to Partners

After the phase II multinational study, Chugai began to out-license nemolizumab to third-party companies, concluding license agreements with Galderma Pharma S.A. of Switzerland in July 2016 and Maruho Co., Ltd. of Japan in September 2016.

Galderma is a global pharmaceutical company with a strong presence in the dermatological field. Chugai and Galderma share many ideas on disease and medicines. After seeing the results of our phase II multinational study, Galderma evaluated nemolizumab as "an innovative biotherapy candidate with first-in-class potential," which led to the agreement. Galderma will continue with clinical development in countries outside Japan and Taiwan while Chugai manufactures and supplies the investigational drug.

Maruho has an impressive track record in Japan in the dermatological field. It expressed strong interest in nemolizumab from early on, and entered into the agreement because it shares Chugai's commitment to bringing this treatment to patients as soon as possible.

The Company's Support Got Us through Many Turning Points

A Japanese phase II study of nemolizumab for pruritus in hemodialysis patients began in August 2015. Chugai plans to continue to conduct development and marketing in Japan for this indication.

This project notably features a series of firsts for Chugai. Dr. Tanaka recalls that behind them all was the strong enthusiasm and determination of the project team members, who were responsible for their respective divisions at the time. Every situation they faced was a turning point, but he says that they were able to get through each one thanks to the full support of the Company.

"These recent projects, including nemolizumab, SA237, emicizumab (ACE910) and Alecensa, were paving the way for Chugai to become a global top pharmaceutical company. While we were very fortunate with nemolizumab in many ways, such as the successful out-licensing to third-party companies, it created an opportunity for the whole company to move in a new direction, and I'm pleased that it also led to organizational transformation. We project team members are all proud to have participated in this groundbreaking project," Dr. Tanaka says emphatically. "I like it when everything is a first," he adds with a smile, promising to continue innovating for the benefit of patients.

We will apply our development experience in the field of dermatology to bring groundbreaking medicines to patients as soon as possible.

Chieko Tanaka
Project Manager
Project Management Dept.
Maruho Co., Ltd.

Galderma Pharma S.A./Galderma S.A.

GALDERMA

Headquartered in Switzerland, Galderma is a pharmaceutical company specializing in dermatology. Founded in 1981, the company now has a presence in 100 countries where it markets an extensive product portfolio to treat a range of dermatological conditions. The company partners with healthcare providers around the world to meet the skin health needs of people throughout their lifetime. Galderma is a leader in research and development of scientifically-defined, innovative medical solutions for the skin, hair and nails.

Maruho Co., Ltd.

maruho

Maruho is headquartered in Osaka and conducts research and development, manufacturing and commercialization of prescription pharmaceuticals. Founded in 1915, the company had 1,398 employees as of September, 30, 2016 and net sales of ¥70.1 billion for the fiscal year ended September 30, 2016. Pursuing its long-term corporate vision of "Excellence in Dermatology," Maruho is striving to make significant contributions to the field.

Chugai's Activities

Interview with the CFO

Yoshio Itaya
Director, Executive Vice President & CFO

The CFO Answers Frequently Asked Questions from Investors

Progress of IBI 18

Q What were the results and issues in the first year of mid-term business plan IBI 18?

Our results in 2016 were generally as planned even with the significant changes in the external environment, including NHI drug price revisions, and we made smooth progress toward the next phase of our evolution. In accordance with the priority agenda of IBI 18, development of products from Chugai research advanced steadily, and we took appropriate measures in various areas to prepare for upcoming changes in the business environment. Examples include our steady efforts to build new drug discovery technology infrastructure for middle molecules and other compounds, capital investments to strengthen our production function, and the establishment of a new organizational structure (effective April 2017) to provide new solutions that are adaptable to the diverse needs of each region rather than uniform nationwide.

Our highly efficient cost structure, which we are constantly evolving, enables us to maintain the ratio of operating expenses to revenues at around 35 percent, and remains a key feature of Chugai's earnings structure. From the start of the alliance with Roche, we made structural improvements through more than 10 years of cost reductions. I believe that ongoing initiatives since then, such as the Productivity Improvement Project we have been implementing since 2013, have also been effective. To manage operating expenses, we will maintain our policy of keeping their growth at or below the growth rate of revenues as a general principle.

Q What is your assessment of Chugai's ability to execute strategies?

In the first year of IBI 18, we were able to steadily implement initiatives for innovation. This tells me that our organizations have the ability to link actions to results.

The results of employee surveys confirmed significant improvement compared with the first year of the previous mid-term business plan in each of three categories: "understanding," "action" and "realization" of the strategies. (See page 45 for details.) I believe this will be critically important in creating value in the future. In particular, understanding strategies before moving to put them into action is key. We are therefore focusing on sharing information through various in-house media to deepen understanding of strategies and measures throughout the Company. In addition, workshop-style discussions are regularly conducted among managers and in each organization, and we will continue to strongly promote these initiatives.

I remember something very surprising in a group discussion at a meeting of managers one year. One of the several topics of the meeting was "What is a top-ranking company?" and everyone discussed it seriously. This may seem ineffective at first glance, but by returning to a discussion of the essentials and humbly looking for ways in which we might not be quite top-ranking yet, we can take on the challenge of attaining that standing. While Chugai is engaged in cutting-edge research and production, I think we are fundamentally a company that sticks to the basics and is honest to a fault. This also shows in how all of our employees embrace our business philosophy, "Innovation all for the patients." It is a characteristic of Chugai's culture, and I feel it is one of our strengths.

Future Growth and Innovation

Q What are some of the issues in generating innovation?

Among the five objectives of the priority agenda in IBI 18, the fifth one is our talent management strategy for generating innovation. To deal with rapid changes in the external environment, including future technological innovations and changes in the industry structure, we are transforming the organization for constant innovation by promoting "autonomy." Each department will become an autonomous organization, and the keyword for developing talent that will generate innovation is "leadership." I am confident that if we increase the number of leaders who can build affinity within their organizations while communicating clear objectives and goals, the corporate value of Chugai, which has many strengths, will increase further.

To evolve into this kind of company, it will be essential for productivity improvement, which is already firmly rooted in each department, to be linked organically with diversity and inclusion (D&I) and work-life synergy. By promoting D&I and work-life synergy, we will create an environment that enables all employees to achieve their maximum potential. This will raise organizational productivity and thus help to drive medium-to-long-term growth.

Q Please explain Chugai's investment strategy.

Up to now, Chugai has made investments for medium-to-long-term growth and to position itself for the future based on its current strengths. We are making capital investments for the purpose of expanding production capacity for antibody active pharmaceutical ingredients (APIs), which will enable us to handle simultaneous development of multiple compounds from the continuous generation of innovative projects. In addition to the business expansion of Chugai Pharmabody Research Pte. Ltd. in Singapore, in 2015 we decided to make a new investment in an antibody API plant at the Ukima Plant to enable high-mix, low-volume production for late stage development and early commercial production. Construction is moving forward on schedule.

However, with the external environment growing increasingly uncertain and innovation becoming even more critical, with an eye on the future, Chugai is making strategic investments that are not merely an extension of the status quo. We made such investments in 2016. We concluded an agreement with Osaka University for comprehensive collaboration with Osaka University Frontier Research Center (IFReC), although that is somewhat different in character from an investment. We also acquired a business site of approximately 170,000 square meters in Yokohama, Kanagawa Prefecture. This site acquisition was made because we believe that a facility with more advanced research and development functions is necessary for the stage of further business growth that we expect in the future, and we see this as our challenge and responsibility. We intend to build a future-oriented core facility that takes into consideration the emergence of disruptive technologies, and will announce a detailed plan after it is finalized.

Investments under ACCEL 15 and IBI 18

Time Frame	Planned Investment	Site	Details
2012-2021	SGD 476 million (about ¥40.0 billion*)	CPR (Singapore)	Business expansion (Accelerate creation of clinical candidates utilizing proprietary antibody technologies) (Initial plan: ¥12.5 billion)
2013-2017	¥6.0 billion	Utsunomiya Plant	Enhancement of high-mix, low-volume production capability for pre-filled syringe form products (Installment of tray filler)
2015-2018	¥37.2 billion	Ukima Plant	Enhancement of high-mix, low-volume production of antibody APIs for initial commercial products (Expansion of production capability with construction of UK3 facility)
2015-2017	¥6.0 billion	Fujieda Plant	Strengthening of solid formulation manufacturing facility, etc. (Achievement of quick launch and steady supply)
2016-2018	¥43.4 billion	—	Purchase of business site in Totsuka Ward, Yokohama

* Converted at ¥90.0/SGD

Capital Strategy, Shareholder Returns and IR Policy

Q What will be your capital strategy going forward?

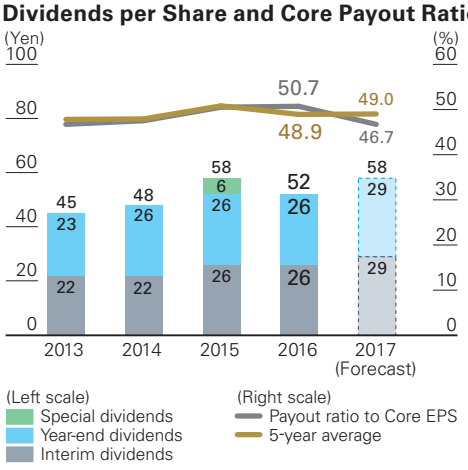
Chugai has ample net cash (cash and cash equivalents plus marketable securities less interest-bearing debt) amounting to roughly half of annual revenues. At the same time, we will generate cash flow with steady earnings each year. Cash management will be a priority, and our policy in IBI 18 is to allocate those funds to invest proactively for the future and to provide appropriate returns to shareholders.

In making investments, we will continue to practice sound cash management while implementing the strategies I outlined above. For example, in the recent site acquisition and the subsequent facility construction, which are major investments, the handover of the site will be completed at the end of 2018 and construction will start in 2019. This means investment in the structures will begin, but we will maintain cash on hand at the current level to make further investments for the future, and we estimate that we can cover that investment with the current cash flow level.

Based on the idea that Core basis* net income should be divided evenly between the Company and its shareholders, we set the target for the payout ratio at 50 percent of Core earnings per share (EPS) on average. This approach has been commended by shareholders and investors for its clarity, but at the same time, it sends a message that our common standard for establishing the Company's targets and returns to shareholders is Core basis profit growth.

* Core basis results are the results after adjusting non-Core items to IFRS basis results. Core basis results are used by Chugai as an internal performance indicator, for representing recurring profit trends both internally and externally, and as indices for establishing profit distributions such as returns to shareholders.

Dividends per Share and Core Payout Ratio



We also receive questions about capital cost and ROE. Naturally, we understand that ROE needs to be greater than the cost of capital. Internally, we calculate and analyze the contribution margin of each product based on the cost of capital, and the results are shared among management. However, what I would like investors to understand is that we place importance on aligning externally disclosed targets with internal Company-wide targets and on the clarity of target-setting, and for these and other reasons we use simple Core basis operating income for financial targets.

Q What are your views on dialogue with investors?

I have sensed changes for the better among institutional investors in Japan since the announcement of Japan's Stewardship Code. On the other hand, I feel that this could become a case of "once bitten, twice shy," and it should not lead to a situation where dialogue is not encouraged.

Chugai's basic strategy is to continuously generate profits and increase its corporate value through innovation, and then return the results to shareholders through higher valuation in capital markets and stable dividends. Therefore, our IR policy is to share common goals with investors who believe that they and the Company are equal partners, to engage in discussions with them on an equal footing, and to grow the Company so that their investment is a success. That's the kind of appropriate relationship I hope to build. We have focused on making the content of Chugai's integrated report (annual report) easy for investors to understand in order to share our management direction and the events behind it. This year, we have designed the report to make it even more user-friendly and convenient. It is always evolving, and we want it to be a starting point for dialogue.

We will continue to do everything we can to communicate and provide disclosure from the standpoint of investors to facilitate a more effective dialogue and meet their expectations.

Overview of Activities in 2016

Items	Main initiatives	Main performance indicators in 2016
Marketing	• Contributing to advances in medicine as Japan's leading oncology drug and therapeutic antibody company • Promoting standards of care, regional healthcare and personalized healthcare (PHC)[1] • Contributing to care through consulting and liaison functions • Enhancing area promotion strategy to increase marketing productivity • Conducting disease awareness and patient support activities in mainstay product areas	• Share of sales in the Japanese therapeutic antibody market: 29.7%[2] • Share of sales in the Japanese oncology market: 20.8%[2] • Education for MRs with a high level of expertise • Enhancement of marketing functions based on local characteristics
Medical Affairs	• Building a consistent global medical affairs promotion system with proper independence of roles • Strengthening systems for healthcare compliance[3] and governance of contract-based post-marketing studies • Conducting area-based evidence creation and promoting scientific communication activities • Introducing global medical information functions	• Contract-based post-marketing studies: 27 (as of January 31, 2017) • Staff with GCP Passport (JSCTR[7] certification): 141 (as of January 31, 2017) • Inquiries to the Medical Information Department: 60,213 (including telephone, e-mail and fax inquiries)
Drug Safety	• Strengthening pharmacovigilance system to meet the world's strictest standards and most comprehensive global regulations • Providing solutions to patients and healthcare professionals using drug safety information • Preparing and implementing risk management plans (RMPs)	• Cases for which safety information was collected from Japan and overseas according to global standards for clinical trials and post-marketing studies: Approximately 158,000 adverse drug reaction reports (January - December 2016) • Started full operation of post-marketing and adverse drug reaction database tools (July 2016)
Development	• Improving clinical development of drugs to address unmet medical need[4] • Increasing productivity and speed of global clinical development for early market launches • Conducting simultaneous development and regulatory filing of drug therapies and diagnostics that contribute to PHC • Strengthening lifecycle management to maximize product value	• Pipeline projects: 39 (as of February 1, 2017) • New products launched/new indications: 12 (2013-2016) • PHC-based development projects: 22 (as of February 1, 2017) • Projects in-licensed from Roche: 11 (2013-2016)
Production	• Providing a stable supply of high-quality drugs and investigational drugs • Enhancing the system for faster global launches and simultaneous development of multiple products • Achieving early PoC[5] by raising the level of CMC[6] development • Raising the level of competitive advantages from late-stage development to initial commercial production • Achieving world-class quality control, quality assurance and regulatory functions • Promoting purchasing that balances compliance, operational efficiency and cost reduction	• Invested in facilities for faster launches and simultaneous development of multiple antibodies and small-molecule drugs • Strengthened global supply chain management • Enhanced next-generation core technologies for API manufacture and formulation • Strengthened development ability by reducing costs from the early stage onward and planning and implementing a dosage form strategy • Established a system for quality control functions to enhance specialization and raise operational efficiency

1. A treatment approach designed and implemented according to each patient's unique molecular and genetic profile
2. Copyright 2017 © QuintilesIMS. Source: JPM 2016. Reprinted with permission. The scope of the market is defined by Chugai.
3. Chugai defines healthcare compliance as compliance in general business operations related to conducting clinical testing, clinical research and nonclinical research, support operations, collecting medical information and providing drug information.

Environment Environmental Protection | Society Providing Value to Society | HR Human Resources | Productivity Raising Productivity

	Examples of ESG initiatives in each division
	Environment • Introduced hybrid vehicles in MR fleet • Promoted paperless operations in areas such as meeting materials Society • Promoted proper use of medicines through support for improvements in the rate and accuracy of testing • Participated in Lung Cancer Awareness and attended to patient requests regarding drugs • Conducted joint activities with Tanita Corporation to promote disease awareness • Held the Bone and Joint Forum 10 times during the year as a measure against locomotive syndrome • Disseminated appropriate information on cancer through the Cancer Information Guide website • Produced a video that introduces the activities of medical staff HR • Held Innovation Club meetings to discuss cross-divisional proposals Productivity • Worked to improve adherence rates
• Product Research Department: Published research papers: 29 (2015-2016) Presentations at scientific conferences: 33 overseas, 36 in Japan (2015-2016) Academic conference awards: 1 overseas, 1 in Japan (2015-2016)	HR • Conducted a training program from the standpoint of training global medical human resources Productivity • Established a global collaboration team to promote visualization of operations at overseas subsidiaries
• New RMPs prepared and carried out: 9 products (as of February 2017) • Papers and conference presentations on safety based on the results of post-marketing surveillance: 19 (2016)	Environment • Promoted paperless operations for stored materials and meeting materials Society • Held awareness-raising activities for the media to disseminate accurate medical information • Provided the latest drug safety information through lectures for healthcare providers • Contributed to the enhancement of Japan's epidemiological database Productivity • Used information and communications technology (ICT) to construct a system for timely provision of the safety information doctors need • Cut back on processes and paper use through the introduction of an image sharing system • Outsourced the management of post-marketing surveillance and individual adverse drug reaction data
• Projects being co-developed with Roche Group: 32 (as of February 1, 2017) • Projects in response to development requests for unapproved drugs/indications: 13 (2011-2016)	HR • Fostered a corporate culture where employees can participate actively after returning from childcare or other leave • Held cross-cultural training to cultivate leaders who can succeed globally • Held study sessions with instructors from other industries to promote global success Productivity • Promoted and conducted a risk-based approach with the BEYOND productivity improvement project • Raised productivity and transformed mindsets by promoting improvement activities through BEYOND
• Promoted fairness and transparency in purchasing that includes cataloging of indirect materials in the electronic purchasing system: Began operation of 3 punch out site catalogs; updated and began operation of the local catalog system	Environment • Reduced greenhouse gas emissions with the scheduled introduction of high-efficiency air conditioning • Promoted reduction of energy consumption through an energy visualization task force Society • Conducted firefighting activities in cooperation with local fire departments HR • Promoted "Techno" technology review activities to create new core competencies and strengthen basic technologies • Held U-MAST (at Utsunomiya Plant), UK-NEXT (at Ukima Plant) and F-OPEX (at Fujieda Plant) as initiatives to train young employees through proposal activities • Held interdivisional exchange meetings (Knowledge Cube for Marketing & Sales, Medical Affairs and Pharmaceutical Technology divisions and BRIDGE for Research, Clinical Development, Translational Clinical Research and Pharmaceutical Technology divisions) Productivity • Held Lean Activity Leader activities at the 3 plants, research departments and the Quality Assurance Dept. • Conducted Bilateral actions of Business and Quality (BBQ) initiatives

4. Medical need that is not adequately met due to a lack of effective treatments
5. Proof of concept: A demonstration that the therapeutic effect conceived in the research stage is effective in humans
6. Chemistry, Manufacturing and Control: a concept that integrates API process research and pharmaceutical development research with quality evaluation research
7. Japan Society of Clinical Trials and Research

Items	Main initiatives	Main performance indicators in 2016
Research	• Continuously generating first-in-class[8] and best-in-class[9] drugs • Creating molecular targeted drugs[10] that contribute to PHC • Strengthening innovative proprietary research technologies and creating innovative antibodies • Providing support and education for researchers from Asia • Maintaining high animal welfare standards in accordance with international guidelines	• In-house products in pipeline research: 13 (as of February 1, 2017) • Expanded business at Singapore subsidiary Chugai Pharmabody Research Pte. Ltd. • Academic papers and presentations at scientific conferences regarding Chugai's innovative proprietary technologies: 49 (2013-2016) • Published academic papers regarding Chugai's research findings: 77 (2013-2016)
Intellectual Property	• Protecting and effectively using rights for broadly applicable innovative technologies • Filing of high-quality patent applications and effectively allocating resources • Aggressive filing of patent applications outside Japan with a view to global co-development	• Patents held (including pending applications): 4,030 • New patents granted worldwide: 176 • Applications to register a patent term extension filed in Japan: 5

Items	Main initiatives	Main performance indicators in 2016
Environment, Health and Safety	• Promoting global warming countermeasures, resource conservation and waste reduction • Thoroughly managing chemical substances • Disclosing environmental information • Enhancing environmental awareness and making environment-related contributions to local communities • Creating safe, comfortable workplaces	• Energy consumption per employee compared with 2010: -16% (Chugai Group in Japan) • Amount of waste generated compared with 2015: -10% (Chugai Group in Japan) • Final disposal ratio in 2016: 1.0% (Chugai Group in Japan) • Ratio of eco-friendly cars: 75%
Social Contribution	• Creating an inclusive society through support for para-sports • Nurturing the next generation who will carry science and technology forward • Supporting employee volunteer activities • Contributing to communities where Chugai Group facilities and sites are located	• Conducted awareness-raising and support activities for para-sports (prepared an educational pamphlet on para-sports, and held an event for trying wheelchair basketball, a photograph exhibition and a talk show with para-athletes) • Donation of welfare vehicles to provide transportation for home welfare services: Total of 243 vehicles over 32 years (1 vehicle each to 5 organizations in 2016) • Cumulative number of countries receiving free therapeutic drugs for treating lymphangiomas: more than 80 (program in its 26th year)
Corporate Communication	• Proactive disclosure of information to and promotion of IR activities for institutional investors, security analysts, individual investors and other stakeholders in Japan and overseas • Building good relationships with media outlets and disseminating information appropriately and in a timely manner (media relations) • Promotion of global communications to enhance global dissemination of information and to improve the crisis preparedness of the Chugai Group • Building and establishing the corporate brand	• Information events for the media and institutional investors: 20 • Security analysts and institutional investors in Japan with whom individual meetings/conference calls were held: 464 (cumulative total) • Briefings for individual investors and shareholders: 11 • Plant tours for shareholders and media: 2 • Attendees at General Meeting of Shareholders: 465
Corporate Governance	• Prompt decision-making, clarification of executive responsibilities and management transparency • Enhancing decision-making by introducing outside perspectives • Maintaining an internal control system • Promoting compliance with the Pharmaceutical Affairs Law, fair competition codes, promotion codes, and other laws and regulations	• Board of Directors meetings: 9 (average attendance rate of outside directors 90.3%) • Auditing system: 4 Audit & Supervisory Board members (including 2 outside members)
Human Resources	• Fostering human resources who are competent in the global arena • Building work environments in which diverse people can succeed • Building sound labor-management relations • Fostering high ethical standards through training on the BCG; making continuous efforts to build human rights awareness	• Implemented leader development program, all-employee program, division programs and Self- Innovation Program (SIP) • Employees posted through the Roche Human Resource Exchange Program: 155 (2004-2016) • Percentage of female managers:[11] 11.3% • Employees approved for telecommuting: 561 • Employees taking childcare leave (non-consolidated): 227 (53 men, 174 women)

8. An original drug that is highly novel and useful, and will significantly change the therapeutic system
9. A drug that offers clear advantages over other existing drugs in the same category, such as those with the same molecular target

Environment Environmental Protection Society Providing Value to Society HR Human Resources Productivity Raising Productivity

	Examples of ESG initiatives in each division
• R&D expenditures to revenues: 16.8% • Created new antibodies using Chugai's recycling antibody, sweeping antibody, bispecific antibody and other proprietary antibody technologies • Concluded an agreement with Osaka University for comprehensive collaboration with IFReC • Conducted ongoing training for all research staff involved in laboratory work	Environment • Fostered employee awareness of reducing energy consumption through energy visualization • Changed to wastewater tanks that can be visually inspected at Kamakura Research Laboratories as a soil contamination countermeasure • Continued joint cleanup activities with a local high school for the Shinkawa River, which flows through the Kamakura Research Laboratories site Society • Conducted activities at Kamakura Research Laboratories to raise awareness of the importance of cancer screening
• Created a system for monitoring other companies' patents • Improved efficiency by using electronic documents and visualizing workflows	Environment • Promoted paperless operations by switching file management to electronic media HR • Began direct communication with overseas law firms for patent applications outside Japan Productivity • Strengthened the quality of patent rights by concentrating overseas agents

	Items described in detail on website (As of March 31, 2017)
• Occupational incidence rate: 1.44 (No. of occupational injuries and deaths/No. of hours actually worked x 1,000,000) (Chugai Group in Japan) • Occupational incidence severity: 0.002 (No. of workdays lost/No. of hours actually worked x 1,000)	Environment, Health and Safety/Mid-Term Environmental Goals/Safety and Health Activities–"Work Support Measures for Employees with Cancer"/Climate Change Countermeasures–"Third-Party Verification of Environmental Performance Data"/Chemical Substance Management/Waste and Recycling/Prevention of Air, Water and Soil Pollution/ Education, Communication and Environmental Accounting
• Number of locations in which Chugai employees participated in the 24-hour charity event Relay For Life Japan: 29 • Biology lab classes for children at the Japan Science Foundation's Science Museum: 178 participants in 18 labs • Endowed courses at Waseda University: 2 lectures • Number of employees who took volunteer leave: 57 • Participated in Pink Ribbon activities	Relay for Life/NPO Shuhei Ogita Fund Supporting Patients with Lymphatic Malformations/ Chugai's Social Contribution Activities/Support for Para-Sports (Japanese only)
• Global press releases: 15 • Overseas media events: 1 • Branding campaign (TV commercials and newspaper advertisements) • Won Grand Prize at 19th Nikkei Annual Report Awards • Won first prize in the IR category at 65th Nikkei Advertising Awards • Won Prize for Best Work at the 83rd Mainichi Advertisement Design Competition held by the Mainichi Newspapers Co., Ltd.	Shareholder Information/Shareholder Meetings/Shareholder Returns/Financial Results/Message to Individual Investors (Japanese only)/Chugai Brand Story/Videos & Advertisements
• Chugai International Council (CIC) meetings: 1 • Established the Compliance Committee	Basic Corporate Governance Policy/Corporate Governance Report/The Resolutions concerning the Internal Control System by the Board of Directors/Relationship with Roche/Chugai's Transparency Guidelines/Emergency Response
• Percentage of employees with disabilities: 2.13% • BCG and human rights training attendees: 13,918 (includes repeat attendees; Chugai Group in Japan) • Conducted compliance surveys for employees in Japan and overseas: 6,616 participants • Selected as a "Nadeshiko Brand" in March 2017 by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange	Business Conduct Guidelines/Promotion of the Active Participation of Women/Our Commitment to Corporate Ethics/Creating Workplaces Free from Harassment/Human Resource Strategy to Become a Top Japanese Pharmaceutical Company/Talent Management According to Each Person's Capabilities and Aptitude/ Personnel Systems That Help Our Diverse People to Succeed/ Diversity Initiatives/Diversity Promotion System/Initiatives to Promote the Success of Diverse Employees/Facilitating Work-Life Balance/Performance Data Related to Diversity

10. A drug designed to specifically inhibit the action of a molecular target that is implicated in a disease process. Molecular targeted drugs play a central role in PHC, which uses advance testing for biomarkers.
11. Percentage of all managers (non-consolidated)

Chugai's ESG Initiatives

Chugai's Approach to ESG

Chugai has long been proactive in conducting ESG (environment, social and governance) activities, based on the concept that its corporate value is a comprehensive product of its economic performance, social awareness and human development.

The ESG activities of Chugai divisions are described at the bottom of each of the following pages. For the convenience of stakeholders, these efforts are grouped into four categories in view of their importance for Chugai: "Environmental Protection;" "Providing Value to Society;" "Human Resources," which is the greatest source of value creation; and "Raising Productivity," which is a Company-wide management theme.

Governance

In addition to being a member of the Roche Group, Chugai maintains its managerial autonomy and independence as a publicly listed company. As such, it works for ongoing improvement in corporate value to fulfill the mandate of its various stakeholders appropriately and fairly. We also emphasize human resources management based on the belief that our people are the source of value creation.

Environment

Based on one of our core values – "We care about the global environment" – and the independently established Chugai Environmental Policy, and taking issues unique to Chugai into account, we aim to contribute throughout the Company to protecting the global environment as an activity that underpins the realization of our mission.

Society

We believe that while taking advantage of Chugai's diverse capital to benefit the medical community and human health around the world, it is important to conduct corporate activities based on a long-term perspective and work proactively to use innovation to create social value.

Sustainable Development Goals (SDGs)

The Sustainable Development Goals are 17 goals for global issues selected in 2015 by the 193 member states of the United Nations and prioritized for resolution by 2030. The SDGs aim to put an end to all forms of poverty, and although they are not legally binding, all stakeholders including companies are expected to contribute.

At the UN Sustainable Development Summit in September 2015, SDGs were adopted based on the participation of UN member states. The actions that Chugai has been taking are also among the actions that can contribute to a number of the development goals in the SDGs. Our intention is to further study the necessity of "Defining priorities" and "Integrating" the SDGs into management.

Marketing

Initiatives and Performance in 2016

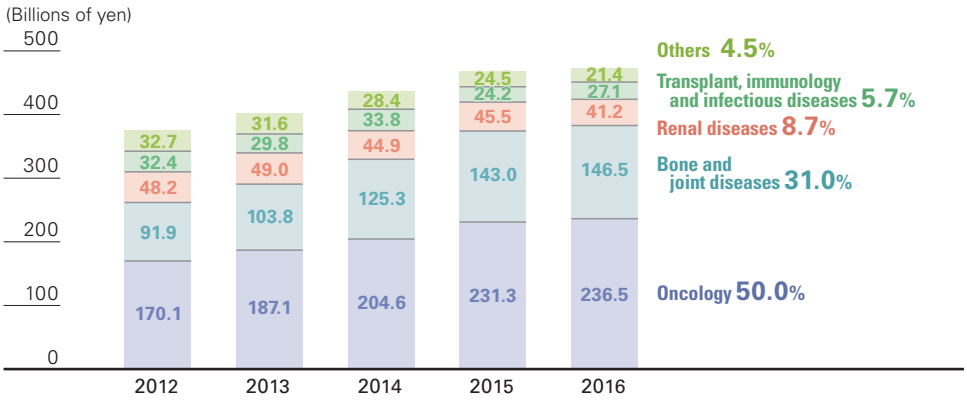
29.7%[1]

Share of sales in the Japanese therapeutic antibody market
(2016)

20.8%[1]

Share of sales in the Japanese oncology market
(2016)

Sales and Percentage of Total Sales



Marketing Policies

For Chugai, which aims to continuously create and provide innovative drugs, ensuring that these valuable drugs are used appropriately by all patients who are waiting for them is a major responsibility. However, another important mission we have is to provide help for treatment of the many potential patients who have not even been examined at a medical facility because they do not yet recognize that they are ill.

Under healthcare system reforms in Japan scheduled to start from 2018, each prefecture will run its healthcare delivery system, which is expected to promote regional diversification of patient flow and differentiation of functions among medical institutions. In response, Chugai must provide solutions to meet the needs of patients and healthcare providers according to regional characteristics. Those needs encompass not only sales and marketing aspects, but also medical affairs and safety information. Chugai will therefore change its organizational structure in April 2017 to strengthen collaboration among its Marketing & Sales, Medical Affairs and Drug Safety divisions, ahead of other companies in the industry. The new structure will allow us to provide solutions that are adaptable to more specialized and diverse needs. In our marketing and sales organization, we will divide the current 11 branches into 36 and review our deployment of MRs, with General MRs who cover all disease areas and a wide range of medical institutions, and Specialty MRs for specialty disease areas. Through these measures, we will promote efforts in each area in line with the community care concept.

With this new structure, we will contribute to treatment of patients by deploying our consulting functions, which focus on proposing treatment options and side-effect management plans tailored to each patient, and our liaison functions, acting as an intermediary among healthcare providers and organizations providing healthcare in each area.

Preparation for the launch of innovative new drugs will also be critical. During 2017, we plan to file applications for approval of two blockbuster products – an engineered anti-PD-L1 antibody (generic name: atezolizumab) that has been attracting attention as a new type of anticancer agent and a hemophilia A treatment (generic name: emicizumab) that employs Chugai's innovative antibody engineering technologies – and will focus our efforts on establishing a structure for providing solutions through collaboration among the Marketing & Sales, Medical Affairs and Drug Safety divisions to propose new treatments using these new drugs.

1. Copyright © 2017 QuintilesIMS.
Source: JPM 2016
Reprinted with permission.
The scope of the market is defined by Chugai

Chugai's ESG Initiatives | Environment

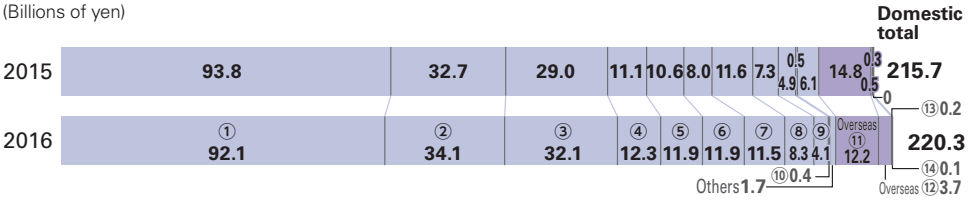
Environmental Protection

Introducing Hybrid Vehicles to Minimize Environmental Impact

Chugai conducts business operations based on its Mission Statement to meet a diverse array of stakeholder expectations as it realizes its corporate responsibility to society. As a concrete measure for one of our core values – "We care about the global environment" – we began introducing hybrid vehicles in our MR fleet in 2003. In 2016 we chose hybrid vehicles for all new orders of 2-wheel drive MR vehicles. As of December 2016, the cumulative total of hybrid vehicles introduced is about 1,200, exceeding 60 percent of the MR fleet.

Oncology

Sales
(Billions of yen)



Initiatives in the Oncology Field

Cancer is the leading cause of death in Japan, with over 370,000 patients dying every year.[2] Chugai is the leading company in the field of oncology in Japan, primarily for gastrointestinal, lung, breast and hematological cancer. We are committed to working for the benefit of patients by delivering cancer treatments that allow them to stand up against their disease with hope.

In personalized healthcare, where Chugai is an industry leader, testing to select treatments that can be expected to have strong therapeutic effects and reduced side effects is essential. To help promote the selection of the appropriate treatment for each patient, we will continue efforts that lead to improvement in the rate and accuracy of testing, such as conducting study sessions with the cooperation of pathologists and clinical technologists at each facility.

To improve appropriate continuity of treatment, we will hold multidisciplinary team care workshops and provide a variety of information to propose side-effect management strategies so that patients are not forced to stop effective treatments because of their side effects.

Review of 2016 Performance and 2017 Outlook

In 2016, sales in the oncology field in Japan increased ¥4.6 billion, or 2.1 percent, year on year to ¥220.3 billion. Sales of Alecensa, which was launched in September 2014, grew substantially as its efficacy was evaluated superior to existing drugs. Sales of major product Avastin were solid in terms of volume, but decreased slightly in monetary terms due to the impact of special market-expansion repricing. In addition, each product in the HER2 franchise – Herceptin, Perjeta and Kadcyla – as well as Rituxan contributed substantially to sales growth.

With these results, our share of the Japanese oncology market was 20.8 percent,[1] maintaining the leading position in the field for the ninth consecutive year.

In 2017, we expect continued solid performance in the oncology field. We are projecting steady growth in sales of Alecensa with further uptake in first-line treatment of *ALK* fusion gene-positive non-small cell lung cancer. We also expect ongoing firm sales as the position of Herceptin, Perjeta and chemotherapy as a first-line treatment for HER2-positive breast cancer together with Kadcyla as a second-line treatment becomes established.[3] Although sales of Avastin are projected to continue to grow for breast cancer and ovarian cancer, we expect only a slight increase overall as we assume there will be some impact from immune checkpoint inhibitors such as anti-PD-1 antibodies for lung cancer indications.

❶**Avastin** (bevacizumab)
Anti-vascular endothelial growth factor (VEGF) humanized monoclonal antibody
Launch in Japan: June 2007

❷**Herceptin** (trastuzumab)
Anti-human epidermal growth factor receptor-2 (HER2) humanized monoclonal antibody
Launch in Japan: June 2001

❸**Rituxan** (rituximab)
Anti-CD20 monoclonal antibody
Launch in Japan: September 2001

❹**Xeloda** (capecitabine)
Fluoropyrimidine anti-tumor agent
Launch in Japan: June 2003

❺**Perjeta** (pertuzumab)
HER2 dimerization inhibitory humanized monoclonal antibody
Launch in Japan: September 2013

❻⓬**Alecensa** (alectinib)
ALK inhibitor
Launch in Japan: September 2014

❼**Tarceva** (erlotinib)
Epidermal growth factor receptor (EGFR) tyrosine kinase inhibitor
Launch in Japan: December 2007

❽**Kadcyla** (trastuzumab emtansine)
Anti-HER2 antibody-tubulin polymerization inhibitor conjugate
Launch in Japan: April 2014

❾⓫**Neutrogin** (lenograstim)
Recombinant human granulocyte colony stimulating factor (G-CSF)
Launch in Japan: December 1991

❿**Zelboraf** (vemurafenib)
BRAF inhibitor
Launch in Japan: February 2015

⓭**Aloxi** (palonosetron)
5-HT3 receptor antagonist
Launch in U.K.: January 2015

⓮**Akynzeo** (NEPA)
Oral combination of netupitant and palonosetron
Launch in U.K.: September 2015
Launch in Ireland: December 2015

2. Source: Outline of Vital Statistics (2015) by Ministry of Health, Labour and Welfare
3. This treatment position is defined as "actively recommended for clinical practice, with a sufficient scientific basis" in the clinical practice guidelines for breast cancer, revised in July 2015.

Providing Value to Society

Participating in Lung Cancer Awareness to Provide Information with Patients in Mind

Lung Cancer Awareness is a committee established by the Japan Lung Cancer Society in November 2014 to share accurate information among patients and their families, promote lung cancer prevention and improve the results of diagnosis and treatment. Chugai markets three lung cancer treatments – Avastin, Tarceva and Alecensa – and considers it important that patients and healthcare providers fully understand the information necessary for their proper use. By actively participating in the committee's activities, we are working to provide information that patients and healthcare providers need.

Bone and Joint Diseases

①⑥Actemra (tocilizumab)
Humanized anti-human IL-6 receptor monoclonal antibody
Launch in Japan: June 2005 (Castleman's disease), April 2008 (rheumatoid arthritis), May 2013 (new formulation: subcutaneous injection)

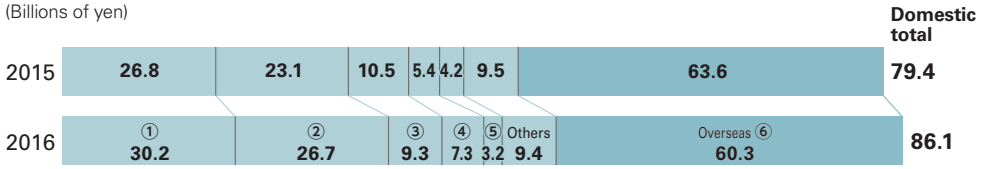
②Edirol (eldecalcitol)
Active vitamin D_3 derivative
Launch in Japan: April 2011

③Suvenyl (sodium hyaluronate)
Agent for joint function improvement
Launch in Japan: August 2000

④Bonviva (ibandronate sodium hydrate)
Bisphosphonate
Launch in Japan: August 2013 (IV)
Launch in Japan: April 2016 (oral formulation)

⑤Alfarol (alfacalcidol)
Active vitamin D_3 derivative (1α(OH) D_3) for improving bone metabolism
Launch in Japan: January 1981

Sales
(Billions of yen)



Initiatives in the Bone and Joint Diseases Field

Actemra, the first therapeutic antibody created in Japan, is the result of more than 20 years of Chugai biopharmaceutical research. It is approved in more than 115 countries as a treatment for rheumatoid arthritis (RA) and other diseases related to interleukin-6 (IL-6) as of January 2017. Now, 11 years after its launch, Actemra has become a global product, with worldwide Roche Group sales exceeding 1.6 billion Swiss francs. We have been working to expand globally recognized treatment options, including the launch of subcutaneous formulations in 2013.

In the osteoporosis segment, only about 20 percent of the total number of estimated sufferers are believed to be receiving treatment due to the few noticeable symptoms and other factors, and the adherence rate is low. Consequently, we are focusing on promoting early detection and treatment as well as treatment compliance through measures such as raising public awareness of the importance of measuring bone density and promoting cooperation between specialists and primary care physicians.

Chugai also has numerous products that can contribute to the treatment of knee osteoarthritis, osteoporosis and RA, the primary underlying diseases that cause "locomotive syndrome," which refers to the loss of mobility of the legs and back due to advanced age or lifestyle factors. We focus on making treatment proposals that lead to improved patient quality of life.

Review of 2016 Performance and 2017 Outlook

In 2016, sales in the bone and joint diseases field in Japan increased ¥6.7 billion, or 8.4 percent, year on year to ¥86.1 billion. In addition to growth driven by Actemra, sales growth continued for Edirol, which has been evaluated as a base treatment for osteoporosis, and for Bonviva, which was launched in an oral formulation was launched in April 2016.

Sales of Actemra outside Japan decreased ¥3.3 billion, or 5.2 percent, to ¥60.3 billion due to lower prices for exports to Roche, among other factors.

In 2017, we expect continued firm sales of treatments for RA and osteoporosis in Japan. Outside Japan, we expect the effect of exchange rates to keep sales of Actemra at the same level as in 2016, despite steady growth of around 10 percent in sales volume.

Chugai's ESG Initiatives | **Society**

Providing Value to Society

Cooperating with the Activities and Aims of the Japanese Orthopaedic Association to Promote Measures against Locomotive Syndrome

Locomotive syndrome is a condition in which muscles, bones, joints, cartilage, intervertebral discs and other parts of the musculoskeletal system become impaired and motor function declines. Because the progression of the syndrome impedes daily life, the Japan Orthopaedic Association proposed it as a concept in 2007 and has been working to improve awareness and countermeasures. In cooperation with the association, Chugai holds the Bone and Joint Forum about 10 times a year to deliver the latest information to healthcare providers. We will continue helping to promote public health through this activity.

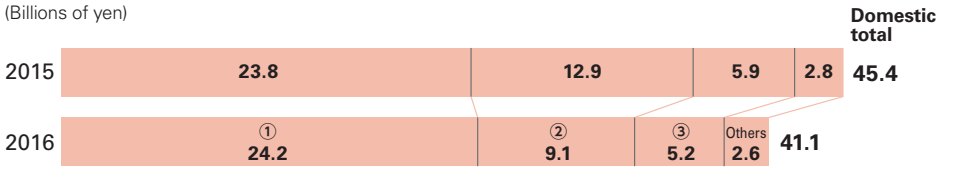
Renal Diseases

❶**Mircera** (epoetin beta pegol)
Continuous erythropoietin receptor activator
Launch in Japan: July 2011

❷**Oxarol** (maxacalcitol)
Agent for secondary hyperparathyroidism
Launch in Japan: September 2000

❸**Epogin** (epoetin beta)
Recombinant human erythropoietin
Launch in Japan: April 1990

Sales
(Billions of yen)



Review of 2016 Performance and 2017 Outlook

Sales in the renal diseases field in Japan in 2016 decreased ¥4.3 billion, or 9.5 percent, to ¥41.1 billion. Mircera, which has a lower dosing frequency than existing medicines, has established a reputation in the pre-dialysis segment for convenience and long duration of action. Sales volume of Mircera grew steadily but the sales growth rate was weak, due in part to competition, including with biosimilars, and the impact of NHI drug price revisions. Sales of Oxarol decreased due to factors such as the effects of competition, including from generics.

In 2017, we will continue to raise awareness of early treatment from the pre-dialysis stage and propose treatments that make full use of the characteristics of Mircera in the field of dialysis.

Transplant, Immunology and Infectious Diseases, and Others

❶**Tamiflu** (oseltamivir phosphate)
Anti-influenza agent
Launch in Japan: February 2001

❷**CellCept** (mycophenolate mofetil)
Immunosuppressant
Launch in Japan: November 1999

❸**Copegus** (ribavirin)
Anti-viral agent
Launch in Japan: March 2007

❹**Pegasys** (peginterferon alfa-2a)
Peginterferon alfa-2a agent
Launch in Japan: December 2003

❺**Sigmart** (nicorandil)
Anti-anginal agent
Launch in Japan: April 1984

Sales
(Billions of yen)

Review of 2016 Performance and 2017 Outlook

In the influenza area, where Chugai plays an important role as a provider of Tamiflu, we focus on providing information on the product's safety and effectiveness, including for prevention of the disease, based on extensive clinical data accumulated over a long period. Sales of Tamiflu, including sales for government stockpiles, increased ¥5.7 billion, or 64.6 percent, year on year to ¥13.5 billion.

Sales in the transplant, immunology and infectious diseases field in Japan in 2016 decreased ¥2.2 billion, or 13.8 percent, to ¥13.7 billion due to the impact of new competitor products. Sales of products in Others in Japan decreased ¥3.2 billion, or 14.7 percent, to ¥18.5 billion.

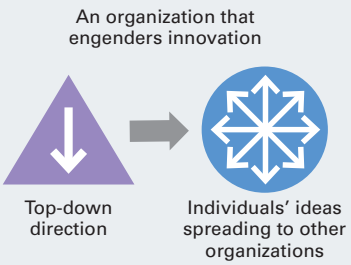
In 2017, we intend to continue proactively providing information centered on Tamiflu to a wide range of facilities by advancing e-promotion and cooperation with wholesalers.

Chugai's ESG Initiatives | **Society**

Providing Value to Society

Analyzing and Sharing Individual Strengths to Speed Innovation

Aiming to be a global top-class company, Chugai treats compliance, productivity improvement, work-life synergy, and diversity and inclusion as important issues, and has made them ongoing Company-wide themes from its previous mid-term business plan. By analyzing the strengths of each employee and sharing the results, we are energetically promoting a shift to autonomous organizations to transform ourselves into an inclusive group that engenders innovation. Our aim is to offer sophisticated and diverse solutions.



Medical Affairs

Initiatives and Performance in 2016

27

Contract-based post-marketing clinical studies (including 19 in accordance with ICH-GCP guidelines)
(As of January 31, 2017)

141

Staff with the GCP Passport (JSCTR certification)
(As of January 31, 2017)

Organization of the Medical Affairs Division

In addition to creating a steady flow of innovative drugs, Chugai recognizes the importance of ensuring that the value of its products is delivered accurately to patients, which will lead to better treatment. We believe that disseminating scientific data is important for elucidating the effects of drugs through non-clinical studies and promoting their safe and appropriate use after launch based on verification of their efficacy in treatment and other matters. At the same time, healthcare compliance requirements for pharmaceutical companies are being tightened worldwide. In Japan, there are strong demands for separation of marketing and medical affairs[1] and enhancement of transparency and fairness in post-marketing clinical studies.

Since 2012, Chugai has unified functions for medical affairs and promotion of non-clinical studies by setting up the Medical Affairs Division to establish the independence of all functions related to medical science; dispatched medical staff to each branch to set up a framework for consistent promotion of medical affairs throughout the Company; and then restructured the Medical Affairs Division to strengthen organizational governance and compliance in these unified activities. In 2016, we newly established the Medical Information Department to create a medical information framework based on global standards.

Strengthening Medical Affairs Functions and Initiatives

Centered on patients, Chugai's Medical Affairs Division plans science-based medical activities and performs or supports non-clinical studies (basic research), post-marketing clinical studies and other activities. Collaboration with medical institutions and healthcare providers is indispensable for these activities, and improving the transparency of researcher compensation and dealing with conflicts of interest have become major issues in recent years. Chugai has dealt with these issues by operating its own scheme for contract-based post-marketing clinical studies since 2012 to guarantee the independence and transparency of research. In addition, we promptly set up a structure for responding to Ethical Guidelines on Medical Research Involving Human Subjects, which were enforced from April 2015. We also established a research support structure that conforms to the GCP[2] guidelines of the International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH). Moreover, we are building an organization to support global post-marketing clinical studies based on these structures.

In the newly established Medical Information Department, we aim to respond to customer inquiries in a globally consistent fashion with appropriate information based on the latest science through collaboration with Roche and our overseas subsidiaries.

Along with elucidation of the causes of diseases and pathological conditions in the future, progress is expected in establishing preventive and treatment methods based on individual genetic, environmental and lifestyle differences. We will respond to this changing environment by enhancing our scientific intelligence functions to help generate new data with higher scientific value. We will also establish a new system for disseminating appropriate information through innovative access to healthcare providers using information and communication technology and other means. In these ways, we will contribute to medical research in Japan.

1. Activities that contribute to healthcare from a scientific standpoint
2. Good Clinical Practice: Standards for conducting pharmaceutical clinical trials

Raising Productivity

Promoting Visualization of Medical Affairs by Creating GCT within Departments

To enhance governance and improve the productivity of medical affairs at overseas subsidiaries, Chugai is promoting visualization of operations (establishment of a procedural manual and reporting system) with the creation of a global collaboration team (GCT) within departments. Observing healthcare compliance and conducting science-based medical activities globally will require cooperation with overseas bases, establishment of common infrastructure centered on Head Office medical functions, and accelerated information sharing. We believe that we can contribute to the development of healthcare globally and to patients through these initiatives.

Drug Safety

Initiatives and Performance in 2016

Approx. 158,000

Cases for which safety information was collected in clinical trials and post-marketing studies globally
(January-December 2016)

9 products

New RMPs prepared and carried out
(As of February 2017)

19

Papers and conference presentations on safety
(2016)

Drug Safety Approach and System

In Japan and overseas, Chugai handles numerous biopharmaceuticals, molecular targeted therapies and other pharmaceuticals with an innovative mode of action. Expert safety evaluation is essential for promoting the appropriate use of these pharmaceuticals around the world and gaining acceptance from patients and healthcare providers, while speedy decision-making is crucial for timely collection and provision of safety information and ensuring safety. Consequently, Chugai has established an independent Drug Safety Division and a safety system directly linked to management. With measures such as these, Chugai is building greater credibility.

Measures to Enhance Drug Safety

Promoting Safety Evaluation and Appropriate Use

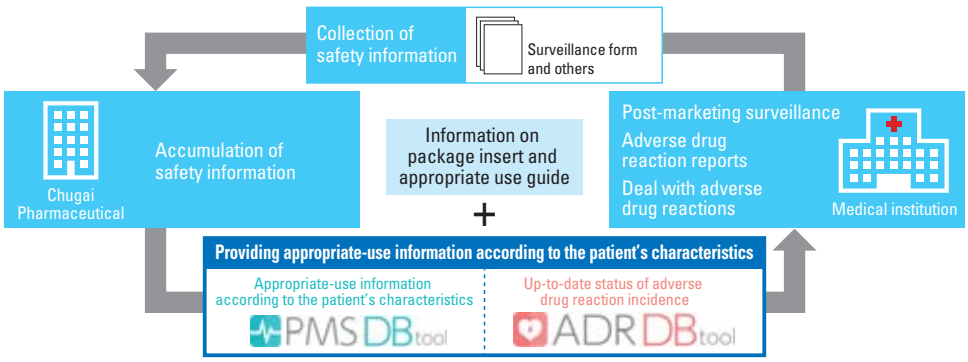
Post-marketing surveillance, which includes all-case registration surveillance, is conducted on new drugs, particularly those with a new mode of action, under actual treatment conditions, to collect safety information unobtainable in clinical trials. In post-marketing surveillance, data forms are collected from medical institutions and accumulated through electronic systems. Information on results obtained from data analysis of the forms is provided to medical institutions and officially announced inside and outside the Company via scientific conferences, papers and other means.

Numerous innovative new drugs including anticancer agents or biopharmaceuticals require wider-ranging and more rigorous management, such as thorough management of distribution and confirmation of conditions of use, in addition to surveillance in which all patients to whom a product is being administered are registered (all-case registration surveillance). Ahead of other companies, Chugai has been conducting all-case registration surveillance for Avastin, Tarceva, Actemra, Alecensa and Zelboraf, together with rigorous safety measures. With this extensive experience, we lead the industry in drug safety evaluation and safety measures.

Safety Evaluation and Communication

Chugai is committed to highly transparent and speedy reporting and release of drug safety information. In 2016, we collected safety information on more than 150,000 cases and evaluated it from a medical standpoint. We have established a system for recording the collected information in a database and conducting signal detection of adverse drug reactions using that database. With this system, we promptly disclose information to regulatory authorities in each country. In addition to a large volume of safety information, we have in-house medical doctors with abundant clinical experience who conduct expert safety evaluations.

Moreover, we provide information on noteworthy adverse drug reactions to medical institutions and academic societies, in addition to distributing patient information leaflets to medical institutions and posting information on our website. We established a specialized group to enhance these



Chugai's ESG Initiatives | Society

Providing Value to Society

Displaying Leadership in an Industry-Government-Academia Project for an Epidemiological Database

There is strong demand in Japan for the development of infrastructure for the epidemiological evaluation of drugs to eradicate the harmful effects of medicines. We believe that reforms to culture and customs, including regulations, should become entrenched in Japan, in addition to monitoring of pharmaceutical safety utilizing epidemiological expertise. Consequently, in 2011 we became the first domestic company to establish a specialized group to handle epidemiological functions. Since then, we have taken the initiative in building a strong epidemiological database in Japan and developing a specialized unit capable of properly analyzing and utilizing it.

communications with customers and have been conducting media seminars and presentations for pharmacists in various regions of Japan. To more speedily offer safety information to healthcare providers, the entire company has been working cross-organizationally to develop a system and review operations. The completed system consists of a post-marketing surveillance database tool (PMS DB tool) containing information on post-marketing surveillance, and an adverse drug reaction database tool (ADR DB tool) containing all post-marketing adverse drug reaction data from Japan. Using these tools, we can make available supplementary information such as package inserts and meet the urgent need for more timely provision of safety information.

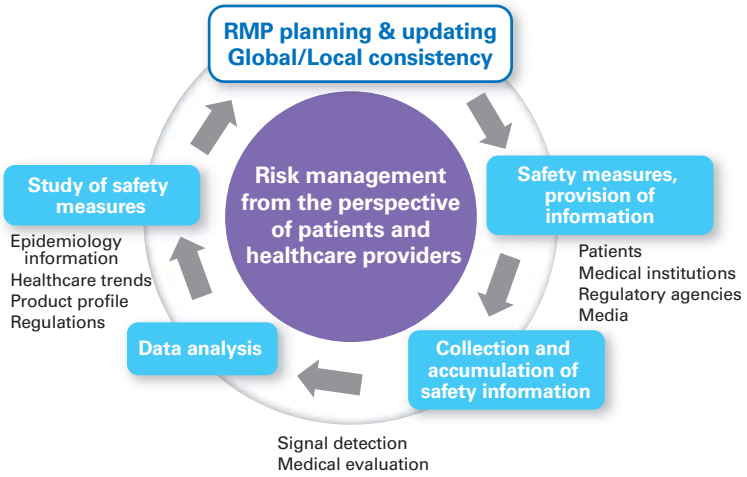
We will continue to enhance delivery of information using ICT-based tools to help healthcare providers better navigate patient treatments, thus helping to steadily reduce the incidence and aggravation of adverse drug reactions.

Leading the Industry through Risk Management Plans

As pharmacovigilance activities and discussions have picked up worldwide in recent years, Chugai has established a world-class safety management system that can accommodate the pharmaceutical regulatory systems and review procedures of regulatory agencies in Japan, the United States and Europe. Moreover, to establish a plan – do – check – act (PDCA) cycle in our post-marketing pharmacovigilance activities, we collect and analyze information consistently from the preclinical and clinical stages, and have drawn up and applied risk management plans (RMPs) to nine of our products since 2012, ahead of our competitors. We are aware that RMPs are part of our commitment to patients and medical institutions, and we have been enhancing our pharmacovigilance system to align it with global standards. Our efforts have included establishing a signal detection system, conducting evaluations with a high level of expertise, and making speedy decisions on measures to ensure safety.

In applying RMPs, we were particularly aware of the need to strengthen our ability to analyze safety information data from an epidemiological standpoint. As a result, we are working to improve the precision of analysis through a specialized internal group in charge of epidemiology functions and proactively cooperating with specialized companies and others to help upgrade Japan's epidemiological database. In addition, based on the strong track record we have compiled we are driving the industry in ways such as proactively working to formulate industry-wide recommendations and guidance related to RMPs and database research.

Organization Oriented to Risk Management



Globalization of Safety Information

To standardize safety information worldwide and conform to global safety standards, Chugai has updated its pharmacovigilance-related protocols with Roche and partner companies. As a result, we have already established a worldwide framework for speedy decision-making through communication with Roche. By enhancing cooperation in these ways, Chugai aims to provide patients and medical institutions with truly valuable safety data and contribute to healthcare worldwide.

Providing Value to Society

Building a Framework for Timely Provision of Safety Information through Development of an Innovative System

Both in Japan and overseas, Chugai handles many drugs with an innovative mode of action such as biopharmaceuticals and targeted molecular therapies. It is important for pharmaceutical companies to provide safety information in a timely fashion so that healthcare providers can understand the characteristics of pharmaceuticals and use them with confidence. Accordingly, we have developed a Company-wide, cross-organizational system that includes database tools for post-marketing surveillance (PMS DB tool) and adverse drug reactions (ADR DB tool) to speedily deliver our extensive, fact-based safety data.

Development

Initiatives and Performance in 2016

39
Pipeline projects
(As of February 1, 2017)

12
New products launched and new indications
(2013-2016)

22
PHC-based development projects
(As of February 1, 2017)

11
Products in-licensed from Roche
(2013-2016)

1. A system introduced in July 2012 by the U.S. Food and Drug Administration aimed at expediting the development and review of drugs for the treatment of severe or life-threatening diseases or symptoms.
2. Proof of concept: A demonstration that the therapeutic effect conceived in the research stage is effective in humans. Early PoC means that in addition to safety, signs of efficacy or pharmacological effect have been confirmed in a limited number of cases.

Chugai's Development System

Guided by its business philosophy, "Innovation all for the patients," Chugai has established a lifecycle management system that coordinates multiple operations, including research and clinical development, manufacturing, drug safety, regulatory affairs, sales and marketing to bring innovative pharmaceuticals to patients as quickly as possible. Function leaders are assigned from different departments for each development project, and lifecycle leaders, who have been given authority over certain personnel matters, provide strong leadership for cross-functional lifecycle teams to expedite the progress of each project and the filing of applications for approval.

Acceleration of Global Development

We are making various changes aimed at speeding up global development to maximize the value of our in-house projects.

For example, Alecensa (development code: AF802) was launched in September 2014, just seven years after the project was conceived. In the United States, Alecensa received breakthrough therapy designation[1] from the FDA, and obtained approval in December 2015, just three months after it was designated for priority review. Another product, emicizumab (ACE 910), was out-licensed to Roche less than two years after the start of clinical development. These successes are the result of following a development model with a higher probability of success and efforts to prove the value of in-house projects from the early stages of development by enrolling patients and selecting appropriate endpoints in phase I clinical trials. In addition, Chugai's new approach of managing multinational studies has been successful for SA237 and nemolizumab (CIM331), leading to the out-licensing of both compounds.

Continuing the evolution of our business model and development system, in August 2014 we amended our business agreement with Roche regarding out-licensing. Among the changes, we now offer Roche first refusal rights for overseas development of all our products upon achievement of early PoC.[2] This enables Chugai to prioritize allocation of resources to the acceleration of early clinical development and proof of medical and economic value. We are working to speed up development overall by designing global development plans and negotiating with partners earlier. Moreover, as part of our drive to accelerate early clinical development of in-house projects, we established the Translational Clinical Research (TCR) Division in April 2015 and shifted to unified management in our three key regions of Japan, the United States and Europe by integrating and reorganizing our overseas subsidiaries. While taking on a certain level of risk, we will carry out a faster, more competitive global development strategy by promoting information sharing and cooperation between research and development from an earlier stage.

Results and Overview of Development Activities

Of the 39 projects currently in Chugai's pipeline, 17 originated from Chugai research, and half are based on PHC (as of February 1, 2017). In 2016, all projects continued to make steady progress. Chugai filed for regulatory approval for six projects, and obtained approval for five others. Chugai's pipeline grew even richer, with two projects from Chugai research and three new projects in-licensed from Roche advancing to the clinical phase.

Raising Productivity

Initiatives to Ensure Global Quality and Productivity: A Risk-Based Approach and Global Harmonization

In clinical development, Chugai responds to matters such as changes in the requirements of regulatory authorities by taking a risk-based approach in collaboration with Roche and Chugai offices overseas. This allows us to narrow our focus to the most important items and procedures in clinical trials and to conduct risk-based quality control of clinical trials, with improvements expected in terms of both quality and productivity. We also collaborate with Roche to promote harmonization of systems and processes, and are working to establish a system for implementing clinical trials to ensure a global level of quality and to further improve productivity.

Production

Initiatives and Performance in 2016

Invested in facilities to handle multiple antibody development projects simultaneously

(See "Capital Investments" on page 123 for details.)

Created and started operation of a world-class system for pharmaceutical quality management

89

Published research papers from the Pharmaceutical Technology Division
(2010-2016)

Features of Chugai's Production Functions

At Chugai, we believe that we create value through production that commercializes innovative pharmaceuticals and provides them to patients as quickly as possible and by stably supplying these products to patients and healthcare providers. Therefore, we conduct CMC (chemistry, manufacturing and controls) development, integrating management of everything from active pharmaceutical ingredient (API) manufacturing process development to pharmaceutical formulation development and quality evaluation, together with the supply chain, quality control and other functions. We also work to continuously strengthen and enhance technologies and systems for these functions.

Chugai has been accumulating new knowledge and experience backed by continuous innovation, particularly in the manufacture of therapeutic antibodies, where our technologies are at the top level in Japan. For example, we have achieved commercial-scale production of a series of pharmaceuticals developed using our new antibody technologies.

Including contract manufacturing organizations, our production bases are located in various regions around the world, with three domestic plants in Utsunomiya, Ukima and Fujieda. We have also created a rigorous quality control system in line with global standards, including compliance with GMP.*

* Good Manufacturing Practice: Standards for pharmaceutical production management and quality control

Overview of Production Bases

Plant	Features	Products Manufactured
Utsunomiya Plant (Tochigi Prefecture)	One of Japan's largest facilities for cultivating biological active pharmaceutical ingredients (APIs) and a state-of-the-art production line for injectable formulations	Biological APIs: Actemra APIs Injectable formulations: Actemra, Epogin and others
Ukima Plant (Tokyo)	Manufactures and packages solid and injectable formulations and biological APIs. Production base for investigational biologics.	Biological APIs: Epogin APIs and others Injectable formulations: Oxarol and others
Fujieda Plant (Shizuoka Prefecture)	Integrated production system from API synthesis to formulation and packaging. Production base for investigational API synthesis.	API synthesis: Edirol API and others Solid formulations: Edirol, Tarceva, Xeloda and others

Measures to Enhance Production Functions

Backed by world-leading discovery infrastructure and research technologies, Chugai aims for production functions that can achieve simultaneous development of multiple products for the quickest launches possible based on the continuous generation of innovative development projects.

For this purpose, we are working to innovate production from the three aspects of facilities, technologies and work procedures to increase flexibility, speed and productivity.

One result has been the establishment of a seamless integrated production system that has shortened the development period. In investigational new drug production and commercial production, which formerly had independent facilities and staff, flexible use of both lines has raised the level of GMP and promoted technology sharing, enabling a dramatic reduction in development time. The extremely rapid acquisition of approval for Alecensa and other products exemplifies the success of this measure.

Facilities: To expedite multiple development projects, we employ single-use bioreactors at the Ukima Plant. This makes washing and inspection after cultivation unnecessary, allowing cultivation of the next batch without interruption and thus dramatically raising capacity utilization (currently four such 2,000-liter units are in operation, including two units installed in 2015). In order to create an API production system for simultaneous development of multiple projects that apply next-generation antibody technologies, we have also decided to build a new antibody API plant at the Ukima Plant capable of high-mix, low-volume production of late-stage investigational biologics and initial commercial products. At the Utsunomiya Plant, we are upgrading production systems, and have already installed tray fillers to handle various types of syringes on the same production line during the filling process for injectable formulations.

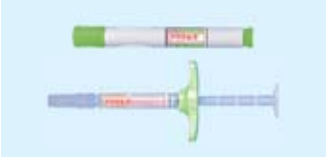
Human Resources

"Techno" Technology Review Activities to Realize the Priority Agenda of IBI 18

The Pharmaceutical Technology Division is promoting "Techno" technology review activities aimed at creating new core competencies and strengthening basic technologies. Activities are promoted along two axes: items related to the technology strategies that lead to accelerated launches and simultaneous development of multiple projects; and items related to resolving issues that arise in their everyday duties. Another goal of these activities is to create a forum for young employees to work across organizations. Through Techno, we will enhance our CMC development infrastructure and strengthen the basis for our competitiveness, which will lead to realizing the priority agenda of IBI 18.

External Recognition

The packaging of Actemra for subcutaneous injections has received three awards, from a Japanese, an Asian and a global organization, respectively. With the adoption of plastic material to resist breakage even if dropped, a syringe needle cap that is easy to hold and to open, and a design that prevents needle bending, the packaging has been improved to incorporate ideas from patients and healthcare professionals for safer, more convenient administration.



GOOD PACKAGING

Winner of the Accessible Design Packaging Award at the Japan Packaging Contest 2016, sponsored by the Japan Packaging Institute

AsiaStar 2016 Winner

Award Winner, Consumer Package Category, AsiaStar 2016, sponsored by the Asian Packaging Federation

WPO WORLD PACKAGING ORGANISATION

WORLDSTAR WINNER 2017

Award Winner, Medical and Pharmaceutical Category, WorldStar Packaging Awards 2017, sponsored by the World Packaging Organisation

Technologies: In our continuous development of technologies, we are focusing on building a technology platform that leads to the early establishment of manufacturing methods. Although we have established this platform to a certain degree, including manufacturing methods for antibody APIs, we will draw strength in the future from building a new platform for commercial production of innovative medicines such as next-generation antibodies and middle molecules. We are currently taking active steps such as securing intellectual property.

Work Procedures: Achieving accelerated market launches and simultaneous development of multiple products requires the same effective transfer of technology and expertise from development to factory for quality functions as for the production system described above. We inaugurated the Quality Development Department in January 2016 and integrated quality-related development and testing functions to seamlessly transfer technologies for quality functions and to enhance the level of those technologies. As a result, we have centralized management of various functions that were previously independent at each production base to build a structure that is responsive and flexible, with personnel transfers for horizontal rollout of technologies and expertise. At the same time, regulatory authorities in Japan and overseas are raising the standards required for product quality each year. Under our new structure, we are cooperating with Roche to conduct activities for the launch of development projects that anticipate future changes in conditions, as well as measures for meeting currently required standards.

Reliable Distribution of Pharmaceuticals and Stable Procurement

To carry out its mission of ensuring a stable and continuous supply of high-quality pharmaceuticals and to build a flexible supply system that can deal with rapidly changing demand, Chugai is strengthening its global supply chain in collaboration with Roche.

With the globalization of our suppliers of raw materials and intermediates and our production bases for finished products, we are ensuring shipping quality between bases and developing risk countermeasures, such as increasing the locations that produce essential products, based on our experience from the Great East Japan Earthquake. In ways such as these, we are working to maintain and improve the reliability of distribution in Japan and overseas by strengthening our measures for supply chain management as it becomes increasingly complex and global.

Quality Assurance

Consistently placing top priority on patients in its quality assurance, Chugai works to improve product quality through measures such as close cooperation with manufacturing sites, including Roche's production facilities.

Quality requirements are becoming increasingly diversified and sophisticated in recent years, with factors such as the start of implementation of the international Pharmaceutical Quality System guidelines, in addition to the increasing complexity of the product supply process and the acceleration of development with the introduction of the fast-track review system. In view of these trends, Chugai has created a world-class system for pharmaceutical quality management and is working to maintain and strengthen consistent management of GMP throughout the product lifecycle from development to manufacturing to promote more rigorous and high-level quality assurance.

Chugai's ESG Initiatives | Environment

Environmental Protection

Introducing an Energy Visualization System to Shift to Task Force-Based Analysis and Application

Energy-saving measures by the Pharmaceutical Technology Division, which accounts for about 70 percent of Company-wide energy consumption, are key to achieving Chugai's mid-term environmental goal of a 20 percent reduction in energy consumption per employee by 2020, compared with 2010. For this purpose, the Pharmaceutical Technology Division has introduced a system that can collect energy consumption data for each work floor and process at each facility and set up a task force on energy-saving measures. Through data analysis, the task force clarifies the effect and priority of measures with regard to investment to draw up plans for saving maximum energy with minimum investment.

Research

Initiatives and Performance in 2016

13

In-house projects in pipeline
(As of February 1, 2017)

49

Academic papers and presentations at scientific conferences regarding Chugai's innovative proprietary technologies
(2013-2016)

77

Published academic papers regarding Chugai's research findings
(2013-2016)

Basic Policy and Allocation of Resources

Chugai's mission is to generate a steady stream of innovative products to address unmet medical need and benefit the medical community and human health around the world. Based on this principle, our key priority is to create new drugs with first-in-class or best-in-class potential. In allocating research resources, we prioritize projects based on the following criteria:

- The compound's potential for development as a novel medicine that can be clearly differentiated
- Whether it has a scientific basis for addressing unmet medical need
- Whether it is a project that will enable personalized healthcare (PHC)

At various decision points during research, we focus first and foremost on patient need, reflecting our belief that creating medicines truly needed by patients and healthcare providers will lead to Chugai's medium-to-long- term growth.

Advantages of Chugai's Research Operations

Strategic: One of Chugai's strategic advantages is its ability to concentrate resources on innovative research. Being able to efficiently carry out development in Japan of projects in-licensed from Roche provides a stable revenue base while we conduct global development of projects from our own research in collaboration with Roche. These and other factors enable us to focus personnel and funds on groundbreaking projects and create a steady succession of innovative drugs and proprietary technologies. To continuously generate our own projects as part of the Roche Group, we need to create products that have value equal to or higher than the projects originating at Roche and Genentech. This is also a driving force behind our innovation.

Technological: Drug discovery technologies, largely antibody engineering technologies, are Chugai's core competence. We are focused on development of proprietary technologies that are necessary to fill areas of unmet medical need. Their application leads to the generation of innovative and competitive medicines.

Chugai began conducting research and development of biopharmaceuticals more than 30 years ago, and the former Nippon Roche had also established world-class technology for the discovery of chemically synthesized agents. Over the years, we have cultivated knowledge and experience through our own pioneering initiatives while also incorporating outside technologies. As a result, we have continuously evolved our technologies, and have built a technology platform that we can flexibly and appropriately apply to drug discovery.

This disciplined approach to research and technology has become Chugai's identity. In the relationships we are building with our research and development partners, including Roche and academia, we recognize each other's technological strengths and expertise, which leads to valuable discussions.

In the new mid-term business plan, we have selected middle molecules as a next-generation core candidate technology in addition to antibody engineering technologies and small molecules. We intend to concentrate investments in this area to establish technologies and quickly generate new projects.

Structural: At the discovery research stage, which includes basic research, we acquire new candidate compounds by making use of our external network in addition to our in-house efforts. We are building a productive external network with open innovation[1] backed by our competitive technological strengths.

Another key advantage is our access to Roche's global research infrastructure. The ability to share Roche's research resources and

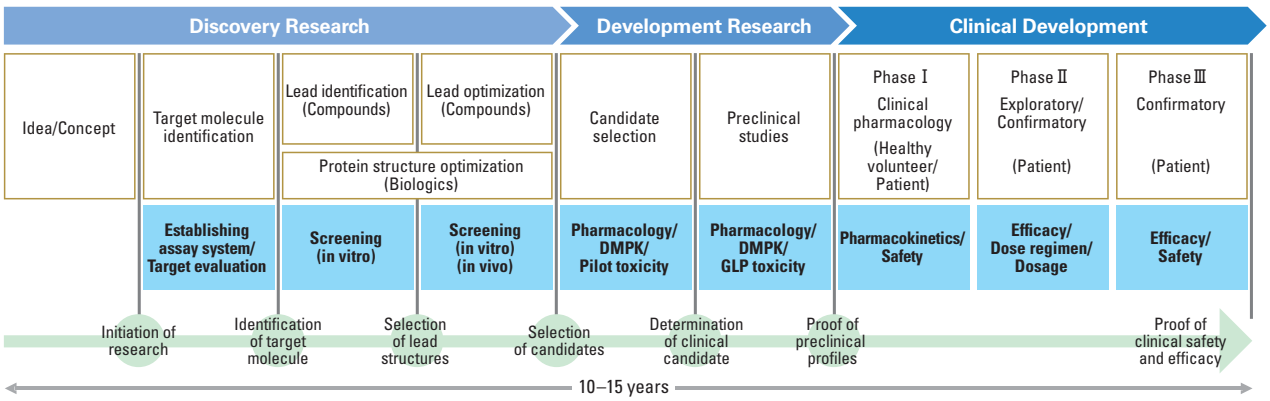
1. Generating innovative, new value by utilizing the technologies and development capabilities of external research networks in addition to in-house capabilities

Environmental Protection

Wastewater Treatment Tanks at Kamakura Research Laboratories Changed from Buried Concrete to Aboveground Type

Soil pollution is directly linked to groundwater pollution, and once soil is contaminated, remediation is difficult. As a soil pollution countermeasure at Kamakura Research Laboratories that will ensure the safety and security of neighborhood residents, the Research Division modified its wastewater treatment plant to prevent underground seepage of effluent by changing all treatment tanks from buried concrete to the aboveground type. The new tanks can be visually inspected. We remain highly conscious of the environment and strive to protect it and reduce risks at our laboratories.

Process and Milestones of Drug Development



infrastructure, which include a rich compound library for use in high throughput screening,[2] is a significant advantage for Chugai in terms of cost and efficiency, and has dramatically increased our research productivity.

Recent Outcomes of Research Activities and Continuous Creation of Innovative Products

Of the five new compounds in our pipeline in 2016, two were developed in-house. PHC-related projects represented 56 percent of our total pipeline, including projects in-licensed from Roche.

We have also achieved significant results in development of proprietary antibody engineering technologies.[3] In May 2014, we licensed these technologies to Roche, including the recycling antibody, which extends a therapeutic antibody's duration of efficacy, the sweeping antibody, which can eliminate disease-causing antigens from plasma, and the bispecific antibody.

In May 2016, Chugai and Osaka University concluded a comprehensive collaboration agreement for advanced research between Chugai and IFReC. We expect to create innovative new drugs by combining the global top-class research in immunology at IFReC and the expertise in drug discovery research we have accumulated through our proprietary technologies. Research at satellite labs has also yielded solid results, leading to the successful establishment of stable cell lines of colon cancer stem cells in October 2012. In addition, URC102, a small-molecule compound discovered at C&C Research Laboratories in South Korea, has advanced into clinical development, and new drug targets have also been identified at Forerunner Pharma Research Co., Ltd. Moreover, Chugai Pharmabody Research Pte. Ltd. (CPR), which we established in Singapore in 2012, is making steady progress in research focusing on discovery of new therapeutic antibodies. A project that originated at CPR also entered clinical development in 2016.

2. A technology that conducts evaluations at a high speed with automated robots or other means to select chemical compounds having activities for drug creation targets from a library consisting of a vast number of compound types with various structures
3. For details on Chugai's proprietary antibody engineering technologies, see our website. (https://www.chugai-pharm. co.jp/english/profile/rd/index.html).

Progress of Development Projects (January 1, 2016 – February 1, 2017)

	Number of Projects	Breakdown		
		New Molecular Entities	Additional Indications	Additional Dosage and Administration/ Formulations
Approved	5	0	3	2
Filed	6	0	4	2
Started phase Ⅲ	4	4	0	0
Started phase Ⅱ	1	0	1	0
Started phase Ⅰ	6	6	0	0
Development suspended	4	—	—	—

Chugai's ESG Initiatives | Environment

Environmental Protection

Joint Cleanup Activities with Fukasawa High School along the Shinkawa River

The Shinkawa River, which flows through the site of Kamakura Research Laboratories, was developed as an irrigation canal in Fukasawa Ward (formerly Fukasawa Village) in the late 1920s, and for decades a summer festival has been held at Fukasawa Elementary School, which is adjacent to the river. Kamakura Research Laboratories conducts joint cleanup activities with Fukasawa High School along the length of the river every year just before the summer festival. Students climb down ladders to clean the riverbed. As a result, the upstream section of the Shinkawa River has been confirmed as a firefly habitat for the past two years. Chugai will continue its active participation in these activities to contribute to the area.

Bioethics in R&D

To ensure that research using human-derived test material is carried out appropriately, Chugai has established Ethical Guidelines for Research That Uses Human-Derived Test Material and a Research Ethics Committee. More than half of the members of this committee are from outside the Company, enabling fair evaluations from a pluralistic frame of reference. Moreover, we strive to ensure that research is conducted with respect for human rights by offering guidance to our researchers on the necessary ethical knowledge and standards required when conducting research on human-derived test material, including the Declaration of Helsinki and protection of personal information.

Chugai's View of Animal Welfare

When handling laboratory animals used in research, Chugai acts in accordance with the Guidelines for the Care and Use of Laboratory Animals it has established to respect their lives from the standpoint of animal welfare, and to minimize their pain, keeping in mind the scientific conditions.

The Institutional Animal Care and Use Committee has added an examiner from outside the Company to assess the validity of research using laboratory animals from a more objective viewpoint and to make appropriate improvements to reflect changes in the social environment and scientific progress. At the same time, an institutional qualification program was adopted for researchers and animal handlers to cultivate concern for animal welfare through education and training. These measures were positively evaluated by AAALAC International,[4] a global independent evaluation organization, and Chugai has maintained full accreditation since 2007.

Academic Support Activities

Chugai actively promotes exchanges with researchers and healthcare providers around the world with a focus on fostering young researchers in Asia.

The Chugai Academy for Advanced Oncology (CHAAO)[5] held its largest event, the International Academy for Advanced Oncology (IAAO) 2016 in Tokyo in July 2016. The main topic of this seventh annual forum was "Dynamisms in Innovations for Precision Medicine and Novel Approaches for Cancer Therapy." Thirteen influential oncologists working at the forefront of their field gave lectures on cutting-edge cancer therapy. Topics raised in 2016 covered a wide range of advanced research including advanced genomic and genetic analysis of cancer patients for precision medicine; epigenetics and DNA repair mechanisms, which are attracting attention as next-generation therapeutic strategies; molecular target creation, including microRNA and drug resistance; cancer metastasis mechanisms; and three-dimensional organoid models of cancer.

Chugai conducts an international joint research fellowship program through the Tokyo Biochemical Research Foundation (TBRF).[6] Each year, the foundation invites young postdoctoral researchers from Asia to conduct joint research at universities and scientific research institutions in Japan for one to two years. Since its launch in 1995, the program has supported 91 researchers from 17 Asian countries and regions. At a meeting in March 2016, 14 researchers from India, Indonesia, South Korea, Thailand, China, Nepal, Pakistan, Bangladesh, the Philippines and Myanmar made presentations.

4. Association for Assessment and Accreditation of Laboratory Animal Care International, a private nonprofit organization that promotes the humane treatment of animals in scientific research through voluntary inspection and accreditation programs. More than 900 facilities in 37 countries have been accredited.
5. Founded in October 2009 to contribute to the establishment and advancement of infrastructure for cancer treatment in Japan. To bring cancer treatment in Japan to a world-class level, CHAAO promotes deeper academic exchange between the world's top specialists in oncology and healthcare professionals who play a leading role in cutting-edge research and treatment of cancer in Japan.
6. For details on the foundation, see the TBRF website. (http://www.tokyobrf.or.jp/english/)

Providing Value to Society

Participation in the Kamakura Manufacturing Exhibition Organized by the Industry Subcommittee of the Chamber of Commerce and Industry

Kamakura Research Laboratories participates in the Kamakura Manufacturing Exhibition held each fall by the Industry Subcommittee of the Kamakura Chamber of Commerce and Industry. In 2016, we developed an activity to let people know about the importance of early cancer screening. In addition to informing children and their families at the venue about cancer, we promoted the discovery research into cancer therapies that we are conducting in Kamakura. As a leading company in the field of oncology, Chugai intends to continue actively promoting the importance of cancer screening.

Intellectual Property

Initiatives and Performance in 2016

4,030
Number of patents held (including pending applications)
(As of December 31, 2016)

176
New patents granted worldwide
(2016)

5
Applications to register a patent term extension filed in Japan (calculated based on the number of patents)
(2016)

Improved efficiency by using electronic documents and visualizing workflows

Implementation of Our IP Strategy

Chugai views its global intellectual property (IP) strategy as the foundation for creating innovative new drugs. By integrating it with our business and R&D strategies, we protect the competitive advantage of our products and ensure operational flexibility. We focus resources on and secure IP rights for high-priority R&D projects. At the same time, we actively work to secure rights outside Japan with a view to global co-development with the Roche Group.

When we apply for patents for products, we include filings for our inventions related to formulation, production method, diagnostic method and personalized healthcare in addition to those for the substance and use. We also work to establish rights globally for significant drug discovery technologies such as innovative antibody technologies, and use those rights in planning and executing our IP strategy. In addition, we are building our own database for patents related to antibody engineering technologies, which are becoming increasingly complex and sophisticated, and are using this database to plan IP strategies, including monitoring trends at other companies.

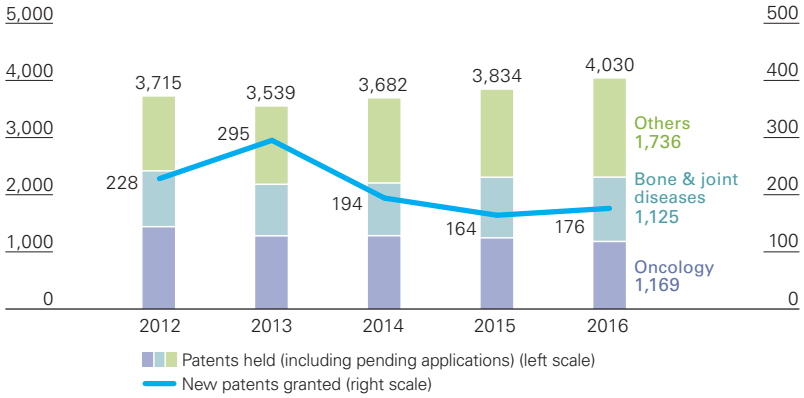
Features of Our IP Strategy

One feature of our IP strategy is that we take full advantage of our benefits as a member of the Roche Group. For inventions originating at Chugai, we take responsibility for planning and execution of matters in Japan and overseas such as application strategies for individual products, selection of countries where applications will be filed, and strategies for acquisition of rights. In addition, we endeavor to choose our best options globally by coordinating closely within the Roche Group, including with Genentech, at all times. Another feature is our strategic use of antibody-related technology patents. Antibody engineering technologies are an important part of our R&D strategy, and we actively conduct research and development both to cultivate our basic technologies and to apply them to product development. Under our IP strategy, we have created a framework for the strategic use of our antibody-related technology patents by building a database of antibody sequences developed by third parties, and by monitoring the status of antibodies, relevant to our patents, being developed at competitors. In this way, we aim to secure a competitive advantage in the market.

Current Patent Portfolio

By therapeutic area, oncology accounts for the largest share of our patent portfolio with approximately 29 percent of the total, a proportion that reflects our product portfolio. In 2016, Chugai acquired 176 patents in Japan, the United States and major European countries, as well as other countries worldwide. These include patents protecting emicizumab (ACE910), Alecensa and nemolizumab (CIM331), which were developed from Chugai research, and SMART-Ig, our innovative antibody technology.

Number of Patents Held (Including Pending Applications) and New Patents Granted

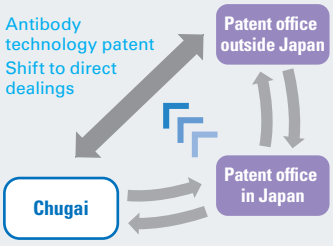


Chugai's ESG Initiatives | Society

Human Resources

Direct Communication with Overseas Law Firms for Patent Applications outside Japan and Procedures to Secure Rights

Chugai has begun engaging overseas law firms directly without the mediation of a domestic patent office for relevant procedures outside Japan. For our antibody-related technologies, which are invented throughout the product development process, a grasp of the whole picture of those technologies leads to the effective formation of rights. Dealing directly with overseas law firms will serve to create more effective rights by giving the firms a full understanding of our patent strategy for relevant technologies, in addition to helping reduce costs.



Environment, Health and Safety

Initiatives and Performance in 2016

-16%

Energy consumption per employee compared with 2010

(Chugai Group in Japan)
(2016)

-10%

Amount of waste generated compared with 2015

(Chugai Group in Japan)
(2016)

1.0%

Final disposal ratio in 2016

(Chugai Group in Japan)

1.44

Occupational incidence rate (No. of occupational injuries and deaths / No. of hours actually worked × 1,000,000)

(Chugai Group in Japan)
(As of December 31, 2016)

0.002

Occupational incidence severity (No. of workdays lost / No. of hours actually worked × 1,000)

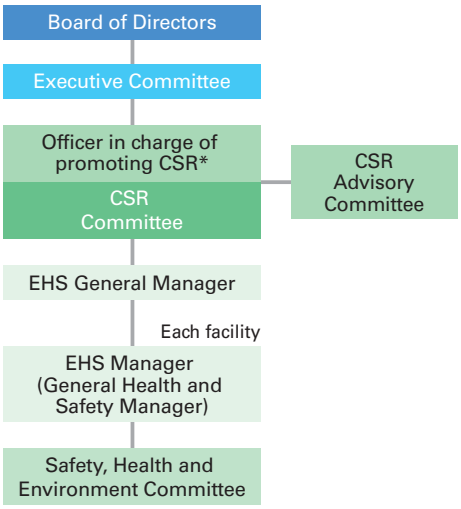
(Chugai Group in Japan)
(As of December 31, 2016)

1. A waste recycling ratio of 99 percent or more
2. Whole effluent toxicity test: A method for comprehensive evaluation of the safety of wastewater and the aquatic environment by determining the impact on crustaceans (*Daphnia*), algae and fish (*Oryzias latipes* and others) immersed in diluted wastewater

Basic Stance

The Chugai Group considers environmental protection and occupational health and safety to be key activities that underpin the realization of its mission to benefit the medical community and human health around the world. For a pharmaceutical company, which conducts many specialized scientific activities, environmental protection is closely linked with health and safety, requiring integrated environment, health and safety (EHS) management worldwide. Under these circumstances, the Chugai Group has established an integrated management system for EHS through research in areas including advanced case studies of companies outside Japan. In addition to introducing this system, we set basic regulations and go through the PDCA cycle at each facility with the aim of achieving sustainable growth.

Framework for Promoting EHS Activities



* CSR: Corporate Social Responsibility

Environmental Protection Activities

Basic Approach

In the Chugai Group, we conduct activities to minimize our impact on the environment in accordance with environmental laws and regulations, with the aim of contributing to the protection of the global environment as set forth in the Chugai Business Conduct Guidelines, based on one of our core values – "We care about the global environment" – and the independently established Chugai Environmental Policy.

We consider it important that these activities not only deal with environmental laws and important social issues, but also fulfill social responsibilities based on issues unique to the Chugai Group, such as handling antibodies and highly pharmacologically active substances.

Mid-Term Environmental Goals

In 2014, the Chugai Group set the following four mid-term environmental goals, with 2020 as the final year, to promote environmental protection activities from a medium-to-long-term perspective.

- Energy consumption per employee: 20 percent reduction compared with 2010
- Discontinuance of the use of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs)
- Zero emissions of waste[1]: Three facilities
- Average fuel efficiency of MR fleet: 16 km/l or higher

Environmental Goals for 2016

Toward the achievement of these mid-term goals, we set the following goals for 2016. Although we did not set numerical targets for energy consumption per employee and

Initiatives by Theme

Theme	Approach to Initiative
Reduction of Climate Change Risk	Reduce greenhouse gas emissions by reducing energy consumption and phasing out the use of CFCs and HCFCs. Focus not only on energy management at plants and laboratories, but also on Company-wide initiatives. Promote eco-friendly cars in MR fleet, etc.
Resource Conservation/Waste Management	Achieve zero emissions of waste by improving recycling ratio and further reducing landfill waste.
Biodiversity Protection	Prevent emissions of pollutants into the environment by observing regulatory limits for air, water quality and soil. In particular, focus on controlling emissions into water with whole effluent toxicity (WET) tests[2] and other methods to protect the water environment.
Chemical Substance Management	Promote the establishment of a system for proper management of chemical substances to ensure safety and prevent environmental pollution.
Reduction of Environmental Risk	Ensure thorough compliance with environmental laws and regulations by conducting extensive environmental law checks through external consultants.
Implementation of Risk Assessment	Create work environments that are free from unacceptable risks.
Health Management	Maintain a support system based on cooperation with the health management organization and related departments.
Working Support for Cancer Patients	Provide enhanced support for continuing to work while undergoing cancer treatment.

discontinuance of the use of CFCs and HCFCs, we worked for continuous reductions.

- A recycling ratio of 80 percent or higher, a final disposal ratio of 2 percent or lower and on-site verification of 40 percent or more of waste disposal contractor facilities
- Plain paper copier (PPC) paper purchased: Less than the previous year; recycling ratio of 80 percent or higher
- Ratio of eco-friendly cars[3]: 60 percent or higher; average fuel efficiency of MR fleet: 16 km/L or higher

Climate Change Countermeasures

The Chugai Group works to reduce its volume of greenhouse gas emissions through measures including reducing energy consumption, introducing eco-friendly cars and reducing the use of CFCs and HCFCs toward discontinuance. Progress in 2016 was as follows.

- Energy consumption per employee was 299 gigajoules, a 16 percent reduction compared with 2010.
- The ratio of eco-friendly cars remained above 60 percent at 75 percent. Average fuel efficiency of the MR fleet was on target at 16.0 km/L.
- The total amount of CFCs and HCFCs used was 5,492 kg, a decrease of 198 kg from 2015.

To enhance the reliability of reporting, we received independent verification from Bureau Veritas Japan of our energy-related greenhouse gas emissions (Scope 1[4] and 2[5] and Scope 3,[6] Category 6 (business travel)[7]). Scope 1, Scope 2 and Scope 3, Category 6 emissions were 44,844 tons, 55,032 tons and 3,062 tons, respectively.

Waste and Recycling

Industrial Waste in 2016

To achieve zero emissions of waste, the Chugai Group aims to increase its recycling ratio and further reduce its amount of landfill waste. In 2016, the amount of industrial waste generated was 2,550 tons (a decrease of 290 tons, or 10 percent, compared with 2015), the amount of landfill waste was 25 tons (unchanged from 2015), the final disposal ratio[8] was 1.0 percent, and the recycling ratio was 78 percent (a decrease of 1 percentage point from 2015). The recycling ratio fell slightly short of the target due to an increase in waste generated as a result of increased production activities and other factors, but we achieved the target for the final disposal ratio.

Biodiversity Protection

Water is an important raw material for pharmaceutical manufacturing, and is also a crucial global resource. The Chugai Group has been building awareness of the effective use of water resources by monitoring the volume used and discharged each year. Moreover, from the standpoint of protecting biodiversity, we began conducting WET tests in 2013 to ascertain the ecological impact of wastewater discharged from our facilities. In 2016, we conducted WET tests two times over the year at all plants and research laboratories, and confirmed that there were no problems.

Environmental Accounting

Environmental accounting data compiled in 2016 are shown below. Investments in 2016 totaled ¥1,217 million, while costs were ¥1,371 million. Major investments included air conditioning equipment. The economic benefit was ¥58 million.

2016 Investments and Costs for Environmental Protection (Millions of yen)

Breakdown of costs	Investments	Costs
(1) Business area costs	1,087	1,101
(2) Upstream and downstream costs	—	63
(3) Administration costs	130	199
(4) R&D costs	—	—
(5) Social activity costs	—	8
(6) Environmental remediation costs	—	—
Total	**1,217**	**1,371**

Training Internal Environmental Auditors for Global ISO14001 Standards

To deal with environmental problems on a worldwide scale, the Chugai Group trains internal environmental auditors who can offer advice for continuous improvement of environmental management systems (EMSs) based on their global knowledge.

Through a contract with the International Register of Certificated Auditors (IRCA) of the U.K. for its Organisations Employing Auditors (OEA) scheme, we have increased the number of IRCA-certified (provisional) internal environmental auditors to 30. These auditors lead Group EMSs from a viewpoint of contributing to environment-oriented management.

3. Includes hybrids and fuel-efficient vehicles
4. Direct emissions
5. Indirect emissions from energy consumption
6. Indirect emissions other than Scope 1 and 2
7. Greenhouse gas emissions associated with use of aircraft for business travel
8. Amount of landfill waste / Amount of industrial waste generated

がん治療と仕事の両立
TOKYO WORK CIRCLE PROJECT

In recognition of its efforts to establish working conditions for employees undergoing cancer treatment, Chugai received the Excellence Award for 2015 from the Tokyo Metropolitan Government as a "company providing support to employees with cancer to keep a good balance between treatment and work."

がん医療と職場の架け橋
Bridge between Clinic & Company

Chugai received the top award in the First Annual Bridge between Clinic & Company Awards (2016) conducted by Bridge between Clinic & Company, a project of the Ministry of Health, Labour and Welfare to support the balance of cancer treatment and work.

Working Support Handbook for Cancer Patients

Health and Safety Activities

Basic Approach

As a healthcare company, the Chugai Group recognizes the importance of employee health, and has worked to maintain and promote health. Going forward, we will take steps to pursue "organizational health" as well as employees' "individual health," with the aim of creating satisfying and rewarding work environments where all employees can do their jobs in good physical and mental health. Based on a policy of pursuing both "individual health" and "organizational health" in parallel, we are making proactive efforts to upgrade promotion frameworks throughout the Company, ensure safety, prevent occupational injuries, promote health maintenance, take measures for mental health and create vibrant, healthy working environments in cooperation with the health insurance society and the labor union.

Risk Assessment

The Chugai Group introduced safety and health risk assessment as a Company-wide activity in 2014 to substantially reduce workplace injuries and health hazards.

In 2016, we completed assessments across all divisions that research and manufacture pharmaceutical preparations and began measures to address the risks that were identified in their complex and varied workplaces.

We also improved systems throughout the Chugai Group for risk assessment of chemical substances handled, in addition to restricted substances,[9] and are working to reduce the risk of occupational injuries from these substances.

Health Management

Chugai has occupational physicians, nurses, psychologists, health officers and other occupational health staff to provide necessary support not only for employees who are unwell or on leave due to illness or injury, but for all employees who need consideration for their health condition at work, including those with abnormalities found in health checkups, those who work long hours, pregnant women, employees being treated for cancer or other diseases, and employees with disabilities. Occupational health staff, human resource managers and workplace supervisors cooperate as shown in the diagram below.

Support for Return to Work after Mental Health Leave

Support for employees returning to work after mental health leave is conducted within a framework similar to that for health management, with ongoing return-to-work programs tailored to each individual. As a result of this program, we found that a relapse-free job retention rate within a year was improved.[10] In addition, Chugai also conducts ongoing awareness activities including training for managers on promoting understanding of mental health problems and dealing with them appropriately.

Work Support Measures for Employees Undergoing Cancer Treatment

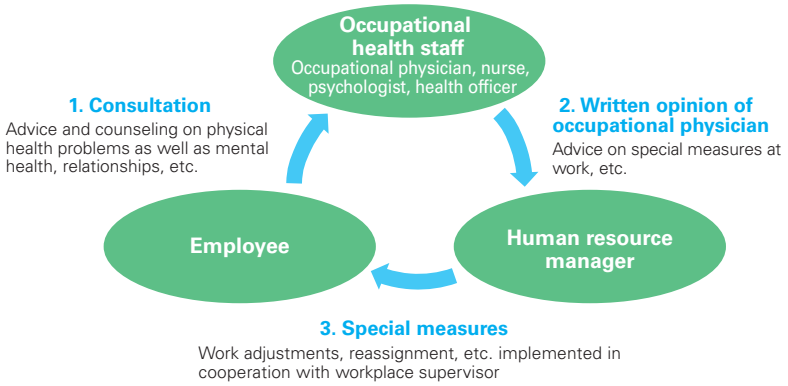
The Chugai Group has enhanced its support for employees who are working while undergoing cancer treatment so that they can do both without anxiety. We continue to maintain and improve the consultation system for carrying out measures in accordance with treatment conditions and the support system for working during outpatient treatments such as chemotherapy, hormone therapy or radiation therapy.

Creating Healthy, Energetic Workplaces

To prevent problems such as poor mental health or harassment, Chugai conducts measures to vitalize workplaces and improve the working climate to create highly productive environments where employees can work energetically. Since 2013, our health management and human capital development organizations have collaboratively conducted team coaching training for a cumulative total of 1,205 participants at 74 organizations as of December 31, 2016. Post-training surveys have shown improvement in work engagement, workplace identification and other items.

9. In accordance with the Industrial Safety and Health Act revised in June 25, 2014, implementing risk assessments for chemical substances (640 items) became obligatory upon enactment of the revision on June 1, 2016.
10. *Sangyo Eiseigaku Zasshi* **2016**, 54(6), 276-285

Basic Health Management Structure



Social Contribution

Initiatives and Performance in 2016

Promoted awareness of para-sports

Donated 1 vehicle each to 5 organizations (Total of 243 vehicles donated over 32 years)

Donation of welfare vehicles to provide transportation for home welfare services
(2016)

More than 80 (total over 26 years)

Cumulative number of countries receiving free therapeutic drugs for lymphangiomas
(2016)

29

Number of locations in which Chugai employees participated in the 24-hour charity event Relay For Life Japan
(2016)

Chugai employees participate as volunteers in Relay For Life Japan.

Basic Approach

As a responsible pharmaceutical company in healthcare, we proactively engage in activities such as raising awareness of diseases and disseminating pharmaceuticals in developing countries. In the area of welfare, in conjunction with our longstanding business activities in the renal and bone and joint fields, we conduct ongoing donations of specially equipped para-transit vehicles as we understand the importance of transportation assistance services for people who require in-home nursing care. We also support para-sports to create an environment where everyone can be active through sports. Regarding education, as a company that deals with leading-edge science we conduct activities to raise awareness of science and medicine, from elementary school children to university students as well as adults. Moreover, we cooperate with local communities and engage in disaster prevention education, mainly in areas where our research laboratories and plants are located.

Disease Awareness

Chugai participates in and co-sponsors a variety of activities to support cancer patients and their families. One such activity is Relay For Life Japan, an awareness support campaign that forges ties in the fight against cancer. This event, a 24-hour walk-a-thon in which cancer patients, their families and supporters compete as relay teams, was held in 50 locations throughout Japan in 2016. Chugai employees have participated as volunteers in Relay For Life Japan since 2007. A total of 639 employees took part as "Team Chugai" at 29 locations in 2016. As its main initiative for 2016, Chugai produced and offered a new "Interactive 3D Adventure (Lung Cancer Edition)," in which 1,515 people took part at 26 locations. While Team Chugai members provided explanations, participants watched the presentation through 3D viewers to learn about examinations for early detection of lung cancer and the importance of early treatment.

Support for Para-Sports

Chugai co-sponsors the Japanese Para-Sports Association (JPSA) as an official partner, and cooperates in activities to help realize the JPSA's philosophy of "creating a vital and inclusive society." The main activities Chugai conducted in 2016 are as follows.

- Co-sponsorship of *Asuchare!* (Challenge For Tomorrow) School project
  Chugai co-sponsored *Asuchare!* School, run by The Nippon Foundation Paralympic Support Center, as an initiative to realize an inclusive society through sports.

- Dispatch of volunteers to competitive sports events
  Chugai supported the 2016 Japan Para Wheelchair Rugby Championships by sending 10 employee volunteers to assist with setting up and dismantling the event venue and with English interpreting.

- Activities to raise awareness of para-sports
  - Co-sponsorship of a chair ski school for parents and children held by the Japan Chair Ski Association
  - Support for a wheelchair tennis camp for children
  - Operated a booth for experiencing wheelchair basketball and chair skiing at local community events and other venues

- Initiatives for employees and their families
  To deepen understanding of para-sports and people with disabilities, Chugai held a hands-on event for experiencing para-sports in cooperation with the Yokohama City Special Support School for the Visually Impaired, and a total of 22 employees and their family members participated.

Para-sports experience event

Disaster Relief

Support for Children in Stricken Areas

Chugai once again participated in the global charity event Roche Children's Walk conducted by Roche to support children in need. In 2016, of the total funds raised by Chugai employees and the matching amount from Chugai, ¥1.18 million was donated to *Hakku no Ie* (Huck's House), an NPO in Iwate Prefecture that supports children and people with disabilities in the area affected by the Great East Japan Earthquake of March 2011.

Donation ceremony at *Hakku no Ie*

Charity sale at the Fuji Gotemba Research Laboratories featuring goods from the affected areas

GHIT Fund

Global Health Innovative Technology Fund

1. A public-private partnership that makes more direct use of Japan's medical technologies, innovations and knowledge to support research and development of drugs, vaccines and diagnostics to fight serious diseases such as malaria, tuberculosis and other infectious diseases in developing countries (https://www.ghitfund.org/en)

ACCESS ACCELERATED

Moving NCD Care Forward

2. A global initiative focused on prevention and care of NCDs, launched by 22 major pharmaceutical companies from around the world. Access Accelerated works to help overcome barriers to NCD prevention, treatment and care through measures such as improving access to medicines in low and middle-income countries. (http://www.accessaccelerated.org/)

Charity Sale to Support the Areas Affected by the Great East Japan and Kumamoto Earthquakes

As part of its support for recovery from the 2011 Great East Japan and 2016 Kumamoto earthquakes, Chugai held a charity sale at its Fuji Gotemba Research Laboratories in cooperation with the Kesennuma Fisheries Cooperative Association and Japan's Central Union of Agricultural Co-operatives (JA) office in Kamimashiki, Kumamoto Prefecture. The event featured specialty products from Kesennuma and Mashiki, and sales totaled more than ¥590,000.

Welfare Vehicle Donation Program

Chugai's program to donate specially equipped welfare vehicles began in 1985 as part of activities to commemorate the Company's 60th anniversary. The program marked its 32nd year in 2016. A total of 243 vehicles have been donated since the start of the program, including the five donated in 2016.

Securing the means for senior citizens and disabled people living at home to go to places such as hospitals, day service centers and day care centers and for staff from these facilities to visit homes to perform in-house care, is significant from the viewpoint of enhancing welfare services.

The welfare vehicle donation program is conducted in cooperation with the Japan National Council of Social Welfare and Central Community Chest of Japan, and through it vehicles have been donated to recipients in all of Japan's 47 prefectures.

Initiatives for Global Health

As international contributions in the area of global health, Chugai participates in the Global Health Innovative Technology Fund (GHIT Fund)[1] and Access Accelerated,[2] which conducts measures for people living with noncommunicable diseases (NCDs).

GHIT Fund

Jointly established in April 2013 with funding from Japanese pharmaceutical companies, the Japanese government (the Ministry of Foreign Affairs and the Ministry of Health, Labour and Welfare), the Bill & Melinda Gates Foundation and the United Nations Development Programme, the GHIT Fund is Japan's first public-private partnership to support and promote research and development of drugs, vaccines and diagnostics for global health.

In December 2014, Chugai announced its participation in the GHIT Fund and contributed capital. At the same time, it decided to undertake a specific drug development program using its innovative discovery technologies and research resources. As a partner in the GHIT Fund, Chugai expects that furthering the development of new medical technologies will go beyond fulfilling its basic social responsibility, leading to the promotion of health and sound economic growth in developing countries. In addition, Chugai is participating in this public-private partnership in the belief that it is a necessary long-term investment in Japan's future growth.

Access Accelerated

Access Accelerated was established in January 2017 by 22 global pharmaceutical companies including Chugai at the World Economic Forum Annual Meeting held in Davos, Switzerland. In partnership with the World Bank Group and the Union for International Cancer Control (UICC), Access Accelerated is working to achieve the UN Sustainable Development Goal 3 target of reducing premature deaths due to NCDs by one-third by 2030.

Approximately 80 percent of NCD deaths occur in low and middle-income countries. Ensuring access to medicines in those regions is a key issue for sustainable improvement in the health of the working population. Through participation in Access Accelerated, Chugai will extend its efforts to healthcare and health in developing countries.

Corporate Communication

Initiatives and Performance in 2016

20

Information events for the media and institutional investors
(2016)

464 (cumulative total)

Security analysts and institutional investors worldwide with whom individual meetings/ conference calls were held
(2016)

11

Briefings for individual investors and shareholders
(2016)

2

Plant tours for shareholders and media
(2016)

Director, Executive Vice President & CFO Yoshio Itaya was selected as both the sell-side (securities companies) and buy-side (institutional investors) "All-Japan Executive Team Best CFO" in the healthcare and pharmaceuticals sector.* This was his fourth consecutive year of selection by the sell side in recognition of his stance of increasing convenience for and enhancing communication with shareholders, investors and analysts in Japan and overseas.

* Initiated by Institutional Investors LLC in 2013, this competition ranks candidates based on a survey of securities analysts and institutional investors around the world, including Japan.

Note: For further details on policies for disclosure to shareholders and investors, securities analysts and other capital market participants, please refer to the Chugai website (https://www.chugai-pharm.co.jp/english/ir/policy/disclosure.html).

Communication with Society

Chugai emphasizes communication with stakeholders to increase its corporate value. As such, we are working to enhance communication not only with our shareholders and investors, but with the general public.

Moreover, by sharing Chugai's unique strengths with our stakeholders outside the Company, we aim to gain their recognition and understanding. (See "The Seven Strengths That Support Our Innovation" on pages 12-13 for details.)

Our slogan is "INNOVATION BEYOND IMAGINATION." It conveys the commitment of the Company and the strong desire of its employees to make Chugai a top pharmaceutical company that continuously creates not only the products anxiously awaited by people around the world but also unprecedented medicines that exceed all expectations.

Media Relations

Chugai conducts media relations on a daily basis to proactively disseminate information through methods including press releases, assistance with information gathering, various types of information meetings, facility tours and informal discussions with management. Recognizing the important role played by the media in conveying corporate information to all its stakeholders, Chugai works to build and maintain good relationships with media outlets while disclosing information appropriately and in a timely manner.

Communication with Shareholders and Investors

General Meeting of Shareholders

Unlike many Japanese companies, which have fiscal years ending in March, Chugai's fiscal year ends in December. As a result, we can avoid holding our general meeting of shareholders on the same day as other companies. Convocation notices for the general meeting of shareholders are normally sent out more than four weeks prior to the meeting date.

The 106th annual general meeting of shareholders was held on March 23, 2017. After the presentation of the business report through narration and materials, shareholders deliberated on agenda items concerning appropriation of retained earnings, election of directors and Audit & Supervisory Board Members, and the amount and details of remuneration to be paid to directors in the form of shares with restriction on transfer. All agenda items were approved and passed by a majority.

IR Activities

Coinciding with financial results announcements, Chugai holds information meetings and conference calls for investors, analysts and the media. In 2016, we held an information meeting for Bonviva Tablet, an osteoporosis agent that we launched in April 2016. After an important overseas academic conference, we held an "R&D call" to explain and answer questions in a conference call format about information of great interest to investors. We also held a "CEO Day" for investors and analysts where we presented the current conditions and future direction of the pharmaceutical industry and the CEO spoke about Chugai's strategies. In addition, we have conducted tours of the Utsunomiya Plant each year since 2013 to increase communication with individual shareholders. Moreover, Chugai is enhancing its outreach to individual investors by holding information meetings for them at branches of securities companies throughout Japan.

In 2016, senior management continued to hold overseas roadshows and, in addition to visiting institutional investors in Europe, the United States and Asia, planned IR Group-led roadshows as an additional initiative to cultivate new institutional investors, mainly in North America. To deepen mutual understanding through opportunities for direct discussion between the President and market participants in small groups, we held a series of four informal discussions between the President and a total of 45 institutional investors and securities analysts. We will continue measures to enhance "face-to-face IR with management" to promote understanding of Chugai's corporate value.

As a rule, we disclose information simultaneously in Japanese and English, and endeavor to provide information in a prompt and fair manner in Japan and overseas.

Detailed Report

Corporate Governance

Basic Approach

Based on its strategic alliance with Roche, a leading global pharmaceutical company, Chugai's mission is to "dedicate itself to adding exceptional value through the creation of innovative medical products and services for the benefit of the medical community and human health around the world," and the company defines its basic management objective as "to become a top Japanese pharmaceutical company by providing a continuous flow of innovative new medicines domestically and internationally."

While being a member of the Roche Group, Chugai maintains its managerial autonomy and independence as a publicly listed company and will constantly strive to perfect its corporate governance as established in "Chugai Pharmaceutical Co., Ltd. Basic Corporate Governance Policy," in order to fulfil the mandate of its many stakeholders appropriately and fairly for the achievement of its basic management objective.

Management Decision-Making, Execution and Oversight of Business Operations

To expedite business operations and clarify executive responsibilities, Chugai has adopted an executive officer system to keep decision-making on management issues of primary importance separate from business execution. The Board of Directors is in charge of the former, while executive officers are entrusted by the board with the authority to conduct the latter. While the Board of Directors is in charge of decision-making with respect to the most important managerial matters, other decisions on business operations are made at organizations such as the Executive Committee. In execution of business, since March 2012 the Chief Executive Officer (CEO) has ultimate responsibility for decisions on Company-wide management strategies and other important matters, and the Chief Operating Officer (COO) is responsible for decisions on business execution.

Board of Directors

The Board of Directors makes decisions on management issues of primary importance and receives quarterly reports on the state of business execution as well as reports on key decisions made at the Executive Committee. It is also responsible for oversight of the execution of business operations. The board consists of 10 directors including three outside directors. In 2016, the Board of Directors convened nine times.

Executive Committee

Decisions concerning important matters related to business execution are made at organizations such as the Executive Committee. It consists of key executive officers, including the CEO and COO, and the full-time Audit & Supervisory Board members.

In addition, the IR Committee, Risk Management Committee, Corporate Social Responsibility Committee and Compliance Committee have been established under the Executive Committee.

Appointment Committee and Compensation Committee

As an advisory board to the Board of Directors, the Appointment Committee deliberates on the selection of director candidates and candidates to succeed the executive directors, including the CEO. The Appointment Committee consists of the CEO and at least three outside committee members, including at least one independent outside director, appointed by the Board of Directors from among the outside directors and persons with experience as outside directors.

Reasons for Election of Outside Directors and Outside Audit & Supervisory Board Members

	Name	Outside Position	Reason for Election
Outside Directors	Yasuo Ikeda	Vice-Chairman of the Board of Directors, Musashi Academy of the Nezu Foundation, University Professor of Waseda University, Professor Emeritus of Keio University	Recommended or appointed based on the Company's judgment that as an outside director he can properly provide advice and monitoring with respect to the Company's management and business because he has abundant experience and knowledge as a doctor and university professor. In addition, he meets Chugai's Independence Standards for an outside officer and the requirements for an independent director set by Tokyo Stock Exchange, Inc., to which notification has been submitted.
	Masayuki Oku	Director of Sumitomo Mitsui Financial Group, Inc., Outside Director of Kao Corporation, Outside Director of Komatsu Ltd., Outside Director of Panasonic Corporation, Outside Corporate Auditor of Nankai Electric Railway Co., Ltd., Non-executive Director of Bank of East Asia (China)	Recommended or appointed based on the Company's judgment that as an outside director he can properly provide advice and monitoring because he has abundant experience and knowledge of corporate management and other fields. In addition, he meets Chugai's Independence Standards for an outside officer and the requirements for an independent director set by Tokyo Stock Exchange, Inc., to which notification has been submitted.
	Yoichiro Ichimaru	Executive Advisor of Toyota Motor Corporation, Representative Director, Chairman of the Board, Aioi Nissay Dowa Insurance Co., Ltd.	Recommended or appointed based on the Company's judgment that as an outside director he can properly provide advice and monitoring with respect to the Company's management and business because he has abundant experience and knowledge of corporate management. In addition, he meets Chugai's Independence Standards for an outside officer and the requirements for an independent director set by Tokyo Stock Exchange, Inc., to which notification has been submitted.
Outside Audit & Supervisory Board Members	Hisashi Hara	General Representative of the Asia-Pacific region, The Law Office of Nagashima Ohno & Tsunematsu	Recommended or appointed based on the Company's judgment that he can properly execute the duties of an outside member of the Audit & Supervisory Board because he has abundant experience and knowledge as an expert in corporate legal affairs (attorney at law).
	Takaaki Nimura	Representative of Nimura Certified Public Accounting Office, Outside Director and Chairman of Audit Committee of Sony Corporation	Recommended or appointed based on the Company's judgment that he can properly execute the duties of an outside member of the Audit & Supervisory Board because he has abundant experience and knowledge as an expert in corporate accounting (certified public accountant). In addition, he has been designated as an independent member of the Audit & Supervisory Board based on the regulations of Tokyo Stock Exchange, Inc., to which notification has been submitted.

Independence Standards

Chugai will judge outside officers (outside directors and outside Audit & Supervisory Board members) that do not fall under any of the following to be independent officers (independent outside directors and independent outside Audit & Supervisory Board members) with no risk of a conflict of interests with Chugai's general shareholders:

(1) a person who is currently or has been in the past ten years an executive[1] of Chugai or any of its subsidiaries (collectively, the "Chugai Group");
(2) a person who is currently or has been in the past five years an executive of the parent company or any sister company of Chugai;
(3) a person for whom the Chugai Group is a major business partner[2] or an executive of that person;
(4) a major business partner[2] of the Chugai Group or an executive of that business partner;
(5) a major lender[3] of the Chugai Group or an executive of that lender;
(6) a consultant, accounting professional, or legal professional who receives a large amount of money or other such assets[4] other than officer remuneration from the Chugai Group (including any person belonging to a corporation, partnership, or other such organization that receives such assets);
(7) a major shareholder[5] of Chugai or an executive of that shareholder;
(8) an executive of a company for which the Chugai Group is a major shareholder
(9) an executive of a company that engages a director or Audit & Supervisory Board member (regardless of whether full or part time) from the Chugai Group or an executive of the parent company or any subsidiary of such company;
(10) a director or other executive of a corporation, partnership, or other such organization that receives contributions or aid exceeding a certain amount[6] from the Chugai Group;
(11) an accounting auditor of the Chugai Group or any person belonging to an auditing corporation that is an accounting auditor of the Chugai Group; and
(12) a close relative[7] of any person (limited to those in material positions[8]) who falls under any of (1) through (11) above.

1. An executive director, executive officer, corporate officer, or other such employee or the like.
2. A business partner whose transactions with the Chugai Group in any business year within the past five years total 2 percent or more of the consolidated sales of that business partner or the Chugai Group.
3. A lender from whom the Chugai Group's borrowings at the end of the business year exceed 2 percent of the Chugai Group's consolidated total assets at the end of that business year.
4. In any business year within the past five years, money or other such assets in excess of the greater of (a) ¥10 million annually or (b) 2 percent of the total annual income of the person receiving the money or other such assets.
5. A shareholder directly or indirectly holding 10 percent or more of total voting rights in any business year within the past five years.
6. In any business year within the past five years, contributions or aid exceeding the greater of (a) ¥10 million annually or (b) 2 percent of the total annual income of the person receiving the contributions or aid.
7. A spouse or a relative within the second degree of kinship.
8. Directors (excluding outside directors), corporate officers, and executive officers, or any person with authority equivalent to any of these.

As an advisory board to the Board of Directors, the Compensation Committee deliberates on remuneration policy and the remuneration of individual directors. It consists of at least three outside committee members, including at least one independent outside director, appointed by the Board of Directors from among the outside directors and persons with experience as outside directors.

Chugai International Council (CIC) Composition

CIC Chair

- Henry L. Nordhoff (U.S.)
  Former Chairman of the Board, Gen-Probe, Inc.

CIC Members

- Virginia Bottomley (U.K.)
  Former Health Secretary of the U.K.
- William M. Burns (U.K.)
  Former Chief Executive Officer of the Pharmaceuticals Division, F. Hoffmann-La Roche Ltd
- Andrew von Eschenbach (U.S.)
  Former Commissioner of the U.S. Food and Drug Administration
- Victor Halberstadt (Netherlands)
  Professor, Leiden University
- Andre Hoffmann (Switzerland)
  Vice Chairman, ROCHE HOLDING LTD
- Franz B. Humer (Switzerland)
  Former Chairman, Diageo plc
  Former Chairman, ROCHE HOLDING LTD
- Robert A. Ingram (U.S.)
  Former Vice Chairman of Pharmaceuticals, GlaxoSmithKline plc
- Arnold J. Levine (U.S.)
  Professor at the Institute for Advanced Study, Princeton University
  Discoverer of the p53 cancer suppressor protein
- Abraham D. Sofaer (U.S.)
  Senior Fellow at the Hoover Institution, Stanford University
  Former legal advisor to the U.S. Department of State
- Sonosuke Kadonaga (Japan)
  President, Intrinsics

Introduction of Outside Perspectives

To reflect diverse stakeholder viewpoints in business decisions, Chugai has taken measures to obtain outside perspectives, such as nominating outside directors and establishing a council made up of domestic and overseas specialists.

Chugai International Council

To respond accurately to changes in the global business environment and conduct international business in an appropriate manner, Chugai works to further enhance decision-making by operating the Chugai International Council (CIC), which is composed of Japanese and international professionals in various sectors. Of the 11 council members, including the CIC Chair, one is a woman.

Outside Directors

Chugai has appointed outside directors to reflect the views of a broader range of stakeholders in management decision-making.

Outside directors point out issues and give advice concerning Chugai's management from their abundant experience and knowledge as corporate executives, physicians or university professors. The rate of attendance by outside directors at the nine board meetings in 2016 was 90.3 percent on average, the highest being 100 percent and the lowest 66.7 percent.*

Of note, the two directors appointed by Roche no longer met the requirements for outside director under the amended Companies Act as of the end of the General Meeting of Shareholders held on March 24, 2016.

* The rate of attendance for the two directors from Roche includes the number of board meetings that they attended as outside directors prior to the end of the General Meeting of Shareholders on March 24, 2016.

Support System for Outside Directors and Outside Audit & Supervisory Board Members

Chugai appoints staff in the Secretarial Department to support the activities of outside directors. Managers including the General Manager of the Corporate Planning Department provide, as needed, reports on major changes in the operating environment and advance explanation of particular items to further enhance decision-making.

The Office of Audit & Supervisory Board Members is responsible for supporting the activities of Audit & Supervisory Board members in ways such as conveying internal information and providing materials for board meetings in advance.

In addition, Chugai invigorates the deliberations of the Board of Directors by preparing materials containing adequate information relevant to agenda items and distributing them to outside directors and outside Audit & Supervisory Board members well in advance of meetings. We also provide additional information required by outside directors and outside Audit & Supervisory Board members and take advantage of opportunities to provide advance explanation.

Auditing System

Audits by Audit & Supervisory Board Members

Chugai has an Audit & Supervisory Board, and audits of management decision-making and business execution are conducted independently from business operations by four Audit & Supervisory Board members, including two outside members.

Audit & Supervisory Board members express their opinions in real time from the standpoint of appropriate corporate governance in a variety of occasions including meetings of the Board of Directors, the Executive Committee (full-time Audit & Supervisory Board members only) and the Audit & Supervisory Board.

Internal Audits

The Audit Department, with a staff that includes certified internal auditors and certified fraud examiners, conducts audits of the status of business execution of the Chugai Group, including subsidiaries, from various standpoints, such as the effectiveness, efficiency and compliance of business activities; reports and makes recommendations to the Executive Committee; and reports to the Audit & Supervisory Board. In addition, Audit Department staff serve as Audit & Supervisory members at subsidiaries.

In addition, the Audit Department assesses whether effective internal controls are established and being implemented in accordance with internal control standards generally accepted as fair and appropriate in Japan to ensure the reliability of financial reporting based on the Financial Instruments and Exchange Act.

Accounting Auditor

KPMG AZSA LLC handles accounting audits and internal control audits.

Cooperative Auditing

Audit & Supervisory Board members, the Audit Department and the Accounting Auditor cooperate closely by regularly exchanging information to improve the effectiveness of their respective audits. Audit & Supervisory Board members and the Accounting Auditor confirm each other's audit plans and hold regular meetings to exchange opinions on matters including the results of quarterly audit reports. In addition, they work to strengthen governance at Group companies by coordinating with Audit & Supervisory Board members at subsidiaries on quarterly reports, fiscal year-end reports and other matters. The Office of Audit & Supervisory Board Members ensures the independence and enhances the auditing functions of Audit & Supervisory Board members.

Amount of Remuneration Paid to Directors and Audit & Supervisory Board Members (2016)

	Total Remuneration, etc. (Millions of yen)	Total Remuneration, etc. by Type (Millions of yen)				Number of Eligible Officers
		Regular Compensation	Bonuses	Common Stock Options	Stock Options as Stock- based Compensation	
Directors (excluding outside directors)	750	313	191	123	122	5
Outside Directors	51	51	—	—	—	3
Total	801	555		123	122	8
Audit & Supervisory Board Members (excluding outside members)	63	63	—	—	—	2
Audit & Supervisory Board Members (outside members)	22	22	—	—	—	3
Total	85	85		—	—	5

1. Amounts are rounded to the nearest million yen.
2. The table above includes one Audit & Supervisory Board member who resigned during 2016.
3. The amount of remuneration (regular compensation and bonuses) paid to all directors is no more than ¥750 million per year as per the resolution passed in the 96th Annual General Meeting of Shareholders held in March 2007. Apart from this, the maximum amounts of compensation paid to directors in the form of stock acquisition rights allocated as stock options are ¥125 million per year for common stock options and ¥150 million per year for stock options as stock-based compensation as per the resolution passed in the 98th Annual General Meeting of Shareholders held in March 2009.
4. The amount of remuneration for all Audit & Supervisory Board members was no more than ¥100 million per year as per the resolution passed in the 95th Annual General Meeting of Shareholders held in March 2006.
5. The amount of bonuses shown in the table above is the amount of the provision of reserve for bonuses to directors during 2016.
6. The amounts of common stock options and stock options as stock-based compensation and the number of eligible officers shown in the table above are the amounts that were posted as expenses for 2016 and the number of officers in 2016, respectively.
7. A resolution was passed in the 98th Annual General Meeting of Shareholders held in March 2009 to abolish the retirement benefits system for directors with executive power, and to pay retirement benefits corresponding to the residual term up to the abolishment of the system to each concerned director remaining in office after the closing of the 98th Annual General Meeting of Shareholders, at the respective time of retirement.
8. The amount of compensation received by director Daniel O'Day from the parent company of the Company or subsidiaries of the said parent company as an officer while serving as an outside director of the Company in 2016 totaled ¥258 million (converted into yen at the average exchange rate in 2016). In line with the enforcement of the "Act for Partial Revision of the Companies Act" (Act No. 90 of 2014), Mr. O'Day changed from outside director to director (non-executive) as of the closing of the 105th Annual General Meeting of Shareholders held on March 24, 2016.

Amount of Remuneration Paid to Representative Directors

	Total Consolidated Remuneration, etc. by Type (Millions of yen)				Total Consolidated Remuneration (Millions of yen)
	Regular Compensation	Bonuses	Common Stock Options	Stock Options as Stock-Based Compensation	
Osamu Nagayama	125	142	55	58	380
Motoo Ueno	58	25	21	20	123
Tatsuro Kosaka	61	32	21	24	138

1. Amounts are rounded to the nearest million yen.
2. Other than the representative directors in the table above, no director or Audit & Supervisory Board member received total remuneration of more than ¥100 million.

Officer Remuneration

Chugai's fundamental policy for remuneration of directors and Audit & Supervisory Board members is to attract outstanding people and appropriately motivate them in order to continuously increase the Chugai Group's corporate value. At the same time, remuneration levels and the remuneration system are designed to link compensation of officers with the Company's performance and promote shared values with shareholders.

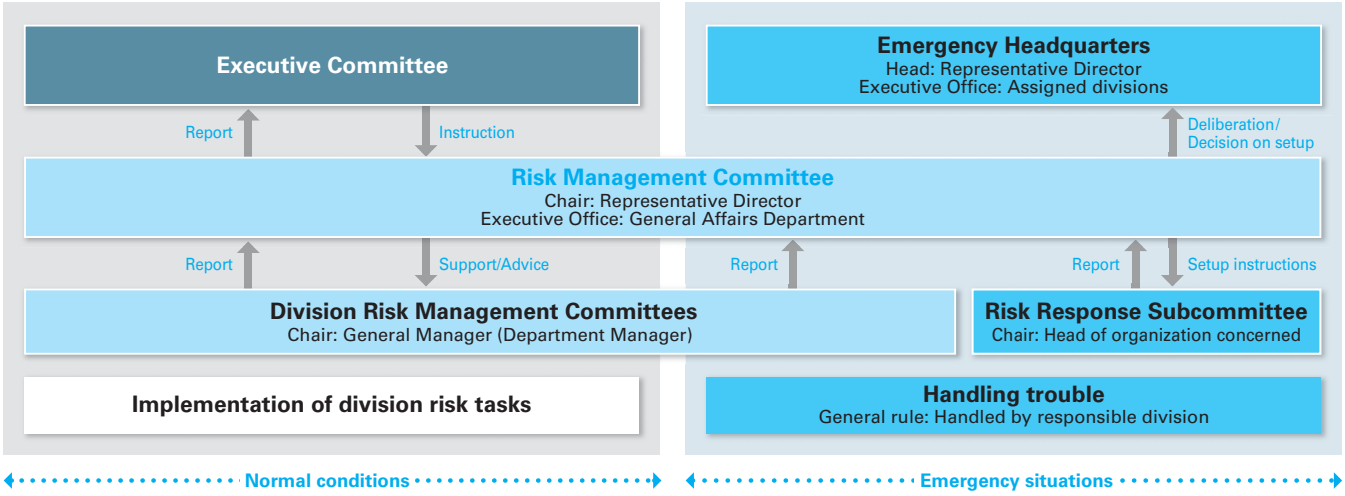
In order to further clarify the link between remuneration and the Company's business performance and shareholder value, and to raise directors' motivation and morale to improve performance, remuneration of executive directors consists of bonuses paid according to performance in each fiscal year and stock options granted as a long-term incentive, in addition to fixed regular compensation. These three components are paid by resolution of the Board of Directors based on the Company's criteria within the limits on remuneration approved by the General Meeting of Shareholders. The Remuneration Committee sets policies and deliberates details concerning remuneration of directors with specific titles to ensure the objectivity and transparency of the remuneration-setting process.

Remuneration of outside directors and Audit & Supervisory Board members (including outside members) consists solely of fixed regular compensation, and is paid by resolution of the Board of Directors for outside directors and through consultation with the Audit & Supervisory Board for Audit & Supervisory Board members. The amounts are set within the limits approved by the General Meeting of Shareholders.

A resolution was passed in the 98th Annual General Meeting of Shareholders held in March 2009 to abolish the retirement benefits system for directors. A resolution was passed in the 95th Annual General Meeting of Shareholders held in March 2006 to abolish the retirement benefits system for outside directors and Audit & Supervisory Board members (including outside members).

At the 106th Annual General Meeting of Shareholders held on March 23, 2017, a resolution was passed to newly introduce shares with restriction on transfer in place of the current stock options for executive directors of the Company in order to further promote shared value with shareholders and provide an incentive for directors to strive for continuous improvement of corporate value by further increasing the linkage between their remuneration and the Company's mid-to-long-term performance. The aggregate amount of such compensation shall not exceed ¥345 million on top of the aforementioned fixed regular compensation and bonuses.

Chugai Risk Management System



Maintenance and Management of Internal Controls

On May 18, 2006, the Company approved the Board of Directors' resolutions concerning the Internal Control System as its basic policies in maintaining systems for ensuring appropriate business operations. The status of implementation of the Internal Control System will be reported regularly at Board of Directors meetings, and any necessary revisions will be made in a timely manner to maintain effective internal controls.

Risk Management

Chugai has established Risk Management Regulations based on its Risk Management Policy to prevent risks that could affect the Company's business activities, as well as to ensure prompt and appropriate handling of problems that arise. We have also established a Risk Management Committee under the Executive Committee, and Division Risk Management Committees. Division Risk Management Committees summarize and create risk maps of all the risks facing their divisions, make proactive efforts to prevent such risks, and submit reports on the progress of those efforts to the Risk Management Committee. The Risk Management Committee identifies Group-wide risk issues that may have a material impact on management and submits a progress report to the Executive Committee concerning preventive measures. (See "Business Risks" on page 125 for details.)

Compliance

Rooted in its belief that corporate ethics take priority over profit, Chugai places paramount importance on respect for life, and strives for fair and transparent corporate activities based on high ethical standards, along with sincere scientific initiatives.

As well as strictly complying with laws and regulations such as the Law for Ensuring the Quality, Efficacy and Safety of Drugs and Medical Devices and the voluntary Code of Practice for the industry established by the Japan Pharmaceutical Manufacturers Association (JPMA), Chugai proactively takes part in the activities of the Fair Trade Council of the Ethical Pharmaceutical Drugs Marketing Industry, the JPMA Code Compliance Committee and other organizations. In addition, by establishing our own two guidelines for transparency, Chugai works to ensure a high level of ethics, morality and transparency in its various business activities including collaboration with medical institutions and other parties and cooperation with patient groups. (For details about these transparency guidelines, see the Chugai website.)

In light of increasing societal demands for greater compliance in the pharmaceutical industry, we have strengthened compliance measures Company-wide. In addition to working to enhance compliance education in each of our training programs, we conducted compliance risk management measures in each organizational unit. Moreover, every six months the Corporate Social Responsibility Department conducts monitoring surveys regarding compliance status. Surveys are conducted for the entire organization, including subsidiaries and affiliated companies in Japan and overseas, and the results are reported to the Corporate Social Responsibility Committee. Each organization works to ensure thorough legal compliance in the workplace through BCG promotion managers and assistants and holds corporate ethics courses twice a year, among other programs.

The BCG Hotline and internal and external Harassment Hotlines have been established to receive employee inquiries and reports concerning laws, Company rules, the Chugai Business Conduct Guidelines (BCG) and other related matters.

In January 2017, the compliance oversight functions that were previously handled by multiple committees to comply with pharmaceutical regulations, general laws, industry standards, Company rules and healthcare compliance, were consolidated, and the Compliance Committee, a corporate management committee, was established to create an administrative system linked more directly to management. Compliance oversight functions (Corporate Social Responsibility Department, Quality & Regulatory Compliance Unit) were established to monitor, lead and support the compliance of the Chugai Group as a whole, including overseas subsidiaries, creating a horizontal global compliance management framework.

Addressing the Corporate Governance Code

Chugai implements all of the principles of the Corporate Governance Code of the Tokyo Stock Exchange. Based on these principles, we enacted the Chugai Pharmaceutical Co., Ltd. Basic Corporate Governance Policy on November 25, 2015 to institute our basic approach to corporate governance, and announced it on our website.

Disclosure Policy

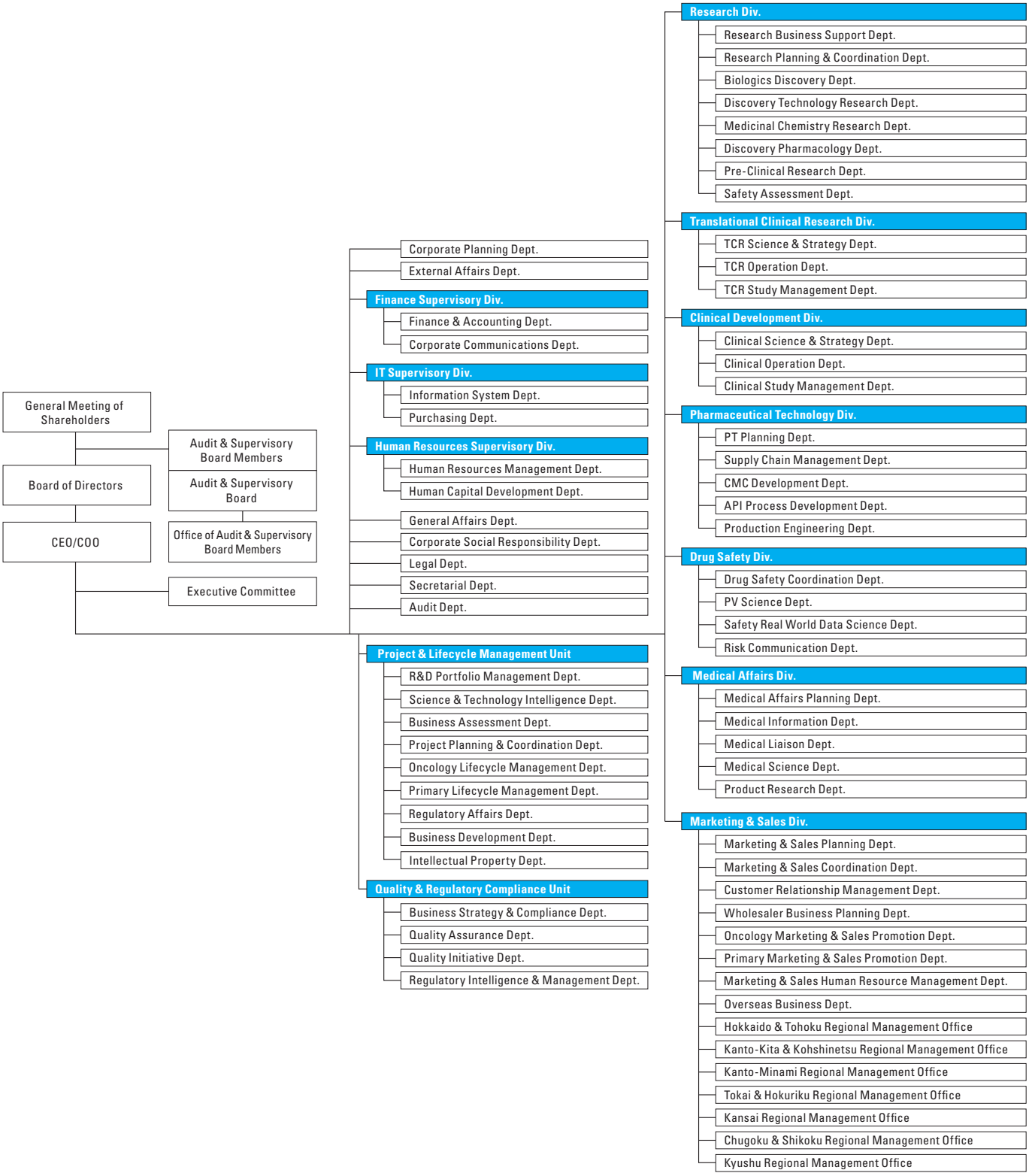
Chugai conducts interactive corporate communication activities to deepen mutual understanding and build relationships of trust with its stakeholders, such as patients, healthcare providers, shareholders, investors and employees. In order to achieve these objectives, Chugai ensures that information related to its business activities is made available in a transparent, fair and consistent manner to all stakeholders.

Chugai's policy for disclosing information to shareholders and investors is to make timely, appropriate and fair disclosure of information in accordance with the Financial Instruments and Exchange Act and relevant rules of the stock exchange on which Chugai's shares are listed in order to receive fair valuation in capital markets. In addition, measures to allow easy access to disclosed information have been established to ensure transparency.

Chugai has established an IR Committee composed of the CFO and general managers of the Corporate Communications Department, the Corporate Planning Department, the Finance & Accounting Department, the Corporate Social Responsibility Department and the General Affairs Department as a corporate management committee. The IR Committee holds regular meetings and is responsible for the establishment, revision and internal dissemination of the information disclosure policy, and for the management and promotion of information collection, disclosure and other related activities. Top management, including the Chairman and key executive officers, has primary accountability for disclosure. In addition, the Corporate Communications Department takes the lead in coordinating with relevant departments to disclose information promptly.

Corporate Governance That Makes Our Corporate Philosophy a Reality →Page 41

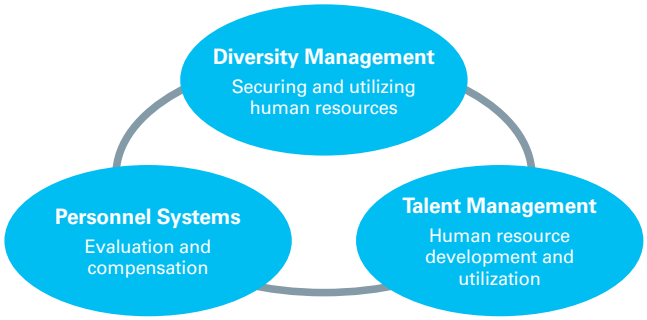
Organization (As of April 1, 2017)



Human Resource Management

Human Resource Strategy

People are an invaluable asset in generating a company's growth and development. In line with that fundamental principle, Chugai's human resource management is based on the three pillars of diversity management, talent management and personnel systems. We are fostering an organizational culture of respect for diverse values, not only in attitudes but also through further measures in areas such as personnel systems, mechanisms and work styles to make diversity in human resources a value of our organization. In this way, we will generate innovation and become a top pharmaceutical company.



Diversity Management

Diversity and Inclusion

Chugai has placed priority on D&I to enable a rich variety of employees to work enthusiastically and create new value. To begin addressing this issue, in 2010 we launched a CEO-led management working team to deal with gender issues, and in 2012 established the Diversity Office to promote measures dealing with nationality and age in addition to gender. Besides distributing educational guidebooks to all employees and conducting diversity management training for all managers, we have conducted activities to promote the concept in every department. Through these initiatives, we have deepened understanding and moved to create workplace environments in which diverse employees can make full use of their talents. In promoting gender diversity, we are taking active steps to provide opportunities for women to succeed. We set a target for 2018 of a 13 percent female manager ratio, and have implemented career planning and development measures. We will continuously cultivate managers to expand the ranks of the next generation of leaders.

NADESHIKO BRAND 2017

For three years in a row, Chugai has been selected as a "Nadeshiko Brand" for its exceptional record in promoting the success of women.

To promote the success of older employees, we are building awareness of career training and other programs, as well as engaging every employee by establishing working systems and providing opportunities to play important roles. The number of non-Japanese people we employ in Japan is also increasing. We provide information and support in English for non-Japanese employees, organize gatherings and take other steps to create a better environment for working together with Japanese colleagues. In addition to attributes such as gender and age, we are diversifying in terms of employees' work styles, including telecommuting. We will continue our efforts to foster an inclusive organizational culture so that all employees can make the most of their abilities regardless of gender, nationality or age. Under IBI 18, we will complement the themes of gender, nationality and age through initiatives that put inclusion into practice with a focus on individual diversity. Our aim is to use diversity to energize our organization and contribute to the success of our business.

Pursuing Work-Life Synergy

We want all employees to have individual work styles and lifestyles that can accommodate issues such as childbirth, child care and nursing care. In 2008, 2011 and 2015, Japan's Ministry of Health, Labour and Welfare certified Chugai under the Act on Advancement of Measures to Support Raising Next-Generation Children, and the Company is currently conducting its Phase 4 Action Plan.

"Kurumin" mark

Diversity and Inclusion Roadmap for Progress during IBI 18

	1st Stage (2010-2015)	2nd Stage (from 2016)		
	Understanding diversity Laying the foundations for the active participation of all individuals	Initiate action to promote innovation Inclusion		
		2016	2017	2018
Diversity and Inclusion (D&I)		Basic knowledge to inculcate D&I	Managers learn behavior to leverage D&I	Organization embraces behavior to leverage D&I and puts it into practice
Gender		Expand programs to cultivate female leaders	Increase talent pool Enhance plan to develop individuals	Expand line managers
Age		Study measures through senior task force activities	Implement policies to expand opportunities for active participation	Foster a sense of career autonomy and cultivate a workplace climate for active participation
Nationalities		Enhance recruiting	Expand awareness and scope of work environment enhancements	Increase and establish non-Japanese employees

Vision for Achievement of IBI 18

Energize our organization and drive business performance by actively practicing D&I

Moreover, beginning from 2007, the labor union and management have been promoting the reduction of excessive working hours. In 2013, we summarized our approach to work-life balance as "the pursuit of work-life synergy," and since then we have been endeavoring to promote understanding of the concept and adoption by employees. Under this concept, when individuals and workplaces come up with original ways to work and live, and pursue synergy between the two, it helps to expand the potential of individuals and raise the productivity of the organization, thus creating a win-win relationship between the Company and each employee.

Talent Management System

Chugai conducts talent management to secure and nurture the leaders and core human resources who will carry out its management strategies to become a top pharmaceutical company. Specifically, in April 2016 each organization continued its efforts from the previous year, holding discussions on medium-to-long-term human resource development policy, drafting a human resource development plan and creating a talent pool. Based on the development plans, the organizations carried out strategic employee assignment and training designed to strengthen leadership from a Company-wide perspective.

In addition, we clarified our succession plan by selecting successor candidates for a total of 94 general managers and department managers in Japan. We are currently implementing development plans for these candidates to help them strengthen a variety of skills and cultivate a wide-ranging perspective to ensure that they can display leadership on a global level.

This talent management system will enable Chugai to systematically and continuously develop and turn out the next generation of leaders and core employees while strengthening human resources and boosting motivation throughout the Company.

Three Goals of the Talent Management System

Goal 1	**Formulate and implement human resource development plans** according to the capabilities and aptitude of individual employees
Goal 2	**Build and manage a talent pool** from which to select successor candidates
Goal 3	**Formulate and implement a succession plan** to serve as a framework for evaluation, selection, development and assignment

Career Development Framework

Our career policy is to "Support employee autonomy and mutual growth by placing importance on providing employees with opportunities to realize and nurture their own value." With the career filing system as the basic cycle, we focus on workplace dialogue and management centering on the awareness of the employee concerned and the support and advice of his or her manager to facilitate self-directed career development. We also supplement the basic cycle with various measures to promote further autonomy and mutual growth.

The Career Consultation Office, established in 2007, supports the use of the various career-related systems available within the Company by providing employees with information for planning their careers and tips on skill development. As of December 31, 2016, a total of 706 people had come to the office for consultation.

Personnel Systems

Issues including globalization, low birthrates and aging populations are changing our operating environment, and competition among companies is increasing. Chugai needs to respond to change more than ever to continue growing in this environment.

Our ability to achieve our goal of becoming a top pharmaceutical company lies in the capabilities of individuals. The pace of individual growth dictates the speed of corporate growth.

With simplicity, flexibility and autonomy as watchwords, we will use our personnel systems to help our people grow quickly and will back them up as they take on challenges.

Equal Opportunity and Fairness in Recruiting

Based on its equal opportunity policy, Chugai treats and compensates its employees equally regardless of gender, age, nationality or disability. In accordance with this policy, we actively seek to hire disabled people in addition to hiring new university graduates, mid-career professionals and non-Japanese. As of December 31, 2016, the ratio of employees with disabilities in the Company was 2.13 percent.

Moreover, we maintain fair and impartial hiring practices by using a diverse team of interviewers to evaluate candidates' abilities, skills and experience.

BCG and Human Rights Training

Chugai conducts annual training for all employees. In the first half of the year, the content focuses on corporate ethics, and in the second, on respect for human rights. The two themes for the first half of 2016 were "Thinking through Chugai BCG Revisions," to deepen understanding of the January 2016 revisions to the Chugai BCG and to consider the need for self-directed compliance promotion, and also "Preventing Sexual Harassment," to learn the mindset and actions for preventing sexual harassment.

The two themes in the second half were "Learning from Drug Disasters" and "Thinking through the Rights of People with Disabilities." The first theme reaffirmed the importance of the responsibilities of pharmaceutical companies through knowledge of the actual circumstances of drug disaster victims. The second theme provided insight into the concepts of the Convention on the Rights of Persons with Disabilities and included interviews with people with disabilities and their volunteer helpers to teach how direct dialogue removes preconceptions and engenders mutual understanding.

Making the Most of Employee Talent →Page 45

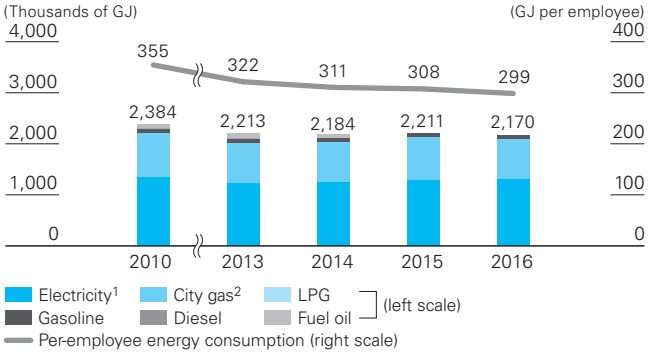
Environmental Data

Climate Change Countermeasures

(2010 is the base year for per-employee energy consumption and CO_2 emission mid-term environmental goals.)

Total and Per-Employee Energy Consumption

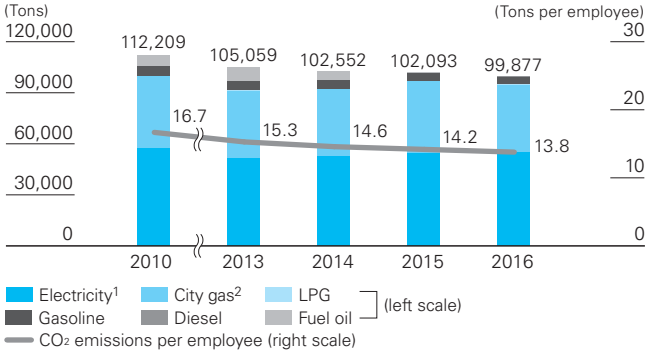
Total energy consumption was 2,170,000 gigajoules, a 2 percent reduction compared with 2015. A 5 percent reduction in consumption of city gas, of which the Chugai Group is a major user, was the main factor in the decrease in total energy consumption.



1. Day/night use not distinguished 2. Standard state

CO_2 Emissions and CO_2 Emissions Per Employee

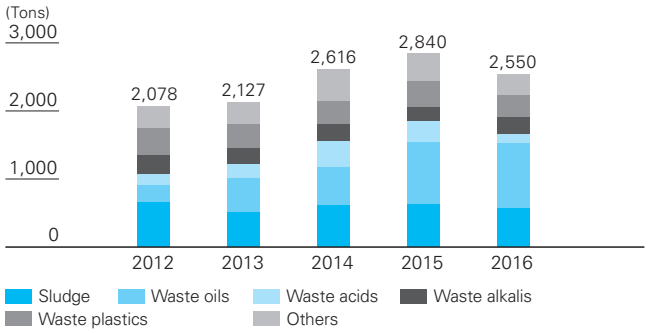
Total CO_2 emissions were 99,877 tons, a 2 percent decrease compared with 2015. A 5 percent reduction in consumption of city gas, of which the Chugai Group is a major user, was the main factor in the decrease in total CO_2 emissions.



Waste Reduction

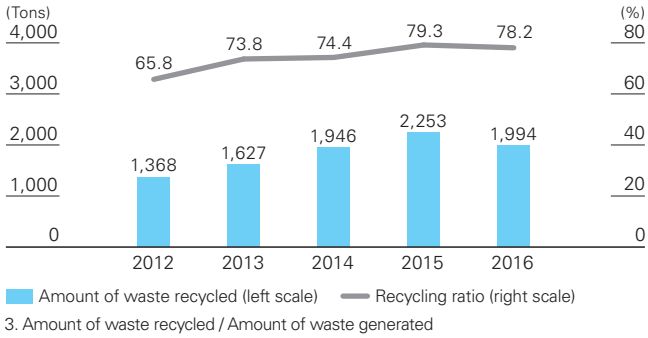
Industrial Waste

The amount of industrial waste generated was 2,550 tons, a 10 percent decrease from 2015. Waste oils and waste alkalis increased by 41 tons and 24 tons, respectively, but generation of all other industrial waste decreased.



Waste Recycled and Recycling Ratio[3]

The recycling ratio was 78.2 percent, a decrease of 1.1 percentage points from 2015, falling slightly short of our targeted recycling ratio of 80 percent or higher.

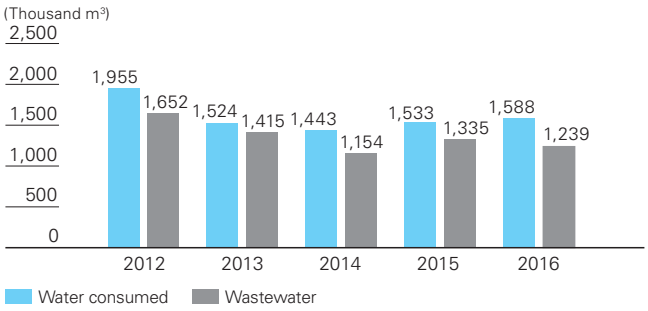


3. Amount of waste recycled / Amount of waste generated

Water and Air Pollution Countermeasures

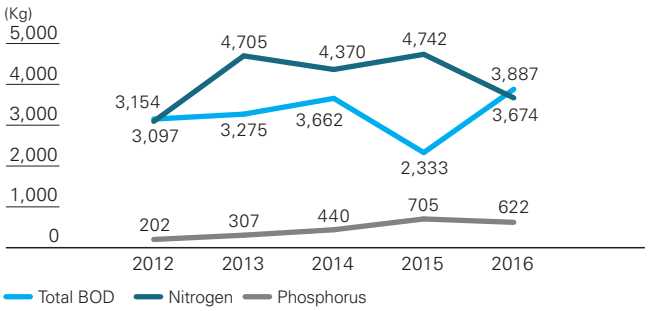
Water Consumed and Wastewater

Water consumed increased 55 thousand tons from 2015. This was due to the increase in production.



Total BOD, Nitrogen and Phosphorus

In terms of water quality, total biochemical oxygen demand (BOD) in wastewater increased 1,341 kg from 2015, while nitrogen decreased 855 kg and phosphorus decreased 83 kg. These water quality indicators were well within the prescribed water quality standards at each facility.

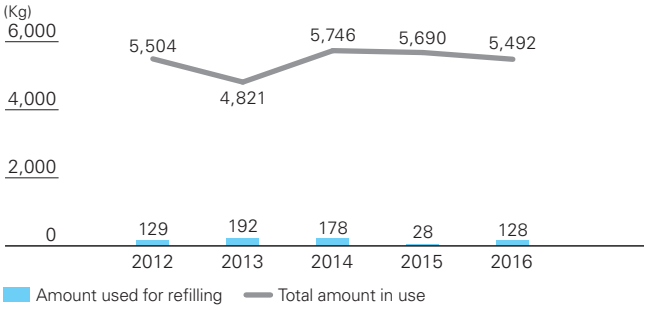


Units of energy for electricity are calculated using the coefficients in the Enforcement Regulations for the Act on the Rational Use of Energy, and the electricity emission factor is calculated using the 2005 Electricity Emission Factor for Receiving Electricity announced by the Federation of Electric Power Companies of Japan. From 2016, the unit of energy and emission factor for each type of energy use the coefficients listed in the Enforcement Regulations of the Act on Promotion of Global Warming Countermeasures (amended March 3, 2010). For city gas consumption, the standard state conversion value is used.

Chemical Substance Management

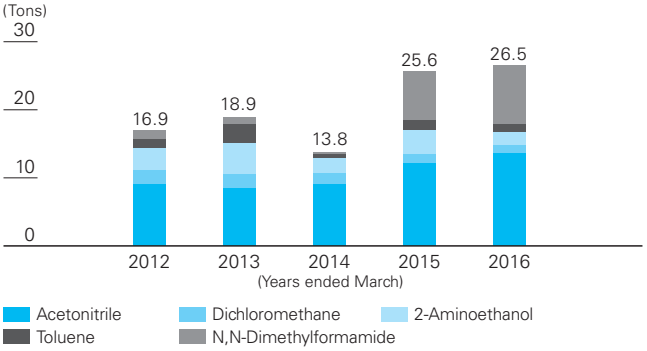
CFCs and HCFCs Used to Fill Equipment

The amount of CFCs and HCFCs used was 5,492 kg, a decrease of 198 kg from 2015. Chugai is making efforts to gradually phase out use of CFCs and HCFCs.



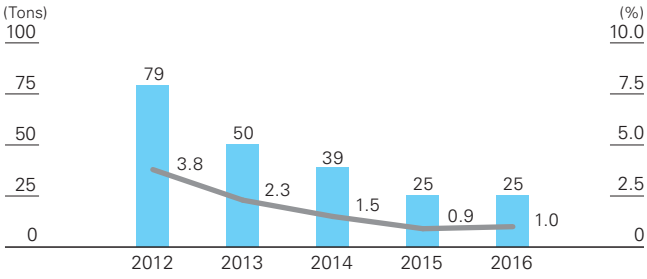
Handled Amounts of Chemical Substances Covered by PRTR Law

The handled amounts of chemical substances covered by the PRTR Law totaled 26.5 tons in 2015, an increase of 0.9 tons from 2014. The increase in acetonitrile and N,N-Dimethylformamide handled was the main factor in the overall increase.



Industrial Landfill Waste and Final Disposal Ratio[4]

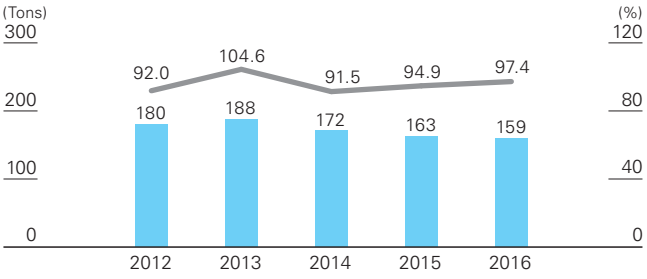
The final disposal ratio was 1.0 percent, unchanged from 2015 and within our target of 2 percent or lower.



4. Amount of industrial landfill waste / Amount of waste generated

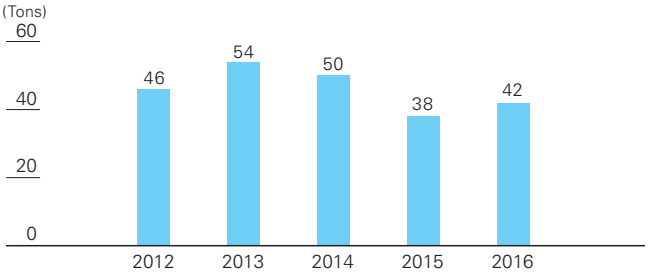
PPC Paper Purchased

The amount of plain paper copier (PPC) paper purchased decreased 2.6 percent compared with 2015. This was largely due to measures such as reducing the amount of printed handouts for meetings and encouraging printing of multiple pages per side and double-sided printing. We also continued to promote purchasing of PPC paper that is compliant with Japan's Green Purchasing Law.



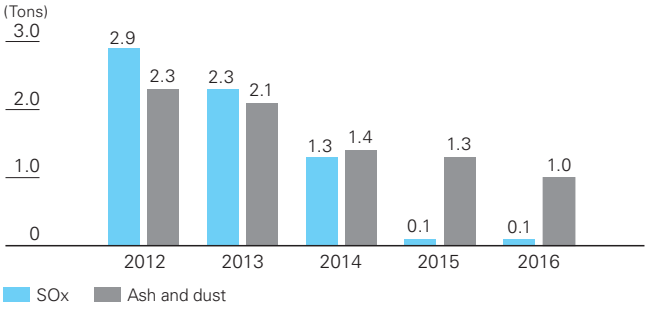
NOx Emissions

NOx emissions increased 4 tons from 2015, but are trending downward overall because of declining use of Bunker A fuel oil and city gas. Air pollutants emitted at each site are significantly below the prescribed environmental limits.



SOx, Ash and Dust Emissions

Since the second half of 2014, Chugai has been promoting the conversion of the main fuel in heat source equipment to city gas from Bunker A fuel oil. This was reflected in a significant decrease in SOx emissions. Ash and dust emissions also decreased for the same reason.



Basic Information

Basic Information on the Pharmaceutical Industry

Overview of Domestic Pharmaceutical Market and NHI Drug Prices

Trends in National Medical Expenses

Without medical system reforms, Japan's national medical expenses will increase at an annual rate of approximately 2 to 4 percent going forward. In the year ended March 2016, national medical expenses[1] totaled ¥41.5 trillion, a ¥1.5 trillion or 3.8 percent increase from the previous year. The rapid aging of Japan's society presents serious challenges to efficiently managing the increase in medical expenses for the elderly.

1. Source: Trends of recent medical expenditure (FY 2015) by Ministry of Health, Labour and Welfare

Promotion of the Use of Generics

The Japanese government is promoting the use of generics[2] with the primary objective of reducing the cost burden on patients and improving the finances of the health insurance system. Various measures have been carried out under the action program announced in October 2007 to promote the worry-free use of generics. In April 2013, the new "Roadmap to Further Promote the Use of Generics" was formulated. A Cabinet decision in June 2015 set the new goal of raising the volume market share of generics, which was 58.2 percent as of February 2015, to more than 80 percent by the end of March 2021. At this stage, a clear target for biosimilars has not been set.

2. Drugs approved after the expiry of the patents for original drugs with the same active ingredients and efficacy

National Health Insurance (NHI) Drug Price Revision

The Ministry of Health, Labour and Welfare (MHLW) generally reviews drug reimbursement prices every two years and sets new standard prices (reimbursement prices) so that the official prices of pharmaceuticals prescribed under the health insurance system approximate their actual market price. MHLW does this by investigating the prices and volumes of all prescription drug transactions during a given period. In fiscal 2016, drug reimbursement prices declined by 1.22 percent overall on a medical expense basis and 5.75 percent on a reimbursement price basis. In addition, including the special market-expansion repricing, the estimated decline in prices was approximately 1.7 percent on a medical expense basis and approximately 7.8 percent on a reimbursement price basis.

NHI Drug Price Revision Rate (%)

	2008	2010	2012	2014*	2016
Industry Average	(5.2)	(6.5)	(6.25)	(2.65)	(7.8)
Chugai	(7.2)	(6.8)	(6.0)	0.8	(5.5)

*Includes provision for increase in consumption tax
Source: Chugai data

Repricing Based on Market Expansion

Under this repricing rule introduced in 1994, drugs priced by the cost calculation method with annual sales exceeding ¥10.0 billion and more than 10 times the original forecast at the time of price revision, or with annual sales exceeding ¥15.0 billion and more than two times the original forecast, are subject to a price reduction of up to 25.0 percent. Drugs priced by methods other than the cost calculation method (including the similar efficacy comparison method) with annual sales exceeding ¥15.0 billion and more than two times the original forecast at the time of the price revision are subject to a price reduction of up to 15.0 percent. In addition, the prices of drugs that have pharmacological action similar to the drug subject to this repricing rule are reduced by the same rate.

Special Market-Expansion Repricing

In the reforms to the drug pricing system in 2016, an additional repricing rule for drugs with very high annual sales was introduced as a special measure from the standpoint of balancing reward for innovation with the sustainability of the National Health Insurance system. This rule lowers prices by up to 25.0 percent for drugs with annual sales of ¥100.0-150.0 billion and more than 1.5 times the original forecast, and lowers prices by up to 50.0 percent for drugs with annual sales exceeding ¥150.0 billion and more than 1.3 times the original forecast. In addition, the prices of drugs that have pharmacological action similar to the drug subject to the special repricing rule and were comparator drugs at the time of the NHI price listing are reduced by the same rate.

In 2016, four active ingredients and six products were subject to the additional repricing rule. The Central Social Insurance Medical Council (Chuikyo) plans to continue examining this rule further.

Premium to Promote the Development of New Drugs and Eliminate Off-Label Use

As part of the NHI drug pricing system reforms of fiscal 2010 (the year ended March 2011), a new pricing scheme was implemented on a trial basis to promote the creation of innovative medical products and solve the drug lag[3] problem. In this scheme, at the time of the NHI drug price revisions a premium (equal to the estimated value based on the market price multiplied by the weighted-average percentage price difference of all listed drugs minus 2 percent, multiplied by 0.8) is added to the price of drugs for which no generics are available (provided that they have been in the NHI price list for no more than 15 years), and which satisfy certain conditions.[4]

This premium pricing for new drugs was continued on a trial basis in the NHI drug pricing system reforms of fiscal 2012, fiscal 2014 and fiscal 2016. The fiscal 2014 reforms added the condition that only companies that (1) conduct research and development of unapproved or off-label drugs as requested by a panel of MHLW, or (2) conduct research and development for creating new drugs will be eligible to receive premium pricing for their products.

In fiscal 2016, 416 active ingredients and 823 products received premium pricing (publicly announced).

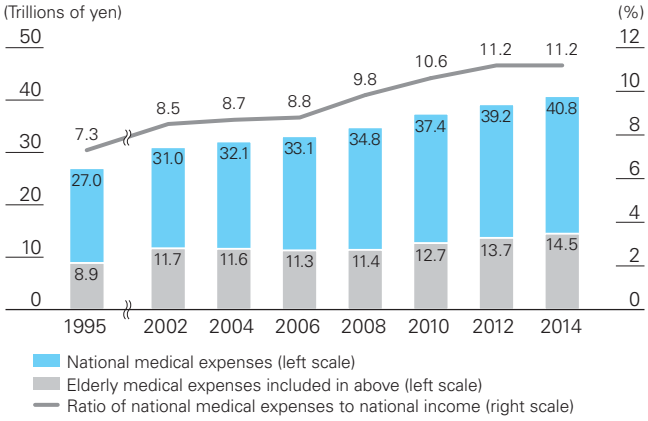
Among new drugs subject to premium pricing, including those for which generics (including biosimilars) have been launched or 15 years have elapsed since their drug price listing, the cumulative amount of premium pricing is deducted from the NHI drug price in the subsequent initial drug price revision. Furthermore, a reduction or other adjustment due to the actual market price of the new drug during the fiscal year is made to the NHI drug price less the cumulative amount.

3. The inability of Japanese patients to gain access to global standard or most advanced treatments because the drugs are not developed in Japan
4. The percentage price difference between the current market price and the reimbursement price of the original drug must not exceed the weighted-average percentage price difference of all listed drugs

Solving the Drug Lag Problem

In January 2005, MHLW established the Investigational Committee for Usage of Unapproved Drugs as one means of helping solve the drug lag problem. The committee is charged with investigating the clinical necessity and the appropriateness of usage of drugs already approved in Europe and the United States, but not yet approved in Japan. The aim of these investigations is to promote the development of those drugs in Japan. In February 2010, MHLW established the Review Committee on Unapproved Drugs and Indications with High Medical Needs. This committee evaluates the medical necessity of drugs and indications that are not yet approved in Japan and investigates matters such as the applicability of filings for approval based on evidence in the public domain. As a result of continuous efforts to strengthen the review function of the Pharmaceutical and Medical Devices Agency, an independent administrative institution responsible for reviewing drugs and medical devices for approval, the median total review time for new drugs in the year ended March 2016 was 11.3 months.

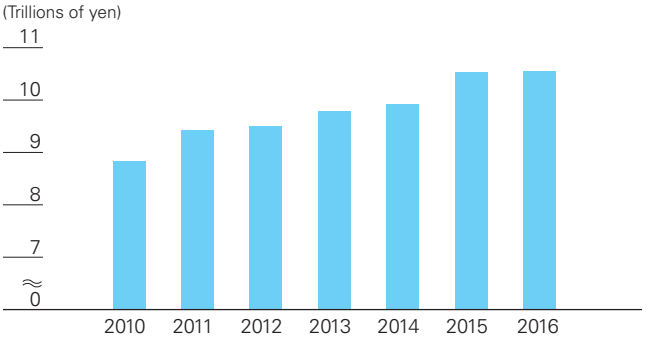
Trends of Medical Care Expenditure



Source: Overview of Estimates of National Medical Care Expenditure, FY2014 by Ministry of Health, Labour and Welfare

Note: National income is based on the actual results of the System of National Accounts announced by the Cabinet Office.

Prescription Drug Market



Response to Requests from the MHLW Review Committee on Unapproved Drugs and Indications with High Medical Needs (As of February 1, 2017)

Development request	Product	Indication	Development status
First development request	Xeloda	Advanced or recurrent gastric cancer	Approved in February 2011
	Tarceva	Advanced or recurrent pancreatic cancer	Approved in July 2011
	Avastin	Advanced or recurrent breast cancer	Approved in September 2011
	CellCept	Pediatric renal transplant	Approved in September 2011
	Herceptin	Q3W dosage metastatic breast cancer overexpressing HER2	Approved in November 2011
		Neoadjuvant breast cancer overexpressing HER2	
	Kytril	Gastrointestinal symptoms associated with radiotherapy	Approved in December 2011
	Pulmozyme	Improvement of pulmonary function in patients with cystic fibrosis	Approved in March 2012
	Bactramin	Treatment and prevention of pneumocystis pneumonia	Approved in August 2012
	Avastin	Ovarian cancer	Approved in November 2013
Second development request	Avastin	Recurrent glioblastoma	Approved in June 2013 (Malignant glioma)
	Herceptin	Q1W dosage postoperative adjuvant breast cancer overexpressing HER2	Approved in June 2013
	CellCept	Lupus nephritis	Approved in May 2016
Third development request	Tamiflu	Additional dosage for neonates and infants younger than 12 months	Public knowledge-based application filed in December 2016
	Xeloda	Adjuvant chemotherapy in rectal cancer	Approved in August 2016
Fourth development request	Copegus	Improvement of viraemia associated with genotype 3 chronic hepatitis C or compensated cirrhosis related to hepatitis C when administered in combination with sofosbuvir	Application filed in November 2016
	Xeloda	Neuroendocrine tumor	Submitted company opinion and waiting for evaluation by committee

Oncology

Overview of Diseases and Treatment Methods

Leading Cause of Death in Japan

Cancer has been the single most common cause of death in Japan since 1981. In 2015, 370,346 people[1] died of cancer, accounting for 28.7 [1] percent of all deaths in that year and the highest number since government surveys began in 1899.

1. Source: Outline of Vital Statistics (2015) by Ministry of Health, Labour and Welfare

Establishment of the Basic Act for Anticancer Measures and Improvement in the Healthcare Environment

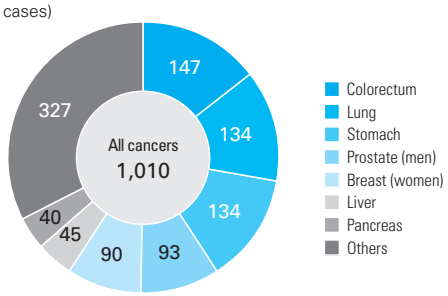
In June 2006, the Diet enacted the Basic Act for Anticancer Measures, which stipulates the obligation of national and local governments to promote measures to fight cancer. The basic principle of the law is to develop cancer treatment systems in every region of the country so that patients can receive standard therapy based on scientific knowledge and in accordance with their wishes ("the availability of standard therapy" for cancer patients). The law includes provisions for (1) improvement of cancer prevention and treatment technologies, (2) development of oncologists and "hub" institutions that specialize in cancer, and (3) enhanced provision of information to patients. As a result of the enactment of this law, progress has been made in the training of oncologists and medical staff such as nurses and pharmacists. Other advances include greater efforts to establish networks among local medical institutions by designating interregional hub cancer centers. Moreover, an increasing percentage of medical institutions are adopting multidisciplinary team care in which oncologists, nurses, pharmacists and nutritionists work together to provide care tailored to the condition of each individual patient. In December 2013, the Cancer Registration Law was enacted, requiring hospitals nationwide to provide information on each cancer patient. The law is aimed at shedding light on the current state of cancer treatment by centralizing patient information in a single database and using that resource to improve early detection and treatment. Furthermore, it is projected that achieving the overall goal of reducing the age-adjusted cancer mortality rate by 20 percent over 10 years from 2007 in the Basic Plan to Promote Cancer Control Programs (approved by the Cabinet in June 2007), will be difficult. Therefore, in December 2015, the Plan for Acceleration of Cancer Control Programs was formulated. This plan specified concrete measures that should be implemented intensively in a short period of time.

Changes in Treatment Methods

Cancer treatment is increasingly being based on a multidisciplinary approach that combines surgery, radiation therapy and anticancer agents. In particular, the field of anticancer agents is evolving, and highly innovative medicines such as molecular targeted drugs have been introduced. This has brought a dramatic improvement in treatment outcomes in colorectal, lung and breast cancer, gynecological cancers, kidney cancer, brain tumors, malignant melanoma, hematological malignancy and other forms of cancer. Advances are being made in personalized healthcare, which involves

Projected Cancer Incidence (2016)

(Thousands of cases)



Source: National Cancer Center Cancer Information Service, "Cancer Registries/ Statistics"

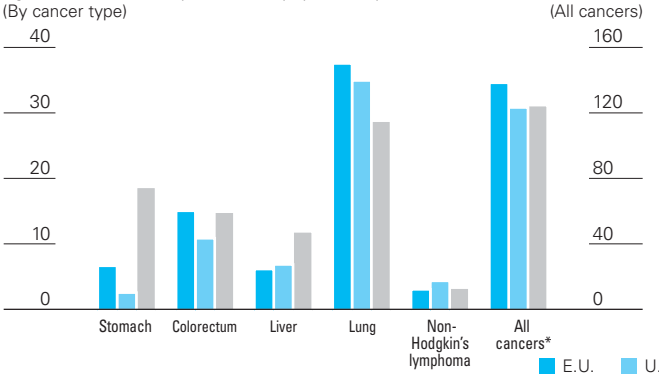
Note: Projections were performed with a model incorporating age, calendar year at diagnosis, and their interactions as independent variables, utilizing frequency of incidence of cancer by age bracket from Monitoring of Cancer Incidence in Japan (1975-2012 nationwide estimates) and cancer mortality figures from the Outline of Vital Statistics (1975-2014 estimates). The total may not add up because projections have been performed by cancer type and figures have been rounded.

Reference: *Japanese Journal of Clinical Oncology* 2014, 44: 36-41

International Comparison of Cancer Mortality Rates (2012)

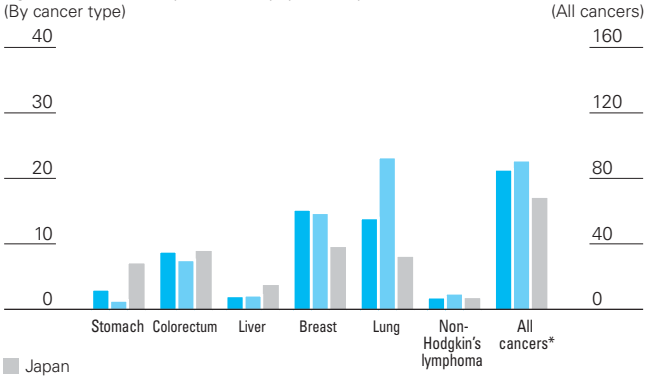
Male

Age-standardized rate per 100,000 population (persons)
(By cancer type) (All cancers)



Female

Age-standardized rate per 100,000 population (persons)
(By cancer type) (All cancers)



E.U. U.S. Japan

* Excluding non-melanoma skin cancer

Source: Ferlay J, Soerjomataram I, Ervik M, Dikshit R, Eser S, Mathers C, Rebelo M, Parkin DM, Forman D, Bray F. GLOBOCAN 2012 v1.0, Cancer Incidence and Mortality Worldwide: IARC CancerBase No. 11 [Internet]. Lyon, France: International Agency for Research on Cancer; 2013. Available from: http://globocan.iarc.fr, accessed on 28/02/2017.

testing patients with diagnostic agents when administering molecular targeted drugs to identify patients in whom the drug is likely to have the desired effect with minimal strain on the body and few side effects. In addition to enabling physicians to propose the optimal treatment tailored to each patient, this approach offers a number of other benefits. For example, it can reduce national healthcare expenditures by reducing the administration of drugs when their effect cannot be determined. When performing a diagnosis, there may be a number of different molecular targeted drugs available for the same disease, and there are some cases in which looking at the molecules expressed in the target tissues is insufficient for diagnosis; therefore, it is also becoming important to conduct exhaustive biomarker measurements such as multiplex testing. Moreover, the Council to Promote the Realization of Genomic Medicine, established by the Japanese government in January 2015, the Ministry of Health, Labour and Welfare and pharmaceutical industry organizations have launched studies for the realization of genomic medicine. The provision of optimal treatments based on each patient's genetic profile is thus becoming a reality.

In addition, cancer immunotherapy, which takes advantage of the body's own immune cells to fight cancer, is another important emerging field of treatment. Immune checkpoint inhibitors, one type of immunotherapy now in use, are a promising new direction in cancer treatment. Cancer has the ability to suppress immune functions to avoid attack from the immune system. By blocking the immune "brakes" (the binding of PD-1 to PD-L1) known as the immune checkpoint, immune cells can be awakened to attack cancer cells. In clinical trial results, immune checkpoint inhibitors have shown promise for long-term survival and cure, even in advanced cancer. Expectations are focused on their high therapeutic effect and potential for treating a wide range of cancers. On the other hand, some patients do not respond to immunotherapy, so screening to select patients for whom this therapy is likely to be effective and combination therapy with existing anticancer and other drugs are also being examined.

Avastin (RG435)

Anti-VEGF humanized monoclonal antibody
(Generic name: bevacizumab)

Basic Information

Avastin is a humanized monoclonal antibody targeting vascular endothelial growth factor (VEGF). It is the first therapeutic agent in the world that inhibits angiogenesis (the growth of the network of blood vessels that supply nutrients and oxygen to the cancer). Unlike conventional anticancer agents that act directly on cancer cells, Avastin acts on the cancer microenvironment. In Japan, Avastin was launched in 2007 for the treatment of unresectable advanced or recurrent colorectal cancer. In 2009, Chugai obtained approval for a new dosage and administration for colorectal cancer and the additional indication of unresectable advanced or recurrent non-squamous non-small cell lung cancer (NSCLC), followed in 2011 by inoperable or recurrent breast cancer. Chugai also obtained approval for the additional indications of malignant glioma and ovarian cancer in 2013, and advanced or recurrent cervical cancer in May 2016.

Review of 2016 Performance

Sales of Avastin decreased ¥1.7 billion, or 1.8 percent, year on year to ¥92.1 billion. Although the NHI drug price decreased 10.9% due to special market-expansion repricing, the decline in sales remained slight due to increased sales volume for various indications including colorectal cancer, for which Avastin has built a solid position. The competitive environment in the field of lung cancer has been changing due to the introduction of immune checkpoint inhibitors and other products, and future acceleration of these conditions is expected. In development, administration of Avastin began in a phase II clinical trial in Japan for the potential treatment of malignant pleural mesothelioma in July 2016, and it received orphan drug designation in December 2016. In addition, a phase III multinational study of Avastin in combination with atezolizumab (RG7446) for the treatment of renal cell carcinoma is under way.

Herceptin

Anti-HER2 humanized monoclonal antibody
(Generic name: trastuzumab)

Basic Information

Herceptin is a humanized monoclonal antibody that targets human epidermal growth factor receptor type 2 (HER2), which contributes to tumor cell growth. Overexpression of HER2 is found in about 20 percent of breast cancers. Such cancer is diagnosed as HER2-positive. HER2-positive breast cancer progresses rapidly, and has been associated with a poor prognosis. However, treatment outcomes have improved significantly with the emergence of Herceptin and other medicines that target HER2. In 2011, Herceptin obtained approval for the additional indication of advanced or recurrent gastric cancer overexpressing HER2, not amenable to curative resection, bringing personalized healthcare to the field of gastric cancer.

Review of 2016 Performance

Sales of Herceptin increased ¥1.4 billion, or 4.3 percent, year on year to ¥34.1 billion. As a pioneering product in personalized healthcare, Herceptin has been valued as a mainstay in the treatment of HER2-positive breast cancer ever since its launch in 2001. The total number of treatment lines for Herceptin has decreased as a result of progress in the uptake of Kadcyla as a second-line treatment for advanced or recurrent breast cancer. However, sales were firm as Herceptin continues to be used following cancer progression (including after administration of Kadcyla), in addition to the extension of the dosage period in first-line treatment in combination with Perjeta. Moreover, Herceptin is used for more than 90 percent of HER2-positive breast cancer patients undergoing postoperative adjuvant chemotherapy, and sales increased with growth in the number of patients. At the same time, increased awareness among physicians has helped to raise the rate of HER2 testing for gastric cancer,[2] further increasing the number of patients who can be treated with Herceptin.

2. A diagnostic test can determine if a patient's breast or gastric cancer cells have overexpression of a protein called HER2. Herceptin, Perjeta and Kadcyla target HER2 and are administered only to patients whose tumors are identified as HER2-positive.

Perjeta (RG1273)

HER2 dimerization inhibitory humanized monoclonal antibody
(Generic name: pertuzumab)

Basic Information

Perjeta is a humanized monoclonal antibody and is the first molecular targeted therapy that inhibits the dimerization of HER2. The combination of Perjeta and Herceptin, which also targets HER2, provides a more comprehensive blockade of HER signaling pathways associated with the proliferation of tumor cells. Chugai launched Perjeta for the additional indication of HER2-positive inoperable or recurrent breast cancer in September 2013, after obtaining approval in June 2013.

Review of 2016 Performance

Sales of Perjeta increased ¥1.3 billion, or 12.3 percent, year on year to ¥11.9 billion, significantly exceeding projections. In the clinical practice guidelines for breast cancer, which were updated in July 2015,

the combination therapy of Herceptin and Perjeta with docetaxel was the only therapy to receive a Grade A recommendation as a first-line therapy for HER2-positive metastatic or recurrent breast cancer, and uptake as a first-line treatment was steady. In development, phase III multinational studies are in progress for the potential treatment of HER2-positive breast cancer (adjuvant chemotherapy) and advanced or recurrent gastric cancer.

Kadcyla (RG3502)

Anti-HER2 antibody-tubulin polymerization inhibitor conjugate
(Generic name: trastuzumab emtansine)

Basic Information

Kadcyla is an antibody-drug conjugate of the anti-HER2 humanized monoclonal antibody trastuzumab (the active ingredient of Herceptin) and the potent chemotherapeutic agent DM1, joined together with a stable linker. Chugai filed an application for approval for the treatment of HER2-positive inoperable or recurrent breast cancer in January 2013, obtained approval in September 2013 after priority review, and launched the product in April 2014.

Review of 2016 Performance

Sales of Kadcyla increased ¥1.0 billion, or 13.7 percent, year on year to ¥8.3 billion. Due to factors including the uptake of Herceptin and Perjeta as a first-line treatment and the timing of the shift to second-line treatment by patients who had been receiving this treatment after the launch of Perjeta, use of Kadcyla in second-line treatment has increased. In the clinical practice guidelines for breast cancer, which were updated in July 2015, Kadcyla was the only drug to be given a Grade A recommendation for second-line treatment of HER2-positive metastatic or recurrent breast cancer. In development, a phase III multinational study for the potential treatment of HER2-positive breast cancer (adjuvant chemotherapy) is under way.

Rituxan

Anti-CD20 monoclonal antibody
(Generic name: rituximab)

Basic Information

Rituxan is a monoclonal antibody targeting the CD20 antigen found on the surface of lymphocytes. As a standard therapy for CD20-positive, B-cell non-Hodgkin's lymphoma (hematological cancer), it has substantially improved clinical outcomes in combination with chemotherapy or in monotherapy. In Japan, Rituxan is marketed jointly by Chugai and Zenyaku Kogyo Co., Ltd. In recent years, the usefulness of Rituxan has been recognized in treating ANCA-associated vasculitis, refractory childhood-onset nephrotic syndrome and suppression of antibody-related rejection in ABO-incompatible kidney and liver transplantation, and it has also become a valuable treatment option for patients with autoimmune diseases.

Review of 2016 Performance

Sales of Rituxan increased ¥3.1 billion, or 10.7 percent, year on year to ¥32.1 billion. The number of patients using Rituxan is increasing with initial diagnoses of non-Hodgkin's lymphoma due to improved accuracy in diagnosing malignant lymphoma. Amid these conditions, expanded use in indolent non-Hodgkin's lymphoma maintenance therapy after remission induction therapy continued to contribute to sales growth.

Alecensa (AF802/RG7853)

ALK inhibitor
(Generic name: alectinib)

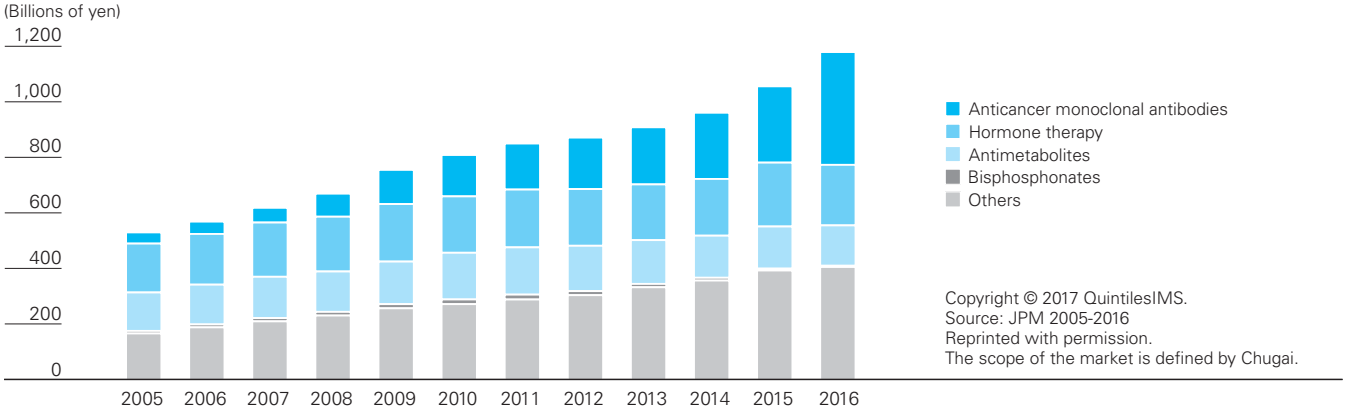
Basic Information

Alecensa, an oral, small-molecule targeted molecular therapy created by Chugai, inhibits the activity of ALK tyrosine kinase with *EML4-ALK* fusion gene expressed in about 2 to 5 percent of NSCLC. It was designated as an orphan drug in Japan in September 2013 for the treatment of *ALK* fusion gene-positive unresectable, recurrent/advanced NSCLC. In October 2013, Chugai filed an application for approval. Following approval in July 2014, Alecensa was launched first in Japan in September 2014. In addition to being the first product from Chugai research to be granted breakthrough therapy designation by the U.S. Food and Drug Administration (FDA), Alecensa received its second such designation as a first-line treatment in 2016, and it is expected to contribute to the treatment of patients around the world.

Review of 2016 Performance

Market penetration proceeded further with the announcement of positive results leading to the early discontinuance for benefit of a study comparing the efficacy and safety of Alecensa and a competing product on patients in Japan (J-ALEX study). Sales increased ¥3.9 billion, or 48.8 percent, year on year to ¥11.9 billion, exceeding expectations due to a high rate of continuation of treatment. All-case registration surveillance is currently being conducted for Alecensa, and Chugai is promoting appropriate use and gathering safety information. Outside Japan, applications were filed in the United States in July 2015 and in Europe in September 2015. In December 2015, Alecensa obtained conditional approval in the United States for the indication of ALK-positive, metastatic non-small cell lung cancer in patients whose disease has progressed on or who are intolerant to crizotinib. Overseas sales of Alecensa (exports to Roche) increased ¥3.2 billion year on year to ¥3.7 billion.

Anticancer Agent Market in Japan



Source: JPM 2005-2016
Reprinted with permission.
The scope of the market is defined by Chugai.

Xeloda

Antimetabolite, 5-FU derivative
(Generic name: capecitabine)

Basic Information

Xeloda is a 5-fluorouracil (5-FU) anticancer agent developed at the research laboratories of the former Nippon Roche. Orally administered Xeloda is absorbed by the body, then gradually metabolized by certain highly active enzymes in liver and tumor tissue, and is eventually converted into active 5-FU within tumor tissue. Xeloda has obtained approval for the treatment of inoperable or recurrent breast cancer, colorectal cancer and gastric cancer.

Review of 2016 Performance

Sales of Xeloda increased ¥1.2 billion, or 10.8 percent, year on year to ¥12.3 billion. By promoting side effect management, Xeloda has established a top position in postoperative adjuvant chemotherapy performed to inhibit recurrence after surgery for colon cancer. In gastric cancer, prescriptions have increased for postoperative adjuvant chemotherapy, for which Xeloda obtained approval in November 2015.

In development, Chugai filed a public knowledge-based application for approval for the additional indication of adjuvant chemotherapy for rectal cancer in March 2016, and obtained approval in August 2016.

Tarceva

Epidermal growth factor receptor (EGFR) tyrosine kinase inhibitor (Generic name: erlotinib)

Basic Information

Tarceva is an oral targeted small-molecule drug that inhibits the activation of epidermal growth factor receptor (EGFR) tyrosine kinase, which is associated with the growth, progression and metastasis of cancer. In Japan, Tarceva had been used for second-line or later treatment of NSCLC since its launch in 2007, but the approval of an additional indication in June 2013 allowed its use in first-line treatment of patients with *EGFR* mutations, in whom high efficacy is expected. About 10 percent of NSCLC patients in Europe and about 30 percent in Asia diagnose positive for *EGFR* mutations. In 2011, Tarceva obtained approval for the additional indication of pancreatic cancer not amenable to curative resection.

Review of 2016 Performance

Sales of Tarceva decreased ¥0.1 billion, or 0.9 percent, year on year to ¥11.5 billion. In NSCLC, uptake of Tarceva in first-line treatment in patients with *EGFR* mutations is progressing due to evidence of efficacy in patients with brain metastases, but sales decreased compared with the previous year due to the impact of competing products in the second-line setting.

Zelboraf

BRAF inhibitor
(Generic name: vemurafenib)

Basic Information

Zelboraf, in-licensed from Roche, is an oral, small-molecule drug that selectively inhibits a mutated form of the BRAF protein found in approximately 30 percent of all malignant melanoma cases. Chugai filed an application for approval of Zelboraf for the treatment of unresectable melanoma with *BRAF* mutation in April 2014, obtained approval in December 2014 and launched the product in February 2015.

Review of 2016 Performance

Since its launch in February 2015, uptake has increased steadily, with sales of ¥0.4 billion in 2016. In addition, Roche Diagnostics K.K. filed an application for approval of a companion diagnostic to detect the *BRAF* mutation, and obtained approval in December 2014.

Neutrogin

Recombinant human granulocyte colony-stimulating factor (G-CSF)
(Generic name: lenograstim; overseas product name; Granocyte)

Basic Information

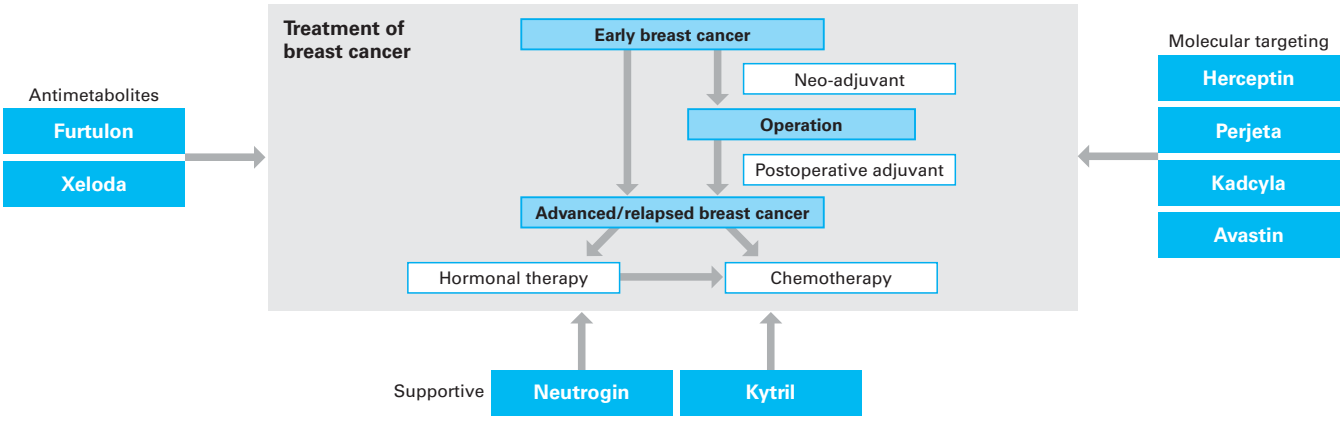
Neutrogin is a recombinant human granulocyte colony-stimulating factor (G-CSF) created by Chugai. One common side effect of anticancer drugs is neutropenia, a decrease in the white blood cell count that heightens the risk of developing serious infections. Neutrogin stimulates the differentiation and growth of neutrophils, enabling the safer use of chemotherapy, thus helping to improve treatment outcomes. Neutrogin is also essential in hematopoietic stem cell transplantation, which is performed for illnesses that affect production of normal blood cells, such as leukemia.

Review of 2016 Performance

Sales of Neutrogin in Japan decreased ¥0.8 billion, or 16.3 percent, year on year to ¥4.1 billion due to competition from other products, including biosimilars.[3] Overseas sales decreased ¥2.6 billion, or 17.6 percent, to ¥12.2 billion, due to the impact of competition as well as exchange rates (high yen relative to the euro).

3. Successor products to biopharmaceuticals whose patent term has expired, made by manufacturers other than the manufacturer that developed the antecedent biopharmaceutical

Extensive Contribution to Cancer Treatment (Breast Cancer)



Aloxi

5-HT_3 receptor antagonist (Generic name: palonosetron)

Akynzeo

NEPA (Generic name: oral combination of netupitant and palonosetron)

Basic Information

These products are small molecules for the prevention of chemotherapy-induced nausea and vomiting. Chugai has been granted exclusive marketing rights by the Helsinn Group of Switzerland for Aloxi in the U.K. and Akynzeo in the U.K. and Ireland. Aloxi is a best-in-class 5-HT_3 receptor antagonist, and Akynzeo is an oral capsule that combines this receptor antagonist with netupitant, a novel NK1 receptor antagonist. Aloxi was launched in the U.K. in January 2015. Akynzeo was launched in the U.K. in September 2015 and in Ireland in December 2015.

Review of 2016 Performance

Sales in the U.K. for Aloxi and Akynzeo totaled ¥0.3 billion. All MRs in charge of promoting these products also handle Granocyte, which is creating synergy.

RG7446

Engineered anti-PDL1 monoclonal antibody
(Generic name: atezolizumab; overseas product name: Tecentriq)

RG7446 is an engineered anti-PDL1 monoclonal antibody in-licensed from Roche. One way that tumor cells evade the immune system is by expressing a protein called programmed death-ligand 1 (PD-L1) on their surface, which is believed to shield them from immune system attacks by binding to T cells. RG7446 restores and maintains the immune response of T cells by binding to PD-L1, and is expected to demonstrate efficacy against cancer cells. Its mode of action differs from conventional treatments that attack cancer cells directly. Since it takes advantage of the patient's own immune response, it is also promising for use in combination with existing drugs and for various cancer types. New phase III multinational studies started for the potential treatment of breast cancer in May 2016, small cell lung cancer in June 2016 and adjuvant chemotherapy of renal cell carcinoma in December 2016. In addition, Chugai began participating in phase II and phase III multinational studies for the potential treatment of NSCLC as well as phase III multinational studies for the respective expected indications of postoperative adjuvant chemotherapy of NSCLC, urothelial carcinoma, postoperative adjuvant chemotherapy of muscle invasive urothelial carcinoma and renal cell carcinoma (in combination with Avastin).

GC33 (RG7686)

Anti-glypican-3 humanized monoclonal antibody
(Generic name: codrituzumab)

GC33, a humanized monoclonal antibody created by Chugai, targets glypican-3 (GPC3), which is specifically expressed in hepatocellular carcinoma. The project involves joint research between Chugai and Tokyo University, as well as clinical proteomics work by PharmaLogicals Research Pte. Ltd., a former subsidiary of Chugai. GC33 did not meet the primary endpoint in a phase II multinational monotherapy study started in March 2012. A phase I clinical trial for the potential treatment of hepatocellular carcinoma in combination with atezolizumab started in August 2016.

ERY974

Anti-glypican-3/CD3 bispecific antibody

ERY974 is the first T-cell redirecting antibody (TRAB) developed by Chugai. TRAB is a bispecific antibody that creates a short bridge between CD3 on T cells and tumor antigen on tumor cells to activate T cells in a tumor antigen-dependent manner, and is expected to demonstrate strong cytotoxicity against tumor cells. Glypican-3 (GPC3), a tumor antigen targeted by ERY974, is reported to be expressed in multiple types of tumor cells including hepatocellular carcinoma, gastric cancer and esophageal cancer. A phase I clinical trial started overseas in August 2016.

RG6078

IDO inhibitor

RG6078 is an IDO inhibitor in-licensed from Roche. It is expected to exert a stronger antitumor effect in combination with atezolizumab by maximizing inhibition of PD-1/PD-L1. A phase I clinical trial (in combination with atezolizumab) for solid tumors began in September 2016.

GA101 (RG7159)

Glycoengineered type II monoclonal antibody
(Generic name: obinutuzumab; overseas product name: Gazyva/Gazyvaro (E.U.))

GA101 is a type II glycoengineered monoclonal antibody in-licensed from Roche that, like Rituxan, targets CD20. A phase III multinational study for the potential treatment of indolent non-Hodgkin's lymphoma (the GALLIUM study) met its primary endpoint early. On the other hand, in consideration of the results of another phase III multinational study (the GOYA study), development targeting aggressive non-Hodgkin's lymphoma has been discontinued. In November 2012, Chugai entered into an agreement with Nippon Shinyaku Co., Ltd. to co-develop and co-market this agent in Japan.

RG7596

Anti-CD79b antibody-drug conjugate
(Generic name: polatuzumab vedotin)

RG7596 is an antibody-drug conjugate of an anti-CD79b monoclonal antibody and the microtubule inhibitor MMAE, joined together with a linker. A phase I clinical trial started in Japan in July 2014 for the potential treatment of non-Hodgkin's lymphoma. The conjugate is designed to deliver MMAE directly into B cells via CD79b, which is expressed in non-Hodgkin's lymphoma, so that the inhibitor can act. RG7596 is expected to demonstrate a cytostatic effect on tumor cells while limiting impact on normal cells.

RG7604

PI3K inhibitor (Generic name: taselisib)

RG7604 is a PI3K inhibitor in-licensed from Roche. A phase I clinical trial started in Japan in September 2014 for the potential treatment of solid tumors. This drug is a small-molecule anticancer agent that selectively inhibits PI3K. It has been shown to exhibit stronger inhibitory activity against PI3Kα mutations compared with RG7321, development of which was discontinued in 2015.

RG7440

AKT inhibitor
(Generic name: ipatasertib)

RG7440 is an AKT inhibitor in-licensed from Roche. Chugai started a phase I clinical trial for the treatment of solid tumors in Japan in June 2015.

CKI27 (RG7304)

Raf/MEK inhibitor

CKI27 is a Raf and MEK dual inhibitor created by Chugai. Phase I clinical trials in Japan and overseas have been completed. An investigator-initiated clinical trial is ongoing overseas, and study results were announced at the 2016 ASCO Annual Meeting.

Bone and Joint Diseases/Autoimmune Diseases

Osteoporosis

Osteoporosis is a disease in which the bones become weak due to advanced age or other factors, increasing the risk of fractures. Osteoporosis patients may incur fractures through normal daily activities. Among these, compression fractures of the spine and femoral neck fractures can decrease quality of life by leaving patients bed-ridden and can also increase mortality risk. About 13 million people in Japan suffer from osteoporosis, including one in every two women age 65 and older. However, the treatment rate stands at around only 20 percent of the estimated number of sufferers because there are virtually no noticeable symptoms until a fracture occurs. The availability of superior new drugs that have higher efficacy, safety and convenience has brought promise for improvement in the quality of life of patients.

Treatment Methods

Osteoporosis has primarily been treated using bisphosphonates, calcitonin preparations and selective estrogen receptor modulators (SERMs), which are bone resorption inhibitors, and active vitamin D_3 derivatives, which improve bone metabolism, but treatments such as human parathyroid hormone (PTH) therapy and a humanized anti-RANKL antibody are also approved.

Regulatory Trends

National guidelines for osteoporosis treatment were revised in October 2006. Subsequently, advances have been made in basic and clinical research into osteoporosis: evaluation of fracture risk and criteria for the initiation of drug treatment have been reviewed; and osteoporosis caused by lifestyle-related diseases has been addressed. In the interim, Edirol and other medicines have been approved for insurance coverage. Revisions issued in December 2011 added preventive and diagnostic items in light of the importance of early prevention to broaden the overall scope of osteoporosis treatment. Since then, the 2012 revised diagnostic criteria for primary osteoporosis and revised management and treatment guidelines for steroid-induced osteoporosis have been adopted, Bonviva IV Injection and other medicines have been launched and covered by insurance, and revised guidelines were issued in July 2015.

Edirol

Active vitamin D_3 derivative (Generic name: eldecalcitol)

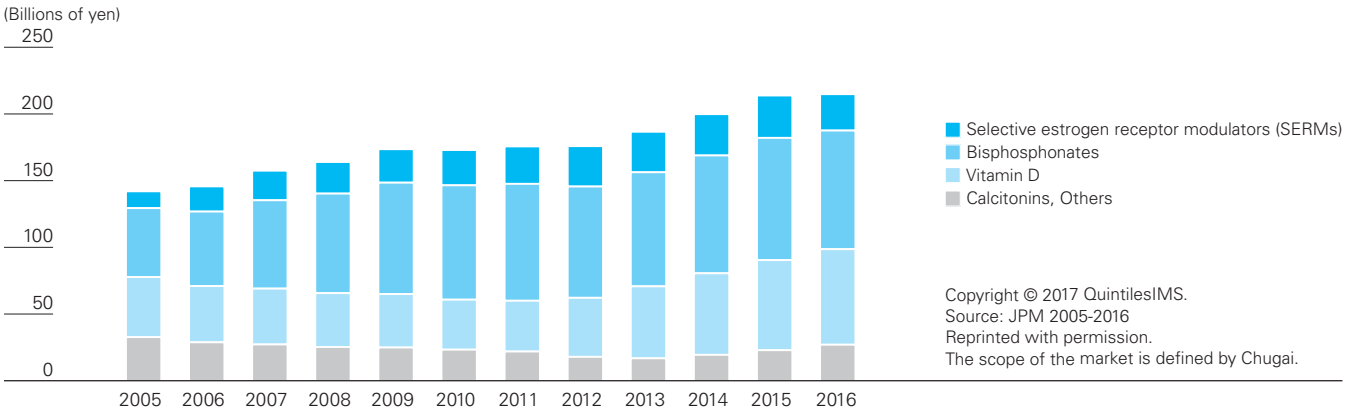
Basic Information

Edirol is a new vitamin D_3 preparation born out of Chugai's many years of research in vitamin D. Chugai started sales of Edirol in April 2011 as the successor drug to Alfarol for the indication of osteoporosis with a stronger effect in regulating bone metabolism. Under an agreement signed in May 2008, Edirol has been co-developed and is currently co-marketed with Taisho Pharmaceutical Co., Ltd. Clinical trials have confirmed that Edirol has a similar safety profile to alfacalcidol with a statistically significant greater effect in preventing fractures. In the 2015 osteoporosis prevention and treatment guidelines, Edirol received a Grade A recommendation, the only one for an active vitamin D_3 preparation, for its effectiveness in increasing bone density and preventing vertebral fractures.

Review of 2016 Performance

Sales of Edirol increased ¥3.6 billion, or 15.6 percent, to ¥26.7 billion. It has become the most widely used active vitamin D_3 preparation

Osteoporosis Market in Japan



The scope of the market is defined by Chugai.

because of its superior efficacy in increasing bone mass and preventing fractures compared with existing products. Recognition and understanding of Edirol as a base treatment has also broadened. As a result, its use by medical institutions is increasing, as are prescriptions, primarily for new cases.

In China, a phase III clinical trial for the potential treatment of osteoporosis is under way.

Bonviva

Bisphosphonate anti-resorptive agent
(Generic name: ibandronate)

Basic Information

Bonviva is a bisphosphonate in-licensed from Roche. Bonviva IV Injection was launched in August 2013. Under an agreement signed in September 2006, Bonviva is being co-developed and co-marketed with Taisho Pharmaceutical Co., Ltd. Bisphosphonates in Japan are administered in drip infusions, but Bonviva IV Injection is given in a rapid intravenous injection once a month. This is expected to significantly reduce the burden on patients at the time of administration. In addition, Bonviva Tablet administered once monthly demonstrated non-inferiority to Bonviva IV Injection in a phase III clinical trial (the MOVEST study). Chugai obtained approval in January 2016 and began sales in April 2016. By enabling drug selection according to patient lifestyle, monthly Bonviva IV Injection and Bonviva Tablet are expected to help improve patient adherence, convenience for healthcare providers and the rate of continuation of treatment.

Review of 2016 Performance

Sales of Bonviva increased ¥1.9 billion, or 35.2 percent, to ¥7.3 billion. Bonviva IV Injection is particularly convenient for patients who have difficulty taking existing oral formulations, and recognition of the drug's usefulness is increasing as a product that can be expected to improve adherence to treatment. With the launch of new Bonviva Tablet in April 2016, the Bonviva brand is steadily growing.

Alfarol

Active vitamin D_3 derivative (1α (OH) D_3) for improving bone metabolism
(Generic name: alfacalcidol)

Basic Information

Alfarol is an active vitamin D_3 derivative approved in 1981. It maintains bone mass by adjusting calcium and bone metabolism, and therefore is effective in preventing vertebral fractures. The drug has been shown to be particularly effective in preventing falls, and attention has focused on this feature that sets Alfarol apart from other osteoporosis treatments.

Review of 2016 Performance

Sales of Alfarol decreased ¥1.0 billion, or 23.8 percent, to ¥3.2 billion due to the switch to Edirol and the market penetration of generics.

Rheumatoid Arthritis/Osteoarthritis

Rheumatoid arthritis (RA) is a systemic disease characterized by painful inflammation and deformation of joints leading to dysfunction. Without appropriate treatment, the patient's condition deteriorates over time. It is estimated that there are about 700,000 patients in Japan suffering from RA, of whom some 330,000 are currently receiving drug treatment. The number of patients is increasing as the average age of the population rises. On the other hand, there are only several hundred patients in Japan with systemic juvenile idiopathic arthritis (sJIA), a form of RA suffered by children below 16 years of age, but sJIA is considered even more difficult to treat than adult forms of the disease.

The most common joint disease is osteoarthritis. Degeneration of the cartilage in the joints and surrounding areas causes joint pain and reduced mobility in daily life. The prevalence of this disease increases with age, with knee osteoarthritis in particular affecting at least 60 percent of people 40 years of age or older, primarily women.

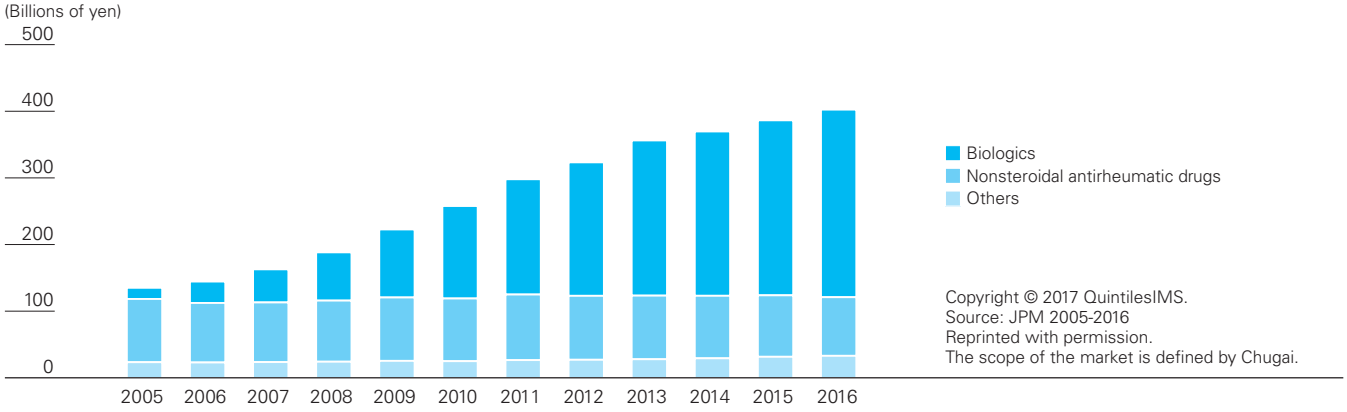
Treatment Methods and Market Conditions

In drug therapy for RA, methotrexate, an anti-rheumatic drug, is mainly used in treatment, but with the introduction of biologics, the goal of treatment has now been extended to remission. Research in recent years suggests that the administration of biologics at the early onset stage is effective in inhibiting bone and joint damage. The global market for these agents is forecast to reach $25.6 billion* by 2020. The market is also changing. In 2013, a new oral formulation was launched in the United States and Japan, and a biosimilar was launched in Europe. In 2014, a biosimilar was also launched in Japan.

In addition to drip infusions, which were the only formulations previously available, subcutaneous formulations have been added, and new formulations that improve convenience, such as a dosage form that can be injected simply by pushing a button, are increasing. In Japan, Europe and the United States, the subcutaneous market is estimated to be larger than the intravenous market.

Steroid drugs, which had been the only treatment available for sJIA, can cause growth impairment and other adverse reactions. Accordingly, the approval and launch of Actemra in April 2008 provided a significant advance in therapy.

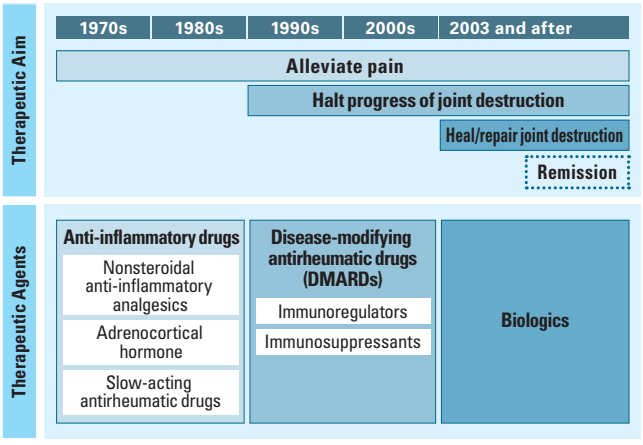
Rheumatoid Arthritis Market in Japan



Source: JPM 2005-2016

The scope of the market is defined by Chugai.

Changes in Rheumatoid Arthritis Drug Therapy



With the advent of biologics, the aim of therapy for rheumatoid arthritis has shifted to achieving and maintaining remission.

The main drug therapies for osteoarthritis include non-steroidal anti-inflammatory analgesics, steroids and hyaluronic acid preparations, with intraarticular administration of hyaluronic acid preparations used as a treatment in the early and middle stages. Intraarticular administration of hyaluronic acid preparations has also demonstrated effectiveness in improving periarthritis of the shoulder and knee joint pain associated with rheumatoid arthritis.

* Source: Evaluate Pharma®

Regulatory Trends

In October 2005, MHLW released the Report of the Rheumatism and Allergy Countermeasure Committee. The report calls for the following measures to prevent RA from becoming severe: (1) promotion of early diagnosis and the development of highly effective treatment methods; (2) establishment of medical service systems to provide appropriate care; and (3) improvement of the patient environment, including consultation opportunities and access to information. In Europe, revised treatment recommendations in 2013 added Actemra and Abatacept to the biologic drugs recommended in first-line therapy, which were previously limited to anti-TNF agents. In 2015, a proposed update of clinical practice guidelines was announced at the American College of Rheumatology, with biologics including Actemra added as first-line therapy along with anti-TNF agents. Moreover, the updated European League Against Rheumatism (EULAR) recommendations that were announced in June 2016 state the superiority of biologics in interleukin-6 (IL-6) inhibitor therapy in cases where MTX and other therapies cannot be used.

In recent years, academic societies and other players have been aggressively promoting research, diagnosis and treatment of osteoarthritis as an underlying cause of "locomotive syndrome," a term proposed in the field of orthopedics to designate the condition of individuals at high risk of suffering loss of motor function due to advanced age that leaves them requiring nursing care and bedridden.

Castleman's Disease

Castleman's disease is a lymphoproliferative disease characterized by symptoms such as systemic lymphadenopathy, fever and general fatigue, as well as various abnormal laboratory test values including anemia, hypergammaglobulinemia and hypoalbuminemia. It has been confirmed that these manifestations result from the excessive production of IL-6, one of the cytokines that causes inflammation. Castleman's disease is very rare, affecting approximately 1,500 people in Japan.

Large-Vessel Vasculitis

Large-vessel vasculitis belongs to a group of autoimmune diseases called vasculitis syndromes. It refers to vasculitis in the aorta and the major aortic branches to the limbs and head and neck, and includes Takayasu's arteritis and giant cell arteritis (temporal arteritis).

Takayasu's arteritis leads to inflammation of the aortic arch and its branch vessels. It affects women more than men, at a ratio of 9:1, and age of onset is between 20 and 50 years. It occurs most commonly in Asia, including Japan, and the Middle East. Initial symptoms include reduced head and cerebral blood flow-related conditions such as dizziness, lightheadedness and headaches, as well as neck pain, chest pain and vascular pain along the limb arteries.

Giant cell arteritis is a granulomatous vasculitis occurring primarily in the aorta and aortic branches, mainly the temporal arteries. It also affects women more than men, at a ratio of 1.6:1, and the age of onset is 55 years or older. It occurs most commonly in Western countries and is rare in Japan. Common initial symptoms include headache, systemic conditions such as fever, and loss of vision.

Systemic Sclerosis

Systemic sclerosis (SSc) is a rare, chronic disorder characterized by blood vessel abnormalities, as well as degenerative changes and scarring in the skin, joints and internal organs. The incidence rate of SSc is difficult to measure, but it is estimated to affect approximately 2.5 million people worldwide, and has the highest fatality rate of any rheumatic disease.

Actemra (MRA/RG1569)

Humanized anti-human IL-6 receptor monoclonal antibody (Generic name: tocilizumab)

Basic Information

Actemra, created by Chugai and the first therapeutic antibody originating in Japan, blocks the activity of IL-6, a type of cytokine. It was launched in Japan in June 2005 as a treatment for Castleman's disease. In April 2008, Chugai obtained approval in Japan for the additional indications of rheumatoid arthritis (RA), polyarticular juvenile idiopathic arthritis (pJIA) and systemic juvenile idiopathic arthritis (sJIA). In May 2013, Chugai launched a new subcutaneous formulation that improves convenience for patients in addition to the existing drip infusion formulation. This subcutaneous formulation includes the first auto-injector in the Japanese RA market. In June 2014, the two-week limit on prescriptions was lifted, allowing Actemra to be prescribed for one month or longer.

Actemra is marketed globally through Roche. In Europe, where the medicine is known as RoACTEMRA, sales for the treatment of RA started in 2009. Chugai's marketing subsidiary co-promotes RoACTEMRA with Roche in the United Kingdom, France and Germany. In the United States, Actemra obtained approval in January 2010 for the treatment of adult patients with moderate to severe active

RA who have had an inadequate response to one or more TNF antagonist therapies, and obtained approval in October 2012 as a first-line biologic treatment. In Taiwan and South Korea, where Chugai has marketing rights, Actemra obtained approval in July 2011 and April 2012, respectively. Following its launch in Japan, the subcutaneous formulation obtained approval in the United States in October 2013 and in Europe in April 2014, and has been launched in both markets. RoACTEMRA was also approved for early RA in Europe in September 2014.

Furthermore, Actemra obtained approval for the additional indication of treatment of sJIA in the United States in April 2011 and in Europe in August 2011. Actemra also received breakthrough therapy designation from the U.S. FDA in 2015 as a potential treatment for systemic sclerosis and in 2016 as a treatment for giant cell arteritis. In Japan, Actemra received orphan drug designations as a treatment for large-vessel vasculitis in June 2014 and systemic scleroderma in March 2016.

Review of 2016 Performance

In 2016, sales of Actemra in Japan increased ¥3.4 billion, or 12.7 percent, to ¥30.2 billion, due to steady uptake of both the drip infusion and subcutaneous formulations. Sales of the subcutaneous formulation accounted for more than 40 percent of the total.

Sales of Actemra outside Japan (to Roche) decreased ¥3.5 billion, or 5.6 percent, to ¥59.1 billion due to a revision of inventory standards conducted by Roche. On the other hand, Roche's global sales increased 16.0 percent year on year with steady market penetration. In particular, market uptake of the subcutaneous formulation drove growth in the United States and key countries of Europe.

In development, Chugai filed an application in August 2016 for the approval of an additional dosage of Actemra in patients with RA who respond inadequately to the currently approved every other week dosing regimen. In November 2016, Chugai filed an application for the approval of the additional indication of large vessel vasculitis, which includes Takayasu's arteritis and giant cell arteritis. In addition, a phase III multinational joint study for the treatment of systemic scleroderma is under way.

Suvenyl

Agent for joint function improvement
(Generic name: sodium hyaluronate)

Basic Information

Suvenyl, a drug that improves joint function through injection into the joint cavity, is a high molecular weight sodium hyaluronate drug that alleviates knee osteoarthritis, shoulder periarthritis and knee joint pain caused by RA. With physical and chemical properties close to that of hyaluronic acid found in the body, Suvenyl has been recognized for its superior performance, including its anti-inflammatory and analgesic effects.

Review of 2016 Performance

Sales decreased ¥1.2 billion, or 11.4 percent, to ¥9.3 billion, due to the impact from competing products and generics.

Neuromyelitis Optica

Neuromyelitis optica (NMO), also known as Devic's disease, is a neurological autoimmune disorder characterized by severe optic neuritis and transverse myelitis. The disease affects 0.3 to 4.4 in 100,000 people, and there are about 4,000 patients in Japan. It is an incurable disease that typically appears around the age of 40 years and affects women more than men, at a ratio of 9:1. Symptoms include loss of vision (blindness) and impairment of motor function and sensation. In some cases, the disease results in death. However, as there are no approved treatments available, NMO is an orphan disease with high unmet medical need. It is believed to occur when aquaporin-4 (AQP4) in the central nervous system is attacked by autoantibodies called anti-AQP4 antibodies.

SA237

Anti-IL-6 receptor humanized monoclonal antibody

Basic Information

SA237, created by Chugai, is a next-generation therapeutic antibody that has shown success in blocking IL-6 receptors for an extended period of time. Chugai created SA237 by applying its novel antibody technology (recycling antibody technology) that enables a single antibody molecule to block the target antigen repeatedly. Preclinical studies have verified that this extends the duration of the blocking action on IL-6 receptors more than four times longer than Actemra, and an extension of serum half-life has been demonstrated in clinical trials. Because IL-6 promotes the production of the anti-AQP4 antibodies that cause NMO, this drug is expected to improve (reduce recurrence of) the symptoms of this disease as it inhibits the production of those antibodies by blocking the IL-6 signal.

Review of 2016 Performance

A phase III multinational study for the potential treatment of NMO is under way. In addition to its designation as an orphan drug by the U.S. FDA, SA237 was also granted orphan drug designation in Europe in 2016. Furthermore, in June 2016, Chugai concluded a license agreement that grants Roche exclusive rights for the development and marketing of SA237 worldwide, with the exception of Japan, South Korea and Taiwan.

Renal Diseases

Renal Anemia

Complications of Renal Dysfunction

For dialysis patients and end-stage renal disease patients, the treatment of various complications of advanced renal dysfunction, such as renal anemia, secondary hyperparathyroidism, and abnormal calcium and phosphorus metabolism, is a major issue. Of these complications, renal anemia is one of the most frequent, occurring not only in renal disease patients undergoing dialysis but also in pre-dialysis renal disease patients. Renal anemia, in turn, is thought to be a factor not only in reducing quality of life, but also in the progress of organ damage, including decreased cardiac function.

The importance of treating renal anemia and chronic kidney disease - mineral and bone disorder (CKD-MBD) was indicated in the Guideline for Renal Anemia in Chronic Kidney Disease (2015) and the Clinical Practice Guidelines for the Management of CKD-MBD (2012) issued by the Japanese Society for Dialysis Therapy and in the Evidence-based Practice Guidelines for the Treatment of CKD (2013) issued by the Japanese Society of Nephrology.

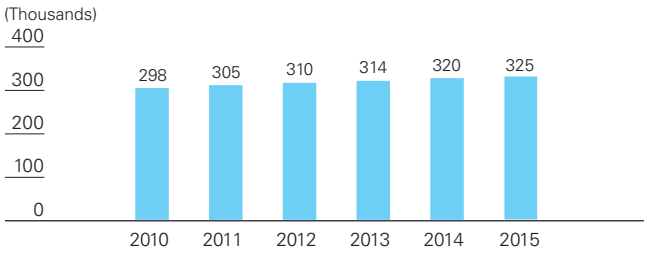
Erythropoiesis-Stimulating Agent (ESA)

Erythropoietin (EPO) is a hemopoietic factor produced mainly in the kidneys. It speeds up erythrocyte production using erythroid progenitor cells found in bone marrow. An erythropoiesis-stimulating agent (ESA) is effective in treating renal anemia caused primarily by the decline in EPO production due to CKD, and is thought to help improve quality of life. It is estimated that ESAs are currently used by approximately 80 percent of dialysis patients as well as by pre-dialysis renal disease patients with renal anemia. ESAs are thus an essential drug for the treatment of renal anemia.

A Flat-Sum Reimbursement System for ESAs

Since the 2006 revisions of medical fees, ESAs have been included in medical fee points for dialysis. The integrated fee points are reviewed with each revision of medical fees.

Number of Dialysis Patients in Japan



Source: Overview of Regular Dialysis Treatment in Japan (as of December 31, 2015) by Statistical Survey Committee, The Japanese Society for Dialysis Therapy

Mircera

Long-acting erythropoiesis-stimulating agent
(Generic name: epoetin beta pegol)

Basic Information

Mircera is a drug that raises the stability of epoetin beta in the bloodstream through pegylation. It is a new type of renal anemia treatment with the longest serum half-life among ESAs, enabling stable and sustained control of hemoglobin. It stimulates erythropoiesis by a different interaction with the EPO receptor on progenitor cells in the bone marrow. Mircera was launched in Japan in July 2011 as a treatment for renal anemia. Outside Japan, Mircera obtained approval in Europe in 2007 and is currently sold in more than 100 countries, including the United States.

The serum half-life of Mircera is virtually the same for intravenous injection or subcutaneous administration, and the drug demonstrates efficacy in relieving the symptoms of anemia when administered at four-week intervals during the maintenance period. Consequently, it may reduce the burden of hospital visits on patients with pre-dialysis renal disease and is expected to contribute to better treatment adherence. Furthermore, as a dialysis-related treatment, Mircera is expected to reduce the burden on medical staff and improve medical safety by dramatically reducing administration frequency. The product thus has the potential to expand the range of options for the treatment of renal anemia.

Review of 2016 Performance

Sales of Mircera increased ¥0.4 billion, or 1.7 percent, to ¥24.2 billion. The NHI drug price was reduced in the most recent revisions because it did not qualify for premium pricing. However, its use is steadily increasing in the renal anemia market, primarily in the pre-dialysis stage, where definite effects can be obtained with administration once every four weeks tailored to the frequency of patients' hospital visits.

Epogin

Recombinant human erythropoietin agent
(Generic name: epoetin beta)

Basic Information

Epogin is a human erythropoietin agent that uses epoetin beta, produced through Chugai's unique gene recombinant technology, as its main active ingredient. Erythropoietin is effective in improving renal anemia primarily caused by the decline in erythropoietin production due to CKD. It also contributes to the improvement of a wide range of complications arising from anemia. Since its launch in 1990, Epogin has been widely used in the clinical setting for its approved indications of renal anemia under dialysis and before dialysis, anemia of prematurity and autologous blood transfusion of patients scheduled for surgery.

Review of 2016 Performance

Sales of Epogin decreased ¥0.7 billion, or 11.9 percent, to ¥5.2 billion due to an NHI drug price revision and the switch to Mircera and competing products, including biosimilars.

Oxarol

Agent for secondary hyperparathyroidism
(Generic name: maxacalcitol)

Basic Information

Synthesized by Chugai, Oxarol is the first intravenous active vitamin D_3 derivative agent in Japan. It treats secondary hyperparathyroidism, a result of prolonged dialysis, by acting directly on the parathyroid gland with high concentration to control parathyroid hormone synthesis and secretion, and by acting to improve bone metabolism. With its short serum half-life, Oxarol is showing efficacy in patients who could not be treated sufficiently with oral vitamin D_3 derivatives due to the onset of hypercalcemia.

Review of 2016 Performance

Sales of Oxarol decreased ¥3.8 billion, or 29.5 percent, to ¥9.1 billion due to the impact of intensifying competition with the launch of a generic product and a substantial NHI drug price revision (-19.7 percent) with the return of the drug's premium for new drug creation. In development, Marudox Ointment, which was jointly developed by Chugai and Maruho Co., Ltd, acquired marketing approval for the indication of psoriasis vulgaris in March 2016, and sales began through Maruho in June 2016.

EOS789

EOS789 is an oral drug created by Chugai with a molecular weight of over 500 g/mol. A phase I clinical trial as a potential treatment for hyperphosphatemia is under way.

Neurology

Alzheimer's Disease

Alzheimer's disease (AD) is the most common form of dementia. Pathologically, it is a progressive neurodegenerative disease that causes neuron death in the brain and brain atrophy. It leads to a general and progressive loss of memory and other cognitive functions, which can interfere with daily life. While existing AD treatments have some effect in slowing disease progression by several months, they are unable to stop the neuron death, and a treatment for the underlying cause does not yet exist. Consequently, unmet medical need is high, and there is strong demand for a more effective drug.

RG1450

Anti-amyloid-beta human monoclonal antibody
(Generic name: gantenerumab)

RG1450 is an anti-amyloid-beta human monoclonal antibody in-licensed from Roche. The drug targets aggregate amyloid beta, with a high binding affinity to plaques in particular. It is expected to improve cognition by removing amyloid beta in the brain. A phase III multinational study of RG1450 as a potential treatment for AD is under way.

RG7412

Anti-amyloid-beta humanized monoclonal antibody
(Generic name: crenezumab)

RG7412 is an anti-amyloid-beta humanized monoclonal antibody in-licensed from Roche. The drug targets all types of amyloid beta, with a high binding affinity to oligomers. It is expected to improve cognition by removing amyloid beta in the brain. A phase I clinical trial of RG7412 as a potential treatment for AD began in September 2016.

Spinal Muscular Atrophy

Spinal muscular atrophy (SMA) is a lower motor neuron disease characterized by amyotrophy and progressive muscle weakness caused by degeneration of anterior horn cells in the spinal cord. The estimated number of patients in Japan is reported to be around 1,000. The disease is caused by a defect in the SMN1 gene, and onset usually occurs in childhood. In severe cases it is fatal. SMA is one of the most serious pediatric neuromuscular diseases, but no standard of care has yet been established.

RG7916

SMN2 splicing modifier

RG7916 is an SMN2 splicing modifier that increases generation of a protein derived from the SMN2 gene. This protein is nearly identical to the protein made from the SMN1 gene, which is not functional in SMA patients. RG7916 shows promise in improving neural and muscular function. A phase I clinical trial of RG7916 as a potential treatment for SMA began in January 2017.

Other Diseases

Influenza

Influenza is an acute infectious disease characterized by the rapid onset of high fever (38 degrees centigrade or more) and severe systemic symptoms. It is highly infectious, and epidemics can develop quickly. In some cases, secondary infections can lead to very serious illness. Influenza is classified into types A, B and C based on differences in the antigenicity of the underlying virus. Types A and B can infect humans and cause major outbreaks.

Tamiflu

Anti-influenza agent
(Generic name: oseltamivir phosphate)

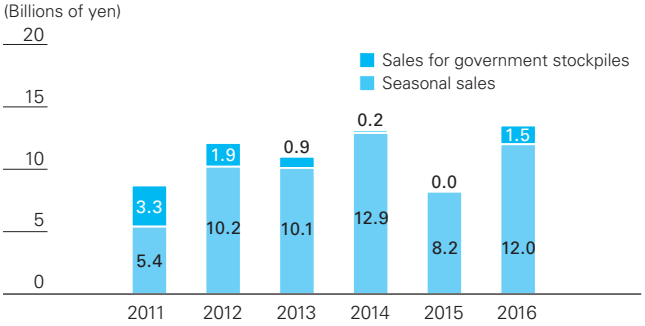
Basic Information

Tamiflu is an oral anti-influenza agent that is effective against both type A and type B infections. It inhibits viral replication by blocking the action of neuraminidase, an enzyme essential for the multiplication of the influenza virus. Launched in capsule form in February 2001 and dry syrup form in July 2002, dosages are available for patients one year of age and older. Since March 2007, restrictions on the use of Tamiflu in teenage patients with seasonal influenza have been in force in Japan. The measure was introduced as a safety precaution following several reports of abnormal behavior in influenza patients who had taken Tamiflu. The report of an epidemiological survey with 10,000 flu patients conducted by a working group of MHLW suggested that there are no findings to date that point to a causal association between Tamiflu and the abnormal behavior of patients taking the drug. MHLW has concluded that it is appropriate to continue to take precautions and other measures, and is thus continuing the restriction on the use of Tamiflu. New research investigating the relationship between abnormal behavior and the use of Tamiflu is expected to begin in 2016. The shelf life of Tamiflu capsules was extended to 10 years from seven years for capsules manufactured after July 2013, and the shelf life of dry syrup was extended to 10 years starting with the portion shipped in 2015.

Review of 2016 Performance

Sales of Tamiflu increased ¥5.3 billion, or 64.6 percent, to ¥13.5 billion. Seasonal sales were ¥12.0 billion, while sales for government stockpiles were ¥1.5 billion. In 2016, the NHI drug price of the capsule formulation was reduced by 11.0 percent with the return of the drug's premium for new drug creation, but Chugai continued to highlight the drug's efficacy and the benefits of its unique dry syrup formulation.

Tamiflu Sales



CellCept

Immunosuppressant
(Generic name: mycophenolate mofetil)

Sales of CellCept, an immunosuppressant, increased ¥0.9 billion, or 12.9 percent, to ¥7.9 billion. CellCept is used to treat refractory rejection after kidney transplants and to prevent rejection after kidney, heart, liver, lung and pancreas transplants. The need for transplantation medication has been rising in Japan, driven by advances in transplantation therapy. In May 2016, CellCept received approval for the indication of lupus nephritis, a refractory disease associated with the autoimmune disease systemic lupus erythematosus.

Chronic Hepatitis C

Chronic hepatitis C is a liver disease caused by persistent infection by the hepatitis C virus (HCV). In Japan, this disease has been designated a "21st century national health issue," as there are an estimated 1.5 million HCV carriers. Early detection and treatment of HCV is important because approximately 70 percent of those infected develop chronic hepatitis, and HCV is rarely eliminated once hepatitis becomes chronic, gradually progressing to liver cirrhosis and then liver cancer.

Treatment Methods and Market Conditions

In 2014, the approval of an interferon-free treatment for patients who have not responded sufficiently to conventional therapies significantly changed the therapeutic system for chronic hepatitis C.

Pegasys

Peginterferon alfa-2a agent
(Generic name: peginterferon alfa-2a)

Copegus

Anti-viral agent
(Generic name: ribavirin)

Basic Information

Pegasys is a pegylated interferon-based drug that was improved to achieve a sustained antiviral effect with once-weekly* administration. Pegasys obtained approval for chronic hepatitis C (as a monotherapy) in October 2003; for combination therapy with Copegus in January 2007; and for the additional indications of compensated liver cirrhosis caused by hepatitis C (in combination with Copegus) in July 2011 and chronic active hepatitis B (as a monotherapy) in September 2011.

Copegus is a chronic hepatitis C treatment that synergistically strengthens the antiviral effect when used in combination with interferon. Chugai obtained approval for Copegus in January 2007 and launched it in March as a combination therapy with Pegasys. In

March 2015, Copegus obtained approval for the additional indication of genotype 2 chronic hepatitis C and compensated cirrhosis related to hepatitis C when administered in combination with Sovaldi.

* Conventional interferon must be injected three or more times per week.

Review of 2016 Performance

Sales of Pegasys decreased ¥1.4 billion, or 73.7 percent, to ¥0.5 billion, and sales of Copegus decreased ¥1.3 billion, or 44.8 percent, to ¥1.6 billion. Sales of both products fell significantly because of a significant change in the therapeutic system for chronic hepatitis C due to the launch of competing products that are interferon-free, as well as the end of a cycle for interferon-free therapies, including Sovaldi.

Angina Pectoris

Hardening of the coronary artery or coronary spasms can cause constriction of the artery and lead to ischemia, a condition in which the heart does not receive sufficient blood flow. Clinical symptoms of angina pectoris include chest pain and pressure that accompany temporary ischemia. Vasodilators, such as nitric acid, that enlarge the coronary artery are used to control attacks. In addition, beta blocker agents are used to treat exertional angina pectoris, a symptom that appears during physical activity such as climbing stairs, and calcium blockers are used for coronary spasm-related angina pectoris.

Acute Heart Failure

Heart failure refers to the general condition that results from insufficient heart activity. When heart failure occurs suddenly in people with no previous history of heart disease, or when heart failure rapidly worsens in patients that had been stable, it is called acute heart failure. Treatments for acute heart failure include diuretics, vasodilators and inotropic drugs.

Sigmart

Anti-anginal agent
(Generic name: nicorandil)

Anti-anginal agent Sigmart is a drug that overcomes the flaws of nitrates such as nitroglycerin and is effective in treating various types of angina pectoris. Both oral and injectable forms are approved. Approval of the injectable formulation was granted for treatment of unstable angina pectoris in 1993 and for acute heart failure in 2007.

Hemophilia

Hemophilia is a disease that leads to bleeding in the joints, muscles and other areas in the body due to a congenital deficiency or abnormal function of blood coagulation factors. A low level or absence of blood coagulation factor VIII is known as hemophilia A, while a low level or absence of blood coagulation factor IX is referred to as hemophilia B. Treatment is centered on replacement therapy to supplement factor VIII or IX. However, since it involves intravenous injections two to three times a week, treatment is a significant burden, particularly on children. Moreover, patients must be monitored for the development of autoantibodies, called inhibitors, to the supplemented factor. Patients with inhibitors are treated by means such as bypass therapy or immune tolerance therapy, but these therapies are limited in terms of convenience and the stability of their effects. A more useful treatment method is therefore needed.

ACE910

Anti-factor IXa/X bispecific antibody
(Generic name: emicizumab)

Emicizumab (ACE910) is an anti-factor IXa/X bispecific antibody that employs Chugai's innovative antibody engineering technologies. Like factor VIII, ACE910 simultaneously binds to factor IXa and factor X, stimulating the activation of factor X by activated factor IX and promoting the blood coagulation that occurs as a result. Unaffected by inhibitors, ACE910 is expected to prevent bleeding with once weekly (or less-frequent) subcutaneous injections.

ACE910 was granted orphan drug designation for the potential treatment of hemophilia A in Europe in December 2013 and the United States in January 2014. Chugai concluded an out-licensing agreement with Roche in July 2014, and the drug received breakthrough therapy designation from the U.S. FDA in September 2015. In a phase III multinational study on patients with inhibitors that began in November 2015, a statistically significant reduction in the number of bleeds was confirmed in patients who received emicizumab prophylaxis (December 2016). Phase III multinational studies also began on juvenile patients with inhibitors in July 2016 and patients without inhibitors in September 2016. In addition, a phase III multinational study with administration at four-week intervals began in January 2017.

ACE910 has the potential to change the existing therapeutic system. Another key feature of this drug is that Chugai's proprietary ART-Ig technology can be applied to enable commercial-scale production of bispecific antibodies.

Atopic Dermatitis

A type of allergic disorder, atopic dermatitis is a chronic skin disease characterized by an itchy rash that alternately improves and worsens. Scratching the affected area exacerbates the skin symptoms and makes the itching worse, leading to an itch-scratch cycle. The basic treatment method is drug therapy using topical steroid preparations and/or topical immunosuppressants to control the inflammation and a skin care regimen to prevent the inflammation from recurring.

Pruritus in Dialysis Patients

Pruritus is a complication found in more than 40 percent of dialysis patients. Various factors are thought to play complex roles in development of the condition, including skin dryness, accumulation of uremic toxins, secondary hyperparathyroidism, complement activation by dialysis membranes, the effect of heparin, and itch mediators. It is systemic and refractory, and the degree, site and timing of itching vary by patient. The itching not only reduces quality of life due to discomfort and sleeplessness, but is also reported to be involved in life expectancy.

CIM331

Anti-IL-31 receptor A humanized monoclonal antibody (Generic name: nemolizumab)

Nemolizumab is an anti-IL-31 receptor A humanized monoclonal antibody originating from Chugai. The drug is expected to suppress itching by blocking IL-31, which is responsible for the itching in atopic dermatitis, from binding to its receptor. It is also expected to improve skin inflammation by cutting off the itch-scratch cycle. A Chugai-managed phase II multinational study was conducted in Japan, the United States and Europe. In March 2016, it was announced at the American Academy of Dermatology that efficacy and tolerability at 12 weeks of treatment had been observed.

A phase II clinical trial of CIM331 as a potential treatment for pruritus in dialysis patients is under way.

In July 2016, Chugai entered into a global license agreement granting Galderma Pharma S.A. of Switzerland exclusive rights for the development and marketing of nemolizumab worldwide, with the exception of Japan and Taiwan. In September 2016, Chugai entered into a license agreement granting Maruho Co., Ltd. the rights for the development and marketing of nemolizumab in the skin disease area for the Japanese market.

Paroxysmal Nocturnal Hemoglobinuria (PNH)

PNH is a disorder that leads to complications such as thrombosis and CKD, in addition to anemia and dark brown urine caused by hemolysis as well as infections and bleeding tendency associated with a decrease in white blood cells and platelets. An acquired genetic mutation affecting hematopoietic stem cells causes the creation of red blood cells that have no complement resistance, and hemolysis occurs when complements are activated in vivo. While there are only an estimated 430 patients suffering from PNH in Japan, it is a progressive disease with a high risk of mortality. The drug approved in Japan to suppress hemolysis in patients who need blood transfusions must be administered by continuous infusion once every two weeks.

SKY59

Anti-C5 recycling antibody

SKY59 is a recycling antibody discovered by Chugai that inhibits the C5 complement component. By blocking cleavage of C5 to C5a and C5b, it is expected to inhibit complement activation, which is the cause of a number of diseases. In PNH, SKY59 may have a suppressive effect on hemolysis by preventing the destruction of red blood cells. Application of multiple Chugai proprietary antibody engineering technologies resulted in an extension of half-life in pre-clinical trials, and the antibody is being developed as a subcutaneous self-injection. Chugai is co-developing SKY59 with Roche, and a phase I/II multinational study began in November 2016.

Idiopathic Pulmonary Fibrosis

Idiopathic pulmonary fibrosis (IPF) is a chronic and progressive lung disease of unknown cause and poor prognosis in which extensive fibrosis results in irreversible honeycomb lung. It is a fatal disease, with a five-year survival rate of around 50 percent. The goal of treatment is to slow the progression of the disease. Currently, only two drugs, pirfenidone and nintedanib, are approved for the treatment of this disease, but considering their side effects and efficacy, IPF remains a disease with high unmet medical need.

RG3637

Anti-IL-13 humanized monoclonal antibody (Generic name: lebrikizumab)

RG3637 is an anti-IL-13 humanized monoclonal antibody in-licensed from Roche. A phase II multinational study as a potential treatment for IPF is under way.

Gout

Gout occurs when uric acid crystals are deposited in the joints due to prolonged high levels of serum uric acid (hyperuricemia), causing inflammation. The peak age of onset is becoming younger, and has shifted from the 50s to the 30s. The number of patients with hyperuricemia, the underlying cause of gout, has been increasing annually, and as many as 5 million people are estimated to be at risk for gout in Japan.

URC102

URAT1 inhibitor

URC102 is a URAT1 inhibitor discovered at C&C Research Laboratories, a joint venture between Chugai and JW Pharmaceutical Corporation of South Korea. It is an oral small-molecule uricosuric agent expected to be effective against gout. This compound is expected to reduce the level of serum uric acid by promoting its excretion through inhibition of URAT1. URC102 is being co-developed with JW Pharmaceutical, and a phase II clinical trial is under way in South Korea.

Glossary

Terms Related to Chugai's Business

Unmet medical need
Medical need that is not adequately met due to a lack of effective treatments.

First-in-class
An original drug that is highly novel and useful, and will significantly change the therapeutic system.

Best-in-class
A drug that offers clear advantages over other existing drugs in the same category, such as those with the same molecular target.

Development pipeline
At pharmaceutical companies, refers to drug candidates that are being developed as potential new drugs. It is important to have a well-stocked pipeline that has a high success rate and is expected to lead to differentiation from other companies' products.

Proof of Concept (PoC)/Early PoC
Proof of concept (PoC) is a demonstration that the therapeutic effect conceived in the research stage is effective in humans. Early PoC means that in addition to safety, signs of efficacy or pharmacological effect have been confirmed in a limited number of cases.

Clinical trial
A study to verify the safety, efficacy and other characteristics of a drug in human subjects. Studies conducted for new drug development are called clinical trials. Clinical trials consist of phase I to phase III studies, which are conducted before filing for approval, and phase IV studies, which are conducted after obtaining approval.

Phase I: Performed on a small number of healthy volunteers (or, for certain disease areas and diseases, on patients) to assess the drug's safety and the process by which it is absorbed, distributed, metabolized and eliminated by the body.

Phase II: Performed on a small number of consenting patients to determine the safest and most effective dosage and the dosing regimen.

Phase III: Performed on a large number of consenting patients to confirm the efficacy and safety of the new drug in comparison with existing drugs or placebo.

Phase IV: Post-marketing clinical surveillance. Performed on a larger number of consenting patients than in phase III studies to verify the indication of a new drug and gather information on any side effects or adverse reactions not identified in phase III.

Application for approval
An application submitted by a pharmaceutical company to a regulatory agency to obtain approval for manufacturing and marketing of a new drug after its efficacy and safety have been verified in clinical trials. In Japan, the Ministry of Health, Labour and Welfare (MHLW) grants manufacturing and marketing approval to substances deemed appropriate as pharmaceuticals based on reviews by the Pharmaceutical Affairs and Medical Devices Agency as well as academic and other experts in the Pharmaceutical Affairs and Food Sanitation Council.

NHI drug price
In Japan, the price paid by the National Health Insurance (NHI) system to hospitals and insurance pharmacies for the drugs they use for insured medical treatments. Drug prices are determined by the MHLW, and are revised based on prevailing market prices once every two years in principle.

All-case registration surveillance
A survey conducted on all patients using a particular drug to verify the efficacy and safety of the drug in actual use and to gather and analyze information on the occurrence of side effects and appropriate use. Required as a condition of approval for certain drugs.

Additional indication
A new indication added to the indication(s) already approved for a drug.

Lifecycle management
The various measures taken to maximize the potential value of a drug, including shortening development time, expanding sales, extending the product's life, and conducting appropriate cost control. Competitiveness can be strengthened further by using earnings from sales of established drugs to strategically reinvest in new drug development, marketing or other areas.

Drug lag
The time difference between the approval of drugs overseas and their approval in Japan. Progress has been made in eliminating the drug lag in recent years as the Japanese government and the pharmaceutical industry have taken various measures to make drugs available to patients in Japan as early as possible.

Multidisciplinary team care
A collaborative approach in which a team of healthcare professionals is formed according to the patient's medical condition. As medicine has become more specialized with advances in medical technology, this approach brings together doctors with different medical specialties as well as pharmacists, nurses, therapists, nutritionists, medical social workers and other professionals to provide patient-centered care as one team.

Terms Related to Drug Discovery

Molecular targeted drug
A drug developed to treat illnesses more safely and effectively by targeting specific molecules in the body and suppressing their activity. Since these drugs target only specific molecules, they do less damage to normal cells, and are therefore expected to ease the burden on patients in comparison with conventional drugs.

Biopharmaceuticals
Drugs created by applying biotechnology such as genetic recombination and cell fusion. Chugai built its expertise in biopharmaceuticals through research and development of Epogin and Neutrogin.

Antibody
A molecule that selectively binds to a specific antigen (target) on a foreign substance and helps to remove the foreign substance from the body. When a foreign substance enters the body, it stimulates the production of antibodies that selectively bind to the antigen on the foreign substance and act to remove the substance.

Therapeutic antibody
A drug that is used to prevent or treat illness by creating an antibody against the substance that causes the illness. Therapeutic antibodies precisely target only specific antigens on the surface of cancer cells or other cells, and therefore can be expected to provide high therapeutic efficacy and reduce side effects.

Open innovation
Generating innovative, new value by utilizing the technologies and development capabilities of external research networks such as with universities, research institutions and other organizations, in addition to in-house capabilities.

Terms Related to the Roche Group

Roche
A pharmaceutical company established in 1896 and headquartered in Basel, Switzerland. With business operations in more than 100 countries, the Roche Group contributes to medicine in a wide range of fields through its two business segments: pharmaceuticals and diagnostics. Central to the Roche Group's strategy is personalized healthcare, the approach of selecting the most appropriate treatment by using biomarkers and diagnostic tests to identify patients most likely to show a significant response to a particular drug. The Roche Group's sales in 2016 were 50.6 billion Swiss francs.

Roche Diagnostics K.K.
The Japanese subsidiary of the Roche Group's diagnostics division. Established in 1998, Roche Diagnostics K.K. provides a wide range of innovative diagnostic solutions, from in-vitro diagnostics and diagnostic equipment and research reagents and related equipment to blood glucose meters for people with diabetes.

Genentech
A leading biotechnology company headquartered in South San Francisco, California. Genentech has been a member of the Roche Group since 1990.

Terms Related to Human Resources

Work-life balance/Work-life synergy
Work-life balance is the concept of creating harmony between work and personal life (family, hobbies, recreation and community activities) and achieving satisfaction in both realms.

The aim of work-life synergy is to generate synergy between each employee's job and lifestyle while improving the quality of both, as well as raising Chugai's productivity as an organization to become a top pharmaceutical company.

Diversity
At Chugai, diversity refers to a diversity of attributes such as gender, age and nationality as well as ways of thinking and values. When people with various backgrounds work together, they become aware of diverse perspectives and ideas. Using this awareness for business innovation, companies promote diversity to create better-quality products and services. Also called "diversity and inclusion (D&I)," this term refers to receptivity to diversity and incorporating diverse opinions and ideas rather than the simple pursuit of variety, and also encompasses the concept of raising organizational value.

Talent management
A human resource strategy to support the development of the next generation of leaders and core human resources and to improve the skills and enhance the motivation of employees throughout the Company, with the aim of realizing our goal of becoming a top pharmaceutical company. Each organization at Chugai has formulated a long-term human resource development plan and is building a talent pool of next-generation leader candidates.

Financial Section

10-Year Financial Summary

Chugai Pharmaceutical Co., Ltd. and Consolidated Subsidiaries/Years ended December 31

International Financial Reporting Standards (IFRS)	2016		2015		2014		2013	
	IFRS	Core[1]	IFRS	Core[1]	IFRS	Core[1]	IFRS	Core[1]
Results								
Revenues[2]	491.8		498.8		461.1		423.7	
Sales	472.7		468.4		436.9		401.3	
Royalties and other operating income	19.1		30.4		24.2		22.4	
Cost of sales	(247.9)	(246.7)	(240.2)	(238.9)	(218.1)	(217.0)	(187.0)	(186.1)
Operating expenses	(167.0)	(164.5)	(171.8)	(169.3)	(167.2)	(166.8)	(157.9)	(157.7)
Marketing and distribution	(69.8)	(69.8)	(74.8)	(74.7)	(71.7)	(71.7)	(71.6)	(71.5)
Research and development	(85.0)	(82.6)	(83.8)	(81.9)	(80.8)	(80.6)	(74.3)	(74.1)
General and administration	(12.2)	(12.1)	(13.2)	(12.8)	(14.6)	(14.6)	(12.1)	(12.1)
Operating profit	76.9	80.6	86.8	90.7	75.9	77.3	78.7	79.9
Profit before taxes	74.4	78.1	87.3	91.2	76.2	77.6	76.9	78.1
Net income	54.4	56.8	62.4	64.9	52.1	53.0	51.9	52.6
Attributable to Chugai shareholders	53.6	56.1	61.1	63.7	51.0	51.9	50.9	51.6
Core EPS (Yen)	—	102.50	—	116.42	—	95.04	—	94.69
Cash dividends per share (Yen)	52		58		48		45	
Core payout ratio	—	50.7%	—	49.8%	—	50.5%	—	47.5%
Financial Position								
Net operating assets	431.1		380.4		357.7		325.2	
Total assets	806.3		787.4		739.5		697.2	
Total liabilities	(159.8)		(160.1)		(141.8)		(124.0)	
Total net assets	646.5		627.3		597.8		573.2	
Investment on property, plant and equipment	19.4		28.7		16.3		13.0	
Depreciation	14.8		14.0		13.7		13.5	
Main Indicators								
Ratio of cost of sales to sales	52.4%	52.2%	51.3%	51.0%	49.9%	49.7%	46.6%	46.4%
Ratio of operating profit to revenues	15.6%	16.4%	17.4%	18.2%	16.5%	16.8%	18.6%	18.9%
Ratio of research and development expenditures to revenues	17.3%	16.8%	16.8%	16.4%	17.5%	17.5%	17.5%	17.5%
Ratio of net income to equity attributable to Chugai shareholders (ROE)[3]	8.4%	—	10.0%	—	8.7%	—	9.3%	—
Ratio of profit before taxes to total assets (ROA)[4]	9.3%	—	11.4%	—	10.6%	—	11.5%	—
Equity per share attributable to Chugai shareholders (BPS) (Yen)	1,181.67	—	1,146.17	—	1,092.90	—	1,049.47	—
Ratio of equity attributable to Chugai shareholders	80.1%	—	79.5%	—	80.6%	—	82.0%	—
Number of employees	7,245		7,169		7,023		6,872	

1. Core basis results are the results after adjusting non-Core items to IFRS basis results. Core basis results are used by Chugai as internal performance indicators, for representing recurring profit trends both internally and externally, and as indices for establishing profit distributions such as returns to shareholders.
2. Revenues do not include consumption tax.
3. Ratio of net income to equity attributable to Chugai shareholders (ROE) = Net income attributable to Chugai shareholders / Capital and reserves attributable to Chugai shareholders (average of beginning and end of fiscal year)
4. Ratio of profit before taxes to total assets (ROA) = Profit before taxes / Total assets (average of beginning and end of fiscal year)

(Billions of yen)

2012	
IFRS	Core[1]
386.6	
375.2	
11.3	
(168.2)	(167.3)
(143.7)	(143.7)
(67.9)	(67.9)
(66.6)	(66.6)
(9.2)	(9.2)
74.7	75.6
72.7	73.6
46.8	47.4
46.1	46.6
—	85.64
40	
—	46.7%
307.9	
645.3	
(116.2)	
529.2	
14.2	
13.3	
44.8%	44.6%
19.3%	19.6%
17.2%	17.2%
9.0%	—
11.8%	—
970.08	—
81.8%	—
6,836	

(Billions of yen)

Japanese GAAP	2012	2011	2010	2009	2008	2007
Results						
Revenues[1]	391.2	373.5	379.5	428.9	326.9	344.8
Sales	375.2	363.6	375.6	419.1	321.8	332.9
Other operating revenues	16.0	9.9	3.9	9.8	5.1	11.9
Cost of sales	167.7	157.5	162.4	192.9	127.0	137.3
Selling, general and administrative expenses	147.1	153.6	150.9	153.5	148.3	140.8
Marketing and distribution expenses	92.0	97.7	96.2	98.2	95.1	86.6
Research and development expenditures	55.1	55.9	54.7	55.3	53.2	54.2
Operating income	76.4	62.4	66.2	82.6	51.6	66.7
Net income (loss)	48.2	35.2	41.4	56.6	39.3	40.1
Net income per share (basic) (Yen)	88.58	64.75	76.14	104.00	72.07	73.23
Net income per share (diluted) (Yen)	88.54	64.72	76.12	103.98	72.04	73.16
Cash dividends per share (Yen)[2]	40	40	40	40	34	30
Payout ratio	45.2%	61.8%	52.5%	38.5%	47.2%	41.0%
Financial Position						
Total assets	587.7	533.5	508.0	540.5	478.5	458.9
Total net assets[3]	490.1	459.1	449.4	434.7	397.1	385.8
Capital investments	14.2	11.9	12.7	14.6	26.6	19.6
Depreciation and amortization	15.3	15.9	18.0	19.5	20.1	14.9
Main Indicators						
Ratio of cost of sales to revenues	44.7%	43.3%	43.2%	46.0%	39.5%	41.2%
Ratio of operating income to revenues	19.5%	16.7%	17.4%	19.3%	15.8%	19.3%
Ratio of research and development expenditures to revenues	14.1%	15.0%	14.4%	12.9%	16.3%	15.7%
Return on equity[4]	10.2%	7.8%	9.4%	13.7%	10.1%	10.4%
Return on assets[5]	8.6%	6.8%	7.9%	11.1%	8.4%	17.4%
Net assets per share (Yen)	896.02	839.50	821.87	794.51	725.18	703.80
Shareholders' equity to total assets	83.0%	85.6%	88.0%	80.0%	82.6%	83.5%
Number of employees	6,836	6,779	6,709	6,485	6,383	6,257

1. Revenues do not include consumption tax.
2. Cash dividends per share for 2009 include a special year-end dividend of ¥6 per share.
3. Net assets include minority interests.
4. Return on equity = Net income / Shareholders' equity (average of beginning and end of fiscal year)
5. Return on assets = Net income / Total assets (average of beginning and end of fiscal year)

Management's Discussion and Analysis

Operating Environment

The pharmaceutical industry continued to face numerous issues and intense competition in 2016. In addition to an emphasis on cost-containment measures in healthcare and Health Technology Assessment (HTA)[1] stemming from the worsening of government finances in various countries, other factors included declining R&D productivity, stricter regulations on safety and quality, and changes in marketing activities. The operating environment in Japan is particularly unclear due to factors including the special market-expansion repricing introduced in 2016, drug price reductions in the interim, and debate over sweeping reform of the NHI drug pricing system.

On the other hand, continued expansion is forecast in biopharmaceuticals and oncology drugs, with expectations for ongoing growth of pharmaceutical markets focused on unmet medical need.

1. A multidisciplinary process of transparently summarizing information on the clinical efficacy, cost effectiveness, social impact and other issues related to health technologies. HTA provides information to assist in the formulation of safe and effective healthcare policies centered on patients.

Management Policies

Based on its strategic alliance with Roche, a leading global pharmaceutical company, Chugai's mission is to dedicate itself to adding exceptional value through the creation of innovative medical products and services for the benefit of the medical community and human health around the world. Our primary management goal is to become a top pharmaceutical company capable of continuously delivering innovative drugs in Japan and internationally as a leading member of the Roche Group. We have been working to fulfill this mission and achieve our goal by leveraging our close relationship with Roche and building systems capable of efficiently and continuously developing and marketing new drugs. We have also innovated by refining our strengths to attain leading-edge drug discovery technology and maintain the top share of the domestic oncology field.

Under our previous mid-term business plan, ACCEL 15, we generated top-class growth in Japan underpinned by several innovative new drugs and expanded our leading share of the domestic oncology field. Other significant outcomes we achieved included world-class drug discovery capabilities exemplified by our antibody engineering technologies, and the creation of a robust pipeline that draws on Roche's rich portfolio of clinical candidates. This pipeline contains numerous convincing new drug candidates, which we see as major opportunities that will drive growth. At the same time, as these candidates come into their own as new growth drivers over the next several years, we expect that factors including significant price decreases for existing major products will slow the pace of sales growth.

Amid such a mixture of opportunities and threats, Chugai formulated its new mid-term business plan, IBI 18, which covers the period from 2016 through 2018, and commenced new initiatives with the aim of transforming into a company that continues making progress globally through demonstration of its competitive advantages that leverage its strategic alliance with Roche. Chugai will work to resolve issues under the two main themes of IBI 18: "acquisition and implementation of competitiveness at a top global level" and "selection and concentration strategy for acceleration of growth." The quantitative outlook through the final year of the plan is a compound annual growth rate for Core EPS[2] in the low single digits (less than 4 percent) based on average exchange rates for 2015. Chugai aims for a consolidated dividend payout ratio that averages 50 percent of Core EPS to provide a stable allocation of profit to all shareholders.

Chugai will unceasingly pursue innovation based on its business philosophy of "Innovation all for the patients" and its slogan "INNOVATION BEYOND IMAGINATION."

2. Diluted net income per share attributable to Chugai shareholders after deducting items that Chugai defines as non-Core items

Overview of Results

Chugai discloses its results on a Core basis from 2013 in conjunction with its decision to apply IFRS. Core results are the results after adjusting non-recurring items recognized by Chugai to IFRS results, and are consistent with the Core concept disclosed by Roche. Core results are used by Chugai as an internal performance indicator, for explaining the status of recurring profits both internally and externally, and as indices for establishing profit distributions such as returns to shareholders.

General Overview

(Billions of yen)

	2014		2015		2016		2015/2016 Change	
	IFRS	Core	IFRS	Core	IFRS	Core	IFRS	Core
Revenues	461.1		498.8		491.8		-1.4%	
Operating profit	75.9	77.3	86.8	90.7	76.9	80.6	-11.4%	-11.1%
Net income	52.1	53.0	62.4	64.9	54.4	56.8	-12.8%	-12.5%

Note: IFRS basis results for 2016 include amortization of intangible assets of ¥1.3 billion, impairment of intangible assets of ¥2.4 billion, and other items excluded from the Core basis results.

- In 2016, Core basis revenues and earnings decreased because royalties and other operating income decreased.

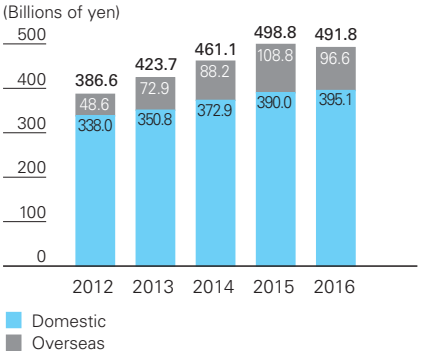
Revenues

(Billions of yen)

	2014	2015	2016	2015/2016 Change
Revenues	461.1	498.8	491.8	-1.4%
Sales (including Tamiflu)	436.9	468.4	472.7	+0.9%
Sales (excluding Tamiflu)	423.8	460.2	459.2	-0.2%
Royalties and other operating income	24.2	30.4	19.1	-37.2%

- Domestic sales increased in 2016 because new and major product sales were firm and Tamiflu sales were strong, but revenues decreased because royalties and other operating income decreased year on year.
- Royalties and other operating income decreased year on year despite steady revenues from Actemra and others, due largely to a decrease in one-time milestone income.

Revenues



Domestic Sales by Field

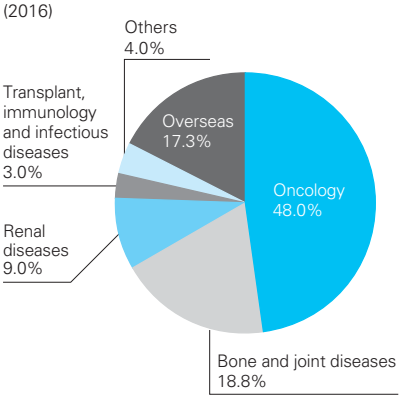
(Billions of yen)

	2014	2015	2016	2015/2016 Change
Domestic sales (excluding Tamiflu)	349.5	378.0	379.7	+0.4%
Oncology	188.9	215.7	220.3	+2.1%
Bone and joint diseases	69.6	79.4	86.1	+8.4%
Renal diseases	44.7	45.4	41.1	-9.5%
Transplant, immunology and infectious diseases	20.8	15.9	13.7	-13.8%
Others	25.6	21.7	18.5	-14.7%
Tamiflu sales	13.0	8.2	13.5	+64.6%
Seasonal sales	12.9	8.2	12.0	+46.3%
Sales for government stockpiles	0.2	0.0	1.5	—

- Domestic sales (excluding Tamiflu) increased slightly year on year because steady growth in sales of new and major products in the fields of oncology and bone and joint diseases absorbed the impact of the 5.5 percent downward NHI drug price revision, including additional repricing of Avastin.
- During 2016, we maintained our number-one share of the domestic oncology market (20.8 percent).[3] Two new products launched in 2014 contributed: Alecensa, an ALK inhibitor for treating *ALK* fusion gene-positive non-small cell lung cancer, and Kadcyla, a treatment for HER2- positive breast cancer. Sales of major products including Rituxan also increased steadily.
- In the bone and joint diseases field, Edirol, which has become a top brand in the domestic market for oral therapeutic agents for osteoporosis, drove solid growth, along with other major products including Actemra and Bonviva.
- In the renal diseases field, sales decreased year on year due to a decline in sales of Oxarol, an agent for secondary hyperparathyroidism, as a result of competition from other drugs including generics.
- In the transplant, immunology and infectious diseases field, sales of Pegasys decreased substantially because of the launch of new competitor products.
- Tamiflu sales increased, including seasonal sales and sales for government stockpiles.

Percentage of Total Sales (Excluding Tamiflu)

(2016)



3. Copyright © 2017 QuintilesIMS.
Source: JPM 2016. Reprinted with permission. The scope of the market is defined by Chugai.

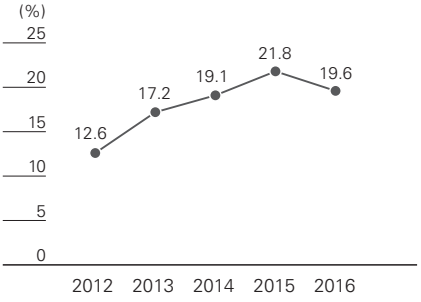
Overseas Sales

(Billions of yen)

	2014	2015	2016	2015/2016 Change
Overseas sales	74.3	82.2	79.5	-3.3%
Actemra (exports to Roche)	55.1	62.6	59.1	-5.6%
Alecensa	—	0.5	3.7	+640.0%

- Overseas sales decreased year on year in 2016 despite increased exports of Alecensa mainly because lower export prices reduced exports of Actemra to Roche.

Overseas Sales Ratio



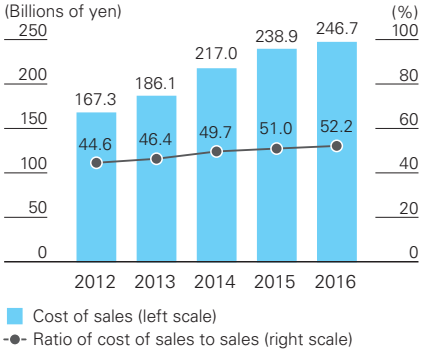
Cost of Sales and Gross Profit (Core Basis)

(Billions of yen)

	2014	2015	2016	2015/2016 Change
Cost of sales	(217.0)	(238.9)	(246.7)	+3.3%
Ratio of cost of sales to sales	49.7%	51.0%	52.2%	+1.2% pts
Gross profit	244.2	260.0	245.0	-5.8%

- The ratio of cost of sales to sales increased year on year in 2016 because forward exchange contracts increased the exposure of product purchases from Roche to the depreciation of the yen compared with 2015. Other factors included the drug price revisions and lower export prices for Actemra.
- In addition, gross profit decreased year on year because revenue decreased.

Cost of Sales/ Ratio of Cost of Sales to Sales



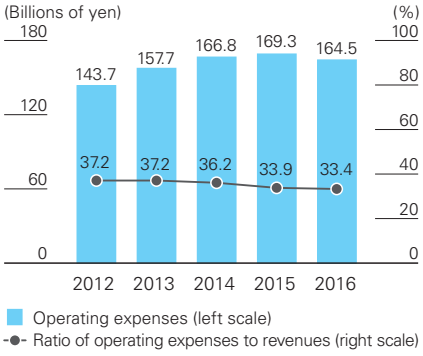
Operating Expenses (Marketing and Distribution Expenses, R&D Expenditures and General and Administrative Expenses) (Core Basis)

(Billions of yen)

	2014	2015	2016	2015/2016 Change
Total operating expenses	(166.8)	(169.3)	(164.5)	-2.8%
Marketing and distribution expenses	(71.7)	(74.7)	(69.8)	-6.6%
R&D expenditures	(80.6)	(81.9)	(82.6)	+0.9%
General and administrative expenses	(14.6)	(12.8)	(12.1)	-5.5%

- Marketing and distribution expenses decreased year on year in 2016 because of the impact of foreign exchange and reduced expenses.
- R&D expenditures increased slightly year on year because increased R&D activities as a result of the progress of development projects more than offset reductions due to the impact of foreign exchange.
- General and administrative expenses decreased year on year due to reduced expenses.

Operating Expenses/ Ratio of Operating Expenses to Revenues



Operating Profit and Net Income (Core Basis)

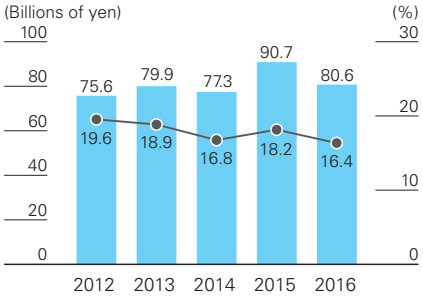
(Billions of yen)

	2014	2015	2016	2015/2016 Change
Operating profit	77.3	90.7	80.6	-11.1%
Ratio of operating profit to revenues	16.8%	18.2%	16.4%	-1.8% pts
Net income	53.0	64.9	56.8	-12.5%
Net income attributable to Chugai shareholders	51.9	63.7	56.1	-11.9%

- Operating profit decreased year on year in 2016 because royalties and other operating income declined and cost of sales increased, causing the ratio of operating profit to revenues to decrease as well.
- Net income in 2016 decreased year on year despite a lower tax rate due to changes in the taxation system.

Note: Chugai filed an Advance Pricing Arrangement covering certain transactions with F. Hoffmann-La Roche Ltd. with Japanese and Swiss tax authorities in accordance with a tax treaty between Japan and Switzerland. Both tax authorities concluded the agreement will decrease taxable income for Chugai and increase it for Roche. As a result of this agreement, Chugai will transfer a part of the deducted amount of corporate tax, etc. to Roche as estimated tax payable for Roche, in accordance with the license agreement between Chugai and Roche, and recognized ¥3,460 million of adjustment from transfer pricing taxation as other expense. (See other expense in the financial statements on page 126.)

Operating Profit/ Ratio of Operating Profit to Revenues

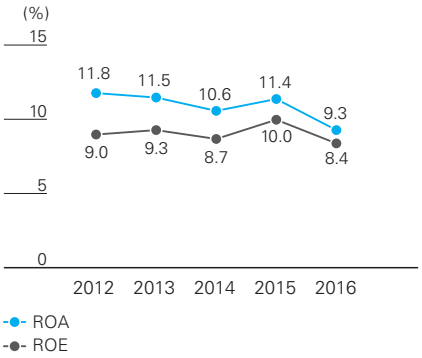


Profitability Indicators (Consolidated)

	2014	2015	2016	2015/2016 Change
Gross profit to revenues (%) (Core)	53.0	52.1	49.8	-2.3% pts
Operating profit to revenues (%) (Core)	16.8	18.2	16.4	-1.8% pts
Ratio of profit before taxes to total assets (ROA[1]) (%) (IFRS)	10.6	11.4	9.3	-2.1% pts
Ratio of net income attributable to Chugai shareholders (ROE[2]) (%) (IFRS)	8.7	10.0	8.4	-1.6% pts

1. ROA = Profit before taxes / Total assets (average of beginning and end of fiscal year)
2. ROE = Net income attributable to Chugai shareholders / Capital and reserves attributable to Chugai shareholders (average of beginning and end of fiscal year)

ROA/ROE



Financial Position

Assets, Liabilities and Net Assets

In conjunction with its decision to apply IFRS from 2013, Chugai has reorganized the consolidated balance sheets and discloses assets and liabilities including net operating assets for use as internal performance indicators (Roche discloses the same indicators). No items have been excluded from the IFRS balance sheet, as the Core basis results concept only applies to the income statement.

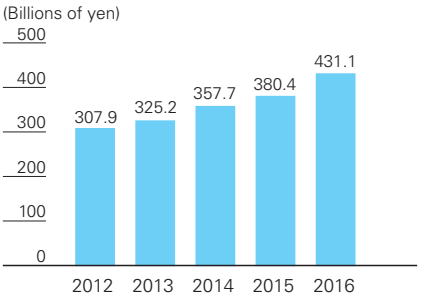
Net Operating Assets (NOA)

(Billions of yen)

	2014	2015	2016	2015/2016 Change
Net working capital	209.4	214.6	258.5	+20.5%
Long-term net operating assets	148.4	165.8	172.7	+4.2%
Net operating assets (NOA)	357.7	380.4	431.1	+13.3%

- Net working capital at December 31, 2016 increased from a year earlier because of higher inventories as a result of the greater need for stable supply due to higher global demand and lower accrued expenditures associated with an antibody API manufacturing plant to handle high-mix, low-volume production (construction to increase the production capacity of UK3).
- Long-term net operating assets increased from a year earlier because investment in property, plant and equipment increased due largely to the purchase of land for business use and investment in research and manufacturing facilities, and intangible assets increased as a result of investment in new projects.
- As a result, net operating assets (NOA) increased from a year earlier due to factors including investments for the future.

Net Operating Assets



Net operating assets are the total of net working capital and long-term net operating assets. Net working capital is composed of accounts receivable, inventories, accounts payable and other payables and receivables. Long-term net operating assets are composed of property, plant and equipment, intangible assets, and other items.

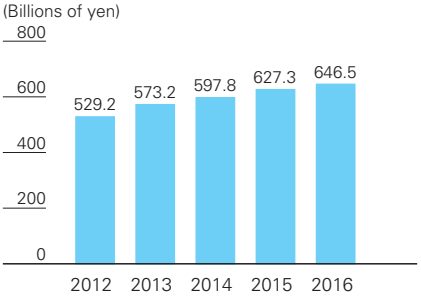
Total Net Assets

(Billions of yen)

	2014	2015	2016	2015/2016 Change
Net operating assets (NOA)	357.7	380.4	431.1	+13.3%
Net cash	229.9	235.4	204.9	-13.0%
Other non-operating assets – net	10.2	11.5	10.5	-8.7%
Total net assets	597.8	627.3	646.5	+3.1%

- Net cash decreased from a year earlier. Marketable securities decreased because certificates of deposit matured.
- As a result, total net assets as of December 31, 2016, consisting of net operating assets (NOA), net cash, and other non-operating assets – net, increased from a year earlier.

Total Net Assets



Total Assets and Total Liabilities

(Billions of yen)

	2014	2015	2016	2015/2016 Change
Total assets	739.5	787.4	806.3	+2.4%
Total liabilities	(141.8)	(160.1)	(159.8)	-0.2%

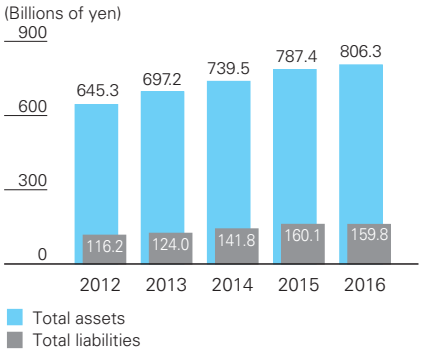
- Looking at the components of total assets, total liabilities and total net assets, total liabilities at December 31, 2016 did not change significantly from a year earlier, and total assets and total net assets increased from a year earlier.

Financial Position Indicators

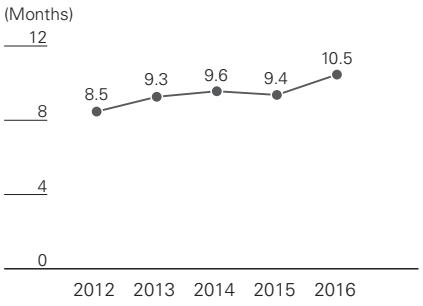
	2014	2015	2016	2015/2016 Change
Ratio of equity attributable to Chugai shareholders (%)	80.6	79.5	80.1	+0.6% pts
Core return on net operating assets (%)	14.8	17.1	13.2	-3.9% pts
Cash conversion cycle (months)	9.6	9.4	10.5	+1.1 months
Net cash turnover period (months)	6.0	5.7	5.0	-0.7 months
Current ratio (%)	471.3	426.7	468.0	+41.3% pts
Debt-to-equity ratio (%)	0.0	0.1	0.1	0.0% pts

Notes: 1. Ratio of equity attributable to Chugai shareholders = Capital and reserves attributable to Chugai shareholders (fiscal year-end) / Total assets (fiscal year-end)
2. Core return on net operating assets = Core net income / Net operating assets
3. Cash conversion cycle = [Trade accounts receivable / Sales + (Inventories – Trade accounts payable) / Cost of sales] x Months passed
4. Net cash turnover period = Net cash / Revenues x Months passed
5. Current ratio = Current assets (fiscal year-end) / Current liabilities (fiscal year-end)
6. Debt-to-equity ratio = Interest-bearing debt (fiscal year-end) / Capital and reserves attributable to Chugai shareholders (fiscal year-end)

Total Assets/Total Liabilities



Cash Conversion Cycle



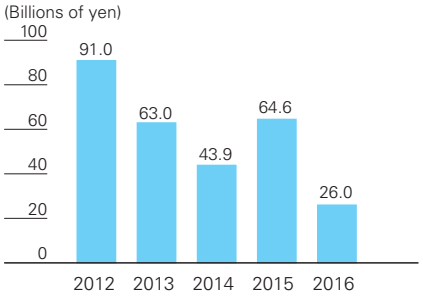
Cash Flows

In conjunction with its decision to apply IFRS from 2013, Chugai has reorganized the consolidated statements of cash flows and uses free cash flows as internal performance indicators (Roche discloses the same indicators). No items have been excluded from cash flows, as the Core basis results concept only applies to the income statement.

(Billions of yen)

	2014	2015	2016	2015/2016 Change
Movements of Free Cash Flows				
Operating profit	75.9	86.8	76.9	-11.4%
Operating profit, net of operating cash adjustment	96.4	105.4	98.5	-6.5%
Operating free cash flow	43.9	64.6	26.0	-59.8%
Free cash flow	19.0	37.0	4.3	-88.4%
Net increase in net cash	(4.5)	5.5	(30.5)	—
Consolidated Statement of Cash Flows				
Cash flows from operating activities	37.0	62.9	38.8	-38.3%
Cash flows from investing activities	(14.4)	(45.3)	(10.1)	-77.7%
Cash flows from financing activities	(24.4)	(28.5)	(33.4)	+17.2%
Net increase in cash and cash equivalents	(1.0)	(12.3)	(6.3)	-48.8%
Cash and cash equivalents at end of year	114.0	101.7	95.4	-6.2%

Operating Free Cash Flow



Operating free cash flow

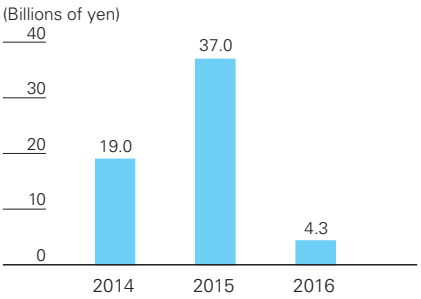
- Operating profit, net of operating cash adjustment, totaled ¥98.5 billion after adjustment for items including ¥14.8 billion for depreciation of property, plant and equipment.
- Operating free cash flow, which is calculated by subtracting the increase in net working capital of ¥36.2 billion and expenditures of ¥36.3 billion for the purchase of property, plant and equipment and intangible assets from operating profit, net of operating cash adjustments, amounted to ¥26.0 billion (¥64.6 billion for 2015). Purchases of property, plant and equipment were mainly investments for expansion of production capability with construction of UK3 facility and purchases of land for business use.

Free cash flow (FCF)

- Free cash flow, which is calculated by subtracting the total of ¥21.7 billion of non-operating cash outflows from financial asset management and income taxes paid from operating free cash flow, was ¥4.3 billion (¥37.0 billion in the previous fiscal year).
- Net cash, after dividends paid and foreign currency translation adjustments, decreased ¥30.5 billion compared with the end of the previous fiscal year. Cash and cash equivalents, excluding changes in marketable securities and interest-bearing debt, decreased ¥6.3 billion.

Note: Chugai formerly stated free cash flow net of dividends paid, but began stating free cash flow before dividends paid from the second quarter of 2016. Chugai changed its presentation of free cash flow to a generally accepted calculation that conforms to the change in the way that Roche defines free cash flow. Free cash flow from 2014 has been restated accordingly. The change has had no effect on operating free cash flow.

Free Cash Flow



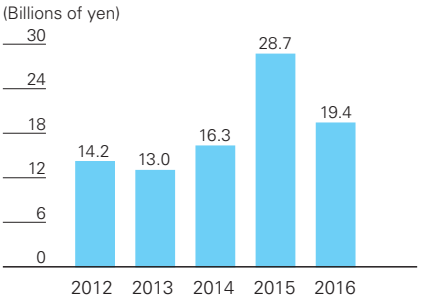
Capital Investments

(Billions of yen)

	2014	2015	2016	2015/2016 Change
Investments in property, plant and equipment	16.3	28.7	19.4	-32.4%
Depreciation	13.7	14.0	14.8	+5.7%

- The increase in capital investments in 2016 was largely the result of expenditures to acquire land for business use and research and plant equipment.
- Chugai plans to make capital investments of ¥38.0 billion during 2017 consisting primarily of new investment in the main facilities below, and expects depreciation to total ¥15.0 billion.

Capital Investments on Property, Plant and Equipment



Major Capital Investments Planned

(Chugai Pharmaceutical Co., Ltd.)

Facilities (Location)	Description	Planned investment (Billions of yen) Total amount	Planned investment (Billions of yen) Investment to date	Fund-raising method	Start of construction	Slated completion date
—	Purchase of land for business in Totsuka-ku, Yokohama	43.4	4.8	Self-financing	March 2016	December 2018

(Chugai Pharma Manufacturing Co., Ltd.)

Facilities (Location)	Description	Planned investment (Billions of yen) Total amount	Planned investment (Billions of yen) Investment to date	Fund-raising method	Start of construction	Slated completion date
Utsunomiya Plant (Utsunomiya-city, Tochigi)	Enhancement of high-mix, low-volume production capability for pre-filled syringe form products (Installment of tray filler)	6.0	4.7	Self-financing	September 2013	July 2017
Ukima Plant (Kita-district, Tokyo)	Enhancement of high-mix, low-volume production of antibody APIs for initial commercial products (Expansion of production capability with construction of UK3 facility)	37.2	10.7	Self-financing	November 2015	December 2018
Fujieda Plant (Fujieda-city, Shizuoka)	Strengthening of solid formulation manufacturing facility, etc. (Achievement of quick launch and steady supply)	6.0	3.1	Self-financing	November 2015	October 2017

Note: Plan concerning installment of tray filler (enhancement of high-mix, low volume production capability for pre-filled syringe form products) was transferred to Chugai Pharma Manufacturing Co., Ltd. in 2015.

Outlook for 2017

Forecast Assumptions

For 2017, Chugai assumes exchange rates of ¥106/CHF, ¥122/EUR, ¥115/USD and ¥80/SGD, and that the scale of seasonal influenza will be about the same as the average since 2007, excluding the influenza pandemic in the 2009/2010 season.

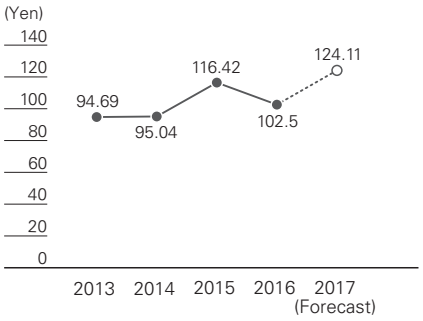
Results Forecast (Core Basis)

(Billions of yen)

	2015	2016	2017 (Forecast)	2016/2017 Change
Domestic sales (excluding Tamiflu)	378.0	379.7	393.9	+3.7%
Tamiflu sales	8.2	13.5	8.2	-39.3%
Overseas sales	82.2	79.5	88.4	+11.2%
Exports to Roche	63.1	62.8	67.4	+7.3%
Royalties and other operating income	30.4	19.1	30.0	+57.1%
Gross profit	260.0	245.0	268.5	+9.6%
Core operating profit	90.7	80.6	92.0	+14.1%
Core EPS (Yen)	116.42	102.50	124.11	+21.1%

- Domestic sales excluding Tamiflu are forecast to increase compared with 2016, driven by growth in sales of new oncology products led by our HER2 franchise including Alecensa and Kadcyla, and by growth in sales of Actemra, Edirol and Bonviva in the bone and joint diseases field.
- Exports to Roche are expected to increase because of sustained growth in Actemra sales volume outside Japan and steady growth in exports of Alecensa, which we initiated in 2015. Sales outside Japan of other products are forecast to increase due to factors including the weaker yen and growth in sales of new products.
- Royalties and other operating income are forecast to increase substantially because of higher revenues from lump-sum payments and payments from Roche for co-promotion and royalties for Actemra.
- Gross profit is forecast to increase mainly as a result of higher revenues, which consist of product sales and royalties and other operating income.
- We expect overall operating expenses to increase year on year due to expanded research and development activities such as progress in development themes originating at Chugai and the conclusion of a comprehensive collaboration agreement for advanced research in immunology with Osaka University.
- As a result of the above, we forecast that Core operating profit and Core EPS will increase.

Core EPS*



* Core EPS = Core net income attributable to Chugai shareholders / Diluted weighted average shares outstanding

Fundamental Profit Distribution Policy and Dividends

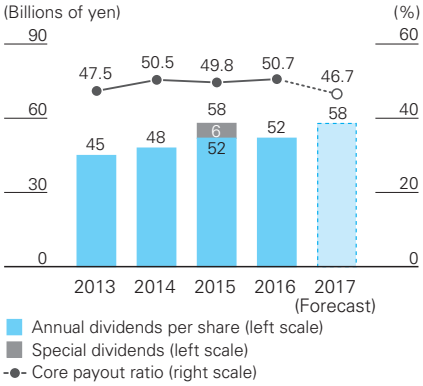
After taking strategic funding needs and the results forecast into account, Chugai aims for a consolidated payout ratio of 50 percent of Core EPS on average to provide for stable allocation of profit to all shareholders. Internal reserves will be used to increase corporate value through investments for further growth in existing strategic fields and to explore future business opportunities.

(Yen)

	2014	2015	2016	2017 (Forecast)
Basic net income per share (EPS)	93.53	112.00	98.12	—
Core EPS	95.04	116.42	102.50	124.11
Equity per share attributable to Chugai shareholders (BPS)	1,092.90	1,146.17	1,181.67	—
Cash dividends per share	48	58	52	58
Core payout ratio	50.5%	49.8%	50.7%	46.7%

- Cash dividends per share for 2016 totaled ¥52.
- The five-year average Core EPS payout ratio for 2016 was 48.9 percent. We expect the five-year average Core EPS payout ratio for 2017 to be 49.0 percent.
- The forecast for cash dividends per share for 2017 includes an interim dividend of ¥29.

Dividends per Share/ Core Payout Ratio



Business Risks

Chugai's corporate performance is subject to material impact from a range of possible future events. Below, we list what we consider the principal sources of risk to the development of our business. We recognize the possibility of these risk events actually occurring, and have prepared policies to forestall such events and take appropriate measures when they do occur.

The categories of risk identified in this section are based on assessments made by Chugai Pharmaceutical as of December 31, 2016.

New Product Research and Development

With the goal of becoming a top pharmaceutical company capable of continuously delivering innovative new drugs, Chugai aggressively pursues research and development in Japan and overseas. Our development pipeline is well stocked, especially in the field of oncology. However, bringing all drug candidates smoothly through to the market from the development stage may not be possible, and we expect to have to abandon development in some cases. When such a situation occurs, there is a possibility of a material impact on Chugai's business performance and financial position, depending on the product under development.

Changes in Product Environments

In recent years, there have been rapid technological advancements in the pharmaceutical industry, and Chugai faces fierce competition from pharmaceutical companies in Japan and overseas. Chugai's business performance and financial position may be materially affected by changes in product environments caused by the sale of competitor products and generics and also by changes in marketing and technology license contracts concluded by Chugai.

Side Effects

Pharmaceutical products are approved by regulatory authorities in each country after stringent screening. However, because of the characteristics of these products, it is difficult to completely prevent side effects from their use even if all possible safety measures are taken. In cases where side effects occur, in particular newly discovered serious side effects, there is a risk of a material impact on Chugai's business performance and financial position.

Medical System Reform

Japan's health insurance system is being reformed against a backdrop of rapid demographic change, with a falling birthrate and an increasing number of elderly people. As part of this process, measures are being taken to curb medical expenses. Revisions have been made to the system of reimbursement of medical fees, and debate is continuing in such areas as NHI drug price reform. Overseas, pressure to reduce drug costs is increasing, especially in advanced countries. Future measures to curb drug costs in these countries could materially affect Chugai's business performance and financial position.

Intellectual Property Rights

Chugai recognizes that it applies intellectual property rights in pursuing its business activities, and takes care to distinguish its own proprietary intellectual property rights and licensing arrangements recognized under law. However, the possibility remains of unintentional infringement on third-party intellectual property rights. Major disputes related to intellectual property rights relating to our business could have a material impact on Chugai's business performance and financial position.

Strategic Alliance with Roche

In line with its strategic alliance with Roche, Chugai is the only pharmaceutical partner of Roche in the Japanese market and has granted Roche first refusal rights with respect to its products in global markets outside Japan, excluding South Korea and Taiwan. Consequently, Chugai has in-licensed and out-licensed many products and projects from and to Roche. Changes in Chugai's strategic alliance with Roche for any reason could have a material impact on its business performance and financial position.

International Business Activities

Chugai actively conducts international operations including overseas marketing and research and development, and export and import of bulk drug products. These international business activities expose Chugai to risks associated with legal and regulatory changes, political instability, economic uncertainty, local labor-management relations, changes in and interpretations of systems of taxation, changes in foreign currency markets, differences in commercial practices and other issues. Compliance and other problems arising from these issues could have a material impact on Chugai's business performance and financial position.

Information Technology Security and Information Control

Chugai makes full use of a wide range of information technology systems in its business activities. Consequently, it is subject to the risk of its operations being disrupted due to system malfunctions, computer viruses or other external factors. In addition, an accident or other incident resulting in the leakage of confidential information could have a material impact on Chugai's business performance and financial position.

Impact from Large-Scale Disasters and Other Contingencies

In the event of natural disasters such as earthquakes or typhoons, or accidents such as fires or other contingencies, damage to Chugai's business sites or sales locations, or those of its business partners, could interrupt its operations. In addition, Chugai could incur significant expenses for the repair of damaged buildings and facilities. Such circumstances could therefore have a material impact on Chugai's business performance and financial position.

Litigation

There is a possibility that litigation may be brought against Chugai over side effects of pharmaceuticals, product liability, labor issues, fair trade or other issues associated with its business activities, which could have a material impact on Chugai's business performance and financial position.

Environmental Issues

In addition to complying with laws and regulations related to environmental issues, Chugai has established a set of even higher voluntary standards and has been making efforts to achieve them. In the course of Chugai's business activities, violations of relevant laws or regulations may occur as a result of an accident or other incident. Any related expenses could have a material impact on Chugai's business performance and financial position.

Consolidated Financial Statements

1. Consolidated income statement and consolidated statement of comprehensive income

1) Consolidated income statement in millions of yen

	Year ended December 31	
	2016	2015
Revenues	**491,780**	**498,839**
Sales (Note 2)	472,673	468,427
Royalties and other operating income (Note 2)	19,108	30,413
Cost of sales	(247,944)	(240,238)
Gross profit	**243,836**	**258,601**
Marketing and distribution	(69,770)	(74,811)
Research and development	(85,011)	(83,799)
General and administration	(12,171)	(13,207)
Operating profit	**76,884**	**86,784**
Financing costs (Note 3)	(86)	(67)
Other financial income (expense) (Note 3)	1,111	559
Other expense (Note 4)	(3,460)	-
Profit before taxes	**74,448**	**87,276**
Income taxes (Note 5)	(20,076)	(24,923)
Net income	**54,372**	**62,353**
Attributable to:		
Chugai shareholders (Note 20)	53,592	61,125
Non-controlling interests (Note 21)	780	1,228
Earnings per share (Note 25)		
Basic (yen)	98.12	112.00
Diluted (yen)	97.97	111.79

2) Consolidated statement of comprehensive income in millions of yen

	Year ended December 31	
	2016	2015
Net income recognized in income statement	**54,372**	**62,353**
Other comprehensive income		
Remeasurements of defined benefit plans (Notes 5 and 20)	(3,472)	(1,519)
Items that will not be reclassified to the income statement	**(3,472)**	**(1,519)**
Available-for-sale investments (Notes 5 and 20)	(1,735)	1,844
Cash flow hedges (Notes 5 and 20)	5,204	(1,741)
Currency translation of foreign operations (Notes 5 and 20)	(3,296)	(3,461)
Items that may be reclassified subsequently to the income statement	**173**	**(3,358)**
Other comprehensive income, net of tax (Note 5)	**(3,300)**	**(4,877)**
Total comprehensive income	**51,073**	**57,476**
Attributable to:		
Chugai shareholders (Note 20)	50,393	56,380
Non-controlling interests (Note 21)	680	1,096

2. **Consolidated balance sheet** in millions of yen

	December 31, 2016	December 31, 2015
Assets		
Non-current assets:		
Property, plant and equipment (Note 6)	157,081	153,545
Intangible assets (Note 7)	19,299	13,511
Financial non-current assets (Note 8)	9,706	13,715
Deferred tax assets (Note 5)	27,474	26,025
Other non-current assets (Note 9)	13,965	12,832
Total non-current assets	**227,525**	**219,628**
Current assets:		
Inventories (Note 10)	185,440	161,135
Accounts receivable (Note 11)	167,482	158,668
Current income tax assets (Note 5)	1	49
Marketable securities (Note 12)	110,176	134,419
Cash and cash equivalents (Note 13)	95,368	101,707
Other current assets (Note 14)	20,293	11,796
Total current assets	**578,760**	**567,773**
Total assets	**806,285**	**787,401**
Liabilities		
Non-current liabilities:		
Long-term debt (Note 15)	(510)	(604)
Deferred tax liabilities (Note 5)	(9,146)	(10,028)
Defined benefit plan liabilities (Note 23)	(8,790)	(2,358)
Long-term provisions (Note 16)	(2,140)	(1,974)
Other non-current liabilities (Note 17)	(15,543)	(12,108)
Total non-current liabilities	**(36,128)**	**(27,071)**
Current liabilities:		
Short-term debt (Note 15)	(135)	(131)
Current income tax liabilities (Note 5)	(10,533)	(13,133)
Short-term provisions (Note 16)	(76)	(180)
Accounts payable (Note 18)	(72,346)	(78,353)
Other current liabilities (Note 19)	(40,570)	(41,260)
Total current liabilities	**(123,660)**	**(133,058)**
Total liabilities	**(159,788)**	**(160,130)**
Total net assets	**646,497**	**627,271**
Equity:		
Capital and reserves attributable to Chugai shareholders (Note 20)	645,508	625,857
Equity attributable to non-controlling interests (Note 21)	989	1,414
Total equity	**646,497**	**627,271**

3. **Consolidated statement of cash flows** in millions of yen

	Year ended December 31	
	2016	2015
Cash flows from operating activities		
Cash generated from operations (Note 26)	102,797	110,159
(Increase) decrease in working capital	(36,159)	(15,945)
Payments made for defined benefit plans	(2,381)	(3,883)
Utilization of provisions (Note 16)	(77)	(510)
Other operating cash flows	(54)	2,239
Cash flows from operating activities, before income taxes paid	**64,127**	**92,059**
Income taxes paid	(25,339)	(29,141)
Total cash flows from operating activities	**38,787**	**62,918**
Cash flows from investing activities		
Purchase of property, plant and equipment	(30,084)	(18,367)
Purchase of intangible assets	(6,247)	(6,472)
Disposal of property, plant and equipment	(91)	(424)
Interest and dividends received (Note 26)	301	355
Purchases of marketable securities	(208,686)	(241,432)
Sales of marketable securities	232,018	221,679
Sales of investment securities	2,679	-
Other investing cash flows	4	(607)
Total cash flows from investing activities	**(10,107)**	**(45,269)**
Cash flows from financing activities		
Interest paid	(8)	(7)
Dividends paid to Chugai shareholders	(31,677)	(28,375)
Dividends paid to non-controlling shareholders	(1,105)	(1,064)
Exercise of equity compensation plans (Note 24)	506	1,391
(Increase) decrease in own equity instruments	(7)	15
Other financing cash flows	(1,124)	(425)
Total cash flows from financing activities	**(33,415)**	**(28,467)**
Net effect of currency translation on cash and cash equivalents	(1,604)	(1,513)
Increase (decrease) in cash and cash equivalents	**(6,338)**	**(12,331)**
Cash and cash equivalents at January 1	101,707	114,037
Cash and cash equivalents at December 31 (Note 13)	**95,368**	**101,707**

4. **Consolidated statement of changes in equity** in millions of yen

	Attributable to Chugai shareholders						
	Share capital	Capital surplus	Retained earnings	Other reserves	Subtotal	Non-controlling interests	Total equity
Year ended December 31, 2015							
At January 1, 2015	**72,967**	**60,817**	**457,720**	**4,594**	**596,099**	**1,657**	**597,756**
Net income recognized in income statement	-	-	61,125	-	61,125	1,228	62,353
Available-for-sale investments (Notes 5 and 20)	-	-	-	1,844	1,844	-	1,844
Cash flow hedges (Notes 5 and 20)	-	-	-	(1,741)	(1,741)	-	(1,741)
Currency translation of foreign operations (Notes 5, 20 and 21)	-	-	-	(3,329)	(3,329)	(132)	(3,461)
Remeasurements of defined benefit plans (Notes 5 and 20)	-	-	(1,519)	-	(1,519)	-	(1,519)
Total comprehensive income	**-**	**-**	**59,605**	**(3,225)**	**56,380**	**1,096**	**57,476**
Dividends (Notes 20 and 21)	-	-	(28,372)	-	(28,372)	(1,064)	(29,436)
Equity compensation plans (Note 20)	-	(44)	-	-	(44)	-	(44)
Own equity instruments (Note 20)	-	1,801	-	-	1,801	-	1,801
Changes in non-controlling Interests (Notes 20 and 21)	-	(8)	-	-	(8)	(275)	(283)
At December 31, 2015	**72,967**	**62,567**	**488,954**	**1,369**	**625,857**	**1,414**	**627,271**
Year ended December 31, 2016							
At January 1, 2016	**72,967**	**62,567**	**488,954**	**1,369**	**625.857**	**1,414**	**627,271**
Net income recognized in income statement	-	-	53,592	-	53,592	780	54,372
Available-for-sale investments (Notes 5 and 20)	-	-	-	(1,735)	(1,735)	-	(1,735)
Cash flow hedges (Notes 5 and 20)	-	-	-	5,204	5,204	-	5,204
Currency translation of foreign operations (Notes 5, 20 and 21)	-	-	-	(3,195)	(3,195)	(101)	(3,296)
Remeasurements of defined benefit plans (Notes 5 and 20)	-	-	(3,472)	-	(3,472)	-	(3,472)
Total comprehensive income	**-**	**-**	**50,119**	**273**	**50,393**	**680**	**51,073**
Dividends (Notes 20 and 21)	-	-	(31,675)	-	(31,675)	(1,105)	(32,780)
Equity compensation plans (Note 20)	-	276	-	-	276	-	276
Own equity instruments (Note 20)	-	657	-	-	657	-	657
At December 31, 2016	**72,967**	**63,500**	**507,399**	**1,642**	**645,508**	**989**	**646,497**

Notes to Consolidated Financial Statements

1. General accounting principles and significant accounting policies

1) Basis of preparation of the consolidated financial statements

These financial statements are the annual consolidated financial statements of Chugai Pharmaceutical Co., Ltd., ("Chugai") a company registered in Japan, and its subsidiaries ("the Group"). The common stock of Chugai is publicly traded and is listed on the Tokyo Stock Exchange under the stock code "TSE: 4519". The consolidated financial statements were approved by Osamu Nagayama, representative director, Chairman of the Board & CEO, and Yoshio Itaya, Board Director & CFO on March 23, 2017.

Roche Holding Ltd. is a public company registered in Switzerland and the parent company of the Roche Group, which discloses its results in accordance with International Financial Reporting Standards ("IFRS"). The shareholding percentage of Roche Holding Ltd. in Chugai is 59.89% (61.36% of the total number of shares issued excluding treasury stock). The Group became a principal member of the Roche Group after entering into a strategic alliance in October 2002.

The Group meets all of the requirements for a "Specified Company under Designated International Financial Reporting Standards" as stipulated under Article 1-2 of the "Regulations Concerning Terminology, Forms, and Preparation Methods of Consolidated Financial Statements" (Ministry of Finance of Japan Regulation No. 28, 1976, "the regulation"). Hence, in accordance with Article 93 of the Regulation, the Consolidated Financial Statements have been prepared in accordance with IFRS.

The consolidated financial statements are presented in Japanese yen, which is Chugai's functional currency and amounts are rounded to the nearest ¥1 million. As a result, the totals shown in the consolidated financial statements do not necessarily agree with the sum of the individual amounts. They have been prepared using the historical cost convention except for items that are required to be accounted for at fair value.

2) Key accounting judgments, estimates and assumptions

The preparation of the consolidated financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of revenues, expenses, assets, liabilities and contingent amounts. Actual outcomes could differ from those management estimates. The estimates and underlying assumptions are reviewed on an ongoing basis and are based on historical experience and various other factors. Revisions to estimates are recognized in the period in which the estimate is revised. The following are considered to be the key accounting judgments, estimates and assumptions made and are believed to be appropriate based upon currently available information.

Revenues. Revenues are only recognized when, in management's judgment, the significant risks and rewards of ownership have been transferred and when the Group does not retain continuing managerial involvement or effective control over the goods sold or when the obligation has been fulfilled. The Group is party to out-licensing agreements which involve upfront and milestone payments occurring over several years and which may also involve certain future obligations. Therefore, for some transactions this can result in cash receipts being initially recognized as deferred income and then released to income over subsequent periods on the basis of the performance of the conditions specified in the agreement.

Sales allowances. The Group makes accruals for expected sales rebates, which are estimated based on analyses of existing contractual or legislatively-mandated obligations, historical trends and the Group's experience. As these deductions are based on management estimates, they may be subject to change as better information becomes available. Such changes that arise could impact the accruals recognized in the balance sheet in future periods and consequently the level of sales recognized in the income statement in future periods.

Impairment. Intangible assets not yet available for use are reviewed annually for impairment. Property, plant and equipment and intangible assets in use are assessed for impairment when there is a triggering event that provides evidence that an asset may be impaired. To assess whether any impairment exists estimates of expected future cash flows are used. Actual outcomes could vary significantly from such estimates of discounted future cash flows. Factors such as changes in discount rates, the planned use of buildings, machinery or equipment, closure of facilities, the presence or absence of competition, technical obsolescence and lower than anticipated product sales could lead to shorter useful lives or impairment.

Post-employment benefits. The Group operates defined benefit plans and the fair value of the recognized plan assets and liabilities are based upon statistical and actuarial calculations. The measurement of the net defined benefit obligation is particularly sensitive to changes in the discount rate and expected mortality. The actuarial assumptions used may differ materially from actual results due to changes in market and economic conditions, longer or shorter life spans of participants, and other changes in the factors being assessed. These differences could impact on the assets or liabilities recognized in the balance sheet in future periods.

Legal. The Group provides for anticipated legal settlement costs when there is a probable outflow of resources that can be reasonably estimated. These estimates consider the specific circumstances of each legal case and relevant legal advice, and are inherently judgmental due to the highly complex nature of legal cases. The estimates could change substantially over time as new facts emerge and each legal case progresses. Where no reliable estimate can be made, no provision is recorded and contingent liabilities are disclosed where material.

Environmental. The Group provides for anticipated environmental remediation costs when there is a probable outflow of resources that can be reasonably estimated. Environmental provisions consist primarily of costs to fully clean and refurbish contaminated sites, including landfills, and to treat and contain contamination at certain other sites. These estimates are inherently judgmental due to uncertainties related to the detection of previously unknown contaminated sites, the method and extent of remediation, the percentage of the problematic materials attributable to the Group at the remediation sites, and the financial capabilities of the other potentially responsible parties. The estimates could change substantially over time as new facts emerge and each environmental remediation progresses.

Income taxes. Significant estimates are required to determine the current and deferred tax assets and liabilities. Some of these estimates are based on interpretations of existing tax laws or regulations. Factors that may impact on current and deferred taxes include changes in tax laws, regulations or rates, changing interpretations of existing tax laws or regulations, future levels of research and development spending and changes in pre-tax earnings.

Leases. The treatment of leasing transactions is mainly determined by whether the lease is considered to be an operating or finance lease. In making this assessment, management looks at the substance of the lease, as well as the legal form, and makes a judgment about whether substantially all of the risks and rewards of ownership are transferred. Arrangements which do not take the legal form of a lease but that nevertheless convey the right to use an asset are also covered by such assessments.

3) Significant accounting policies

Consolidation policy

Subsidiaries are all companies over which the Group has control. Chugai controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Companies acquired during the year are consolidated from the date on which control is transferred to the Group, and subsidiaries to be divested are included up to the date on which control passes from the Group. Inter-company balances, transactions and resulting unrealized income are eliminated in full. Changes in ownership interests in subsidiaries are accounted for as equity transactions if they occur after control has already been obtained and if they do not result in a loss of control. Associates are companies over which the Group exercises, or has the power to exercise, significant influence, but which it does not control and they are accounted for using the equity method.

Foreign currency translation

Most foreign subsidiaries of the Group use their local currency as their functional currency. Certain foreign subsidiaries use other currencies (such as the euro) as their functional currency where this is the currency of the primary economic environment in which the entity operates. Local transactions in other currencies are initially reported using the exchange rate at the date of the transaction. Gains and losses from the settlement of such transactions and gains and losses on translation of monetary assets and liabilities denominated in other currencies are included in income, except when they are qualifying cash flow hedges. In such cases the gains and losses are deferred into other comprehensive income.

Upon consolidation, assets and liabilities of foreign subsidiaries using functional currencies other than the Japanese yen are translated into Japanese yen using year-end rates of exchange. The income statement and statement of cash flows are translated at the average rates of exchange for the year. Translation differences due to the changes in exchange rates between the beginning and the end of the year and the difference between net income translated at the average and year-end exchange rates are taken directly to other comprehensive income.

Revenue recognition
Sales represent amounts received and receivable for goods supplied to customers after deducting trade discounts, cash discounts and volume rebates, and exclude consumption taxes and other taxes directly linked to sales. Revenues from the sale of products are recognized upon transfer to the customer of significant risks and rewards. Trade discounts, cash discounts and volume rebates are recorded on an accrual basis consistent with the recognition of the related sales. Sales returns, charge-backs and other rebates are also deducted from sales and recorded as accrued liabilities or as a deduction from accounts receivable.

Royalties and other operating income are recorded as earned or as the services are performed. Single transactions are split into separately identifiable components to reflect the substance of the transaction, where necessary. Conversely, two or more transactions may be considered together for revenue recognition purposes, where the commercial effect cannot be understood without reference to the series of transactions as a whole.

Cost of sales
Cost of sales includes the corresponding direct production costs and related production overheads of goods sold and services rendered. Royalties, alliance and collaboration expenses, including all collaboration profit-sharing arrangements are also reported as part of cost of sales. Start-up costs between validation and the achievement of normal production capacity are expensed as incurred.

Research and development
Internal research and development activities are expensed as incurred for the following:
- Internal research costs incurred for the purpose of gaining new scientific or technical knowledge and understanding.
- Internal development costs incurred for the application of research findings or other knowledge to plan and develop new products for commercial production. The development projects undertaken by the Group are subject to technical, regulatory and other uncertainties, such that, in the opinion of management, the criteria for capitalization as intangible assets are not met prior to obtaining marketing approval by the regulatory authorities in major markets.
- Post-marketing studies after regulatory approval, such as phase IV costs in the pharmaceuticals business, generally involve safety surveillance and on-going technical support of a drug after it receives marketing approval to be sold. They may be required by regulatory authorities or may be undertaken for safety or commercial reasons. The costs of such post-marketing studies are not capitalized as intangible assets, as in the opinion of management, they do not generate separately identifiable incremental future economic benefits that can be reliably measured.

Acquired in-process research and development resources obtained through in-licensing arrangements, business combinations or separate asset purchases are capitalized as intangible assets. The acquired asset must be controlled by the Group, be separately identifiable and expected to generate future economic benefits, even if uncertainty exists as to whether the research and development will ultimately result in a marketable product. Consequently, upfront and milestone payments to third parties for pharmaceutical products or compounds before regulatory marketing approval are recognized as intangible assets. Assets acquired through such arrangements are measured on the basis set out in the “Intangible assets” policy. Subsequent internal research and development costs incurred post-acquisition are treated in the same way as other internal research and development costs. If research and development are embedded in contracts for strategic alliances, the Group carefully assesses whether upfront or milestone payments constitute funding of research and development work or acquisition of an asset.

Licensing, milestone, and other upfront receipts
Royalty income is recognized on an accrual basis in accordance with the substance of the respective licensing agreements. If the collectability of a royalty amount is not reasonably assured, those royalties are recognized as revenues when the cash is received. The Group receives upfront, milestone and other similar payments from third parties relating to the sale or licensing of products or technology. Revenues associated with performance milestones are recognized based on achievement of the deliverables as defined in the respective agreements. Upfront payments and license fees for which there are subsequent deliverables are initially reported as deferred income and are recognized in income as earned over the period of the development collaboration or the manufacturing obligation.

Employee benefits
Short-term employee benefits include wages, salaries, social security contributions, paid annual leave and sick leave, profit sharing and bonuses, and non-monetary benefits for current employees. The costs are recognized within the operating results when the employee has rendered the associated service. The Group recognizes a liability for profit sharing and bonuses where contractually obliged or where there is a past practice that has created a constructive obligation.

Termination benefits are payable when employment is terminated by the Group before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. Termination costs are recognized at the earlier of when the Group can no longer withdraw the offer of the benefits or when the Group recognizes any related restructuring costs.

Post-employment benefits
For defined contribution plans, the Group contributions are recognized within the operating results when the employee has rendered the associated service.

For defined benefit plans the liability or asset recognized in the balance sheet is net amount of the present value of the defined benefit obligation and the fair value of the plan assets. All changes in the net defined benefit liability (asset) are recognized as they occur as follows:

Recognized in the income statement:
- Current service costs are charged to the appropriate income statement heading within the operating results.
- Past service costs, including curtailment gains or losses, are recognized immediately in general and administration within the operating results.
- Settlement gains or losses are recognized in general and administration within the operating results.
- Net interest on the net defined benefit liability (asset) is recognized in financing costs.

Recognized in other comprehensive income:
- Actuarial gains and losses arising from experience adjustments (the difference between previous assumptions and what has actually occurred) and changes in actuarial assumptions.
- The return on plan assets, excluding amounts included in net interest on the net defined benefit liability (asset).

Net interest on the net defined benefit liability (asset) comprises interest income on plan assets and interest costs on the defined benefit obligation. The net interest is calculated using the same discount rate that is used in calculating the defined benefit obligation, applied to the net defined benefit liability (asset) at the start of the period, taking account of any changes from contribution or benefit payments.

Pension assets and liabilities in different defined benefit plans are not offset unless the Group has a legally enforceable right to use the surplus in one plan to settle obligations in the other plan.

Equity compensation plans
The fair value of all equity compensation awards granted to directors and certain employees is estimated at the grant date and recorded as an expense over the vesting period. The expense is charged to the appropriate income statement heading within the operating results. For equity-settled plans, an increase in equity is recorded for this expense and any subsequent cash flows from exercises of vested awards are recorded as changes in equity.

Property, plant and equipment
Property, plant and equipment are initially recorded at cost of purchase or construction, and include all costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. These include items such as costs of site preparation, installation and assembly costs and professional fees. The net costs of testing whether the asset is functioning properly, including validation costs, are also included in the initially recorded cost of construction. Property, plant and equipment are depreciated on a straight-line basis, except for land, which is not depreciated. The estimated useful lives of major classes of depreciable assets are as follows:
- Land improvements: 40 years
- Buildings: 10-50 years
- Machinery and equipment: 3-15 years

Where parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate components. The estimated useful lives of the assets are regularly reviewed, and, if necessary, the future depreciation charges are accelerated. Repairs and maintenance costs are expensed as incurred.

Leases
Where the Group is the lessee, finance leases exist when substantially all of the risks and rewards of ownership of leased assets are transferred to the Group. Finance lease assets are capitalized at the start of the lease at fair value, or the present value of the minimum lease payments, if lower. The rental obligation, net of finance charges, is reported within debt. Finance lease assets are depreciated over the shorter of the lease term and its useful life. The interest element of the lease payment is charged against income over the lease term based on the effective interest rate method. Operating leases are when substantially all of the risks and rewards of ownership are not transferred to the Group. Payments made under operating leases are charged against income on a straight-line basis over the period of the lease.

Intangible assets
Purchased patents, trademarks, licenses and other intangible assets are initially recorded at cost. Assets that have been acquired through a business combination are initially recorded at fair value. Once available for use, intangible assets are amortized on a straight-line basis over their useful lives. The estimated useful life is the lower of the legal duration and the economic useful life. The estimated useful lives of intangible assets are regularly reviewed. Estimated useful lives of major classes of amortizable intangible assets are as follows:

- Product intangibles in use: 5-16 years
- Marketing intangibles in use: 2-5 years
- Technology intangibles in use: 3-8 years

Impairment of property, plant and equipment and intangible assets
An impairment assessment is carried out at each reporting date when there is evidence that an item of property, plant and equipment or intangible asset in use may be impaired. In addition intangible assets that are not yet available for use are tested for impairment annually. When the recoverable amount of an asset, being the higher of its fair value less costs to sell and its value in use, is less than its carrying value, then the carrying value is reduced to its recoverable amount. This reduction is reported in the income statement as an impairment loss. Value in use is calculated using estimated cash flows. These are discounted using an appropriate long-term interest rate. When an impairment loss arises, the useful life of the asset is reviewed and, if necessary, the future depreciation/amortization charge is accelerated. If the amount of impairment loss subsequently decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, then the previously recognized impairment loss is reversed through the income statement as an impairment reversal.

Inventories
Inventories are stated at the lower of cost and net realizable value. The cost of finished goods and work in process includes raw materials, direct labor and other directly attributable costs and overheads based upon the normal capacity of production facilities. Cost is determined using the weighted average method. Net realizable value is the estimated selling price less cost to completion and selling expenses.

Accounts receivable
Accounts receivable are carried at the original invoice amount less allowances made for doubtful accounts, trade discounts, cash discounts, volume rebates and similar allowances. An allowance for doubtful accounts is recorded where there is objective evidence that the Group will not be able to collect all amounts due. These estimates are based on specific indicators, such as the aging of customer balances, specific credit circumstances and the Group's historical experience, taking also into account economic conditions. Expenses for doubtful trade receivables are recognized within marketing and distribution expenses. Trade discounts, cash discounts, volume rebates and similar allowances are recorded on an accrual basis consistent with the recognition of the related sales, using estimates based on existing contractual obligations, historical trends and the Group's experience.

Cash and cash equivalents
Cash and cash equivalents include cash on hand and time, call and current balances with banks and similar institutions. Such balances are only reported as cash equivalents if they are readily convertible to known amounts of cash, are subject to insignificant risk of changes in their fair value and have a maturity of three months or less from the date of acquisition.

Provisions and contingencies
Provisions are recognized where a legal or constructive obligation has been incurred which will probably lead to an outflow of resources that can be reliably estimated. In particular, restructuring provisions are recognized when the Group has a detailed formal plan that has either commenced implementation or has been announced. Provisions are recorded for the estimated ultimate liability that is expected to arise and are discounted when the time value of money is material. A contingent liability is disclosed where the existence of the obligation will only be confirmed by future events or where the amount of the obligation cannot be measured with reasonable reliability. Contingent assets are not recognized, but are disclosed where an inflow of economic benefits is probable.

Fair values
Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. It is determined by reference to quoted market prices or by the use of established valuation techniques such as option pricing models and the discounted cash flow method if quoted prices in an active market are not available.

Financial instruments
Financial instruments are classified into the following categories:

Available-for-sale. These are non-derivative financial assets that are either designated as such or are not classified in any other financial asset category. Available-for-sale financial assets are initially recorded and subsequently carried at fair value. Changes in fair value are recorded in other comprehensive income, except for impairments, interest and foreign exchange components. When an investment is derecognized the cumulative gains and losses in equity are reclassified to other financial income (expense). Available-for-sale assets are mainly comprised of marketable securities and financial non-current assets.

Fair value – hedging instruments. These are derivative financial instruments that are used to manage the exposures to foreign currency risk. Derivative financial instruments are initially recorded and subsequently carried at fair value. Apart from those derivatives designated as qualifying cash flow hedging instruments, all changes in fair value are recorded as other financial income (expense).

Fair value – designated. These are non-derivative financial instruments that are designated as fair value through profit or loss on initial recognition. Designated fair value instruments are initially recorded and subsequently carried at fair value. Changes in fair value are recorded in the income statement. Designated fair value instruments mainly comprise of financial assets held for trading.

Loans and receivables. These are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables are initially recorded at fair value and subsequently carried at amortized cost using the effective interest rate method, less any impairment losses. Loans and receivables are mainly comprised of accounts receivable, cash and cash equivalents and a part of financial non-current assets.

Other financial liabilities. These are non-derivative financial liabilities. Other financial liabilities are initially recorded at fair value and subsequently carried at amortized cost using the effective interest rate method. Other financial liabilities are mainly comprised of accounts payable and debt.

Derecognition of financial instruments
A financial asset is derecognized when the contractual cash flows from the asset expire or when the Group transfers the rights to receive the contractual cash flows from the financial assets in a transaction in which substantially all the risks and rewards of ownership of the financial asset are transferred. A financial liability is derecognized when the contractual obligations are discharged, cancelled or expire.

Impairment of financial assets
Financial assets are individually assessed for possible impairment at each reporting date. An impairment charge is recorded where there is objective evidence of impairment, such as where the issuer is in bankruptcy, default or other significant financial difficulty. Available-for-sale equity securities that have a market value of more than 25% below their original cost, or have a market value below their original cost for a sustained six-month period will be considered as impaired.

For financial assets carried at amortized cost, any impairment charge is the difference between the carrying value and the recoverable amount, calculated using estimated future cash flows discounted using the original effective interest rate. For available-for-sale financial assets, any impairment charge is the amount currently carried in other comprehensive income for the difference between the original cost, net of any previous impairment, and the fair value.

An impairment loss is reversed if the reversal can be related objectively to an event occurring after the impairment loss was recognized. For equity securities held as available-for-sale, the reversal is recognized directly in other comprehensive income. For debt securities measured at amortized cost or available-for-sale, the reversal is recognized in other financial income (expense).

Hedge accounting
The Group uses derivatives to manage its exposures to foreign currency risk. The instruments used may include forwards contracts and options. The Group generally limits the use of hedge accounting to certain significant transactions. To qualify for hedge accounting the hedging relationship must meet several strict conditions on documentation, probability of occurrence, hedge effectiveness and reliability of measurement. While many of these transactions can be considered as hedges in economic terms, if the required conditions are not met, then the relationship does not qualify for hedge accounting. In this case the hedging instrument and the hedged item are reported independently as if there were no hedging relationship, which means that any derivatives are reported at fair value, with changes in fair value included in other financial income (expense).

Cash flow hedge. Is a hedge of the exposure to variability in cash flows that is attributable to a particular risk associated with a recognized asset or liability or a highly probable forecast transaction and could affect profit or loss. The hedging instrument is recorded at fair value. The effective portion of the hedge is included in other comprehensive income and any ineffective portion is reported in other financial income (expense). If the hedging relationship is the hedge of the foreign currency risk of a firm commitment or highly probable forecasted transaction that results in the recognition of a non-financial item, the cumulative changes in the fair value of the hedging instrument that have been recorded in other comprehensive income are included in the initial carrying value of the non-financial item at the date of recognition, and if it is the other forecasted transaction, have been recorded the profit or loss as well as the term when hedged item affect profit or loss. For other hedged forecasted cash flow, the cumulative changes in the fair value of the hedging instrument that have been recorded in other comprehensive income are included in other financial income (expense) when the forecasted transaction affects net income.

Fair value hedge. Is a hedge of the exposure to changes in fair value of a recognized asset or liability, or an unrecognized firm commitment, or an identified portion of such an asset, liability or firm commitment, that is attributable to a particular risk and could affect profit or loss. The hedging instrument is recorded at fair value and the hedged item is recorded at its previous carrying value, adjusted for any changes in fair value that are attributable to the hedged risk. Changes in the fair values are reported in other financial income (expense).

Taxation
Income taxes include all taxes based upon the taxable profits of the Group. Other taxes not based on income, such as property and capital taxes, are included in the appropriate heading within the operating results.

Liabilities for income taxes, which could arise on the remittance of retained earnings, principally relating to subsidiaries, are only recognized where it is probable that such earnings will be remitted in the foreseeable future.

Deferred tax assets and liabilities are recognized on temporary differences between the tax bases of assets and liabilities and their carrying values. Deferred tax assets are recognized to the extent that it is probable that future taxable profit will be available against which the unused tax losses can be utilized.

Current and deferred tax assets and liabilities are offset when the income taxes are levied by the same taxation authority and when there is a legally enforceable right to offset them. Deferred taxes are determined based on the currently enacted tax rates applicable in each tax jurisdiction where the Group operates.

Own equity instruments
The Group's holdings in its own equity instruments are recorded as a deduction from equity. The original purchase cost, consideration received for subsequent resale of these equity instruments and other movements are reported as changes in equity. The exercise of stock acquisition rights granted to directors and certain employees will result in the allotment from own equity instruments.

4) Changes in accounting policies
The accounting policies applied by the Group for the consolidated financial statements for the year ended December 31, 2016 are the same as for the previous fiscal year

There were minor amendments to some existing, which do not materially impact the Group's performance or financial status.

5) Future new and revised standards

The Group is currently assessing the potential impacts of new and revised standards and interpretations that will be effective from January 1, 2017 and beyond. Based on the analysis to date, the Group does not anticipate that these will have a material impact on the Group's overall results and financial position in 2017.

By the date of approval of the consolidated financial statements, the following main new standards have been issued by the International Accounting Standards Board (IASB) and have not yet been implemented by the Group.

	IFRS	Mandatory adoption (from the year beginning)	Plan to be implemented by the Group	Description of new and revised standards
IFRS 15	Revenue from Contracts with Customers	January 1, 2018	FY ending Dec. 2018	Revision of accounting relating to revenue recognition
IFRS 9	Financial Instruments	January 1, 2018	FY ending Dec. 2018	Classification, measurement and recognition of financial instruments, and revision of hedge accounting
IFRS 16	Leases	January 1, 2019	FY ending Dec. 2019	Revision of accounting relating to recognition of leases

2. Operating segment information

The Group has a single business of pharmaceuticals and does not have multiple operating segments. The Group's pharmaceuticals business consists of the research and development of new prescription medicines and the subsequent manufacturing, marketing and distribution activities. These functional activities are integrated and managed effectively.

Information on revenues by geographical area in millions of yen

	2016		2015	
	Sales	Royalties and other operating income	Sales	Royalties and other operating income
Japan	393,134	1,998	386,241	3,770
Overseas	79,539	17,109	82,185	26,643
of which Switzerland	62,780	15,563	63,084	26,555
Total	**472,673**	**19,108**	**468,427**	**30,413**

Information on revenues by major customers in millions of yen

	2016		2015	
	Revenues	%	Revenues	%
Alfresa Corporation	103,308	21.0	100,181	20.1
Mediceo Corporation	79,275	16.1	78,489	15.7
F. Hoffmann-La Roche Ltd.	78,321	15.9	89,639	18.0
Suzuken Co., Ltd.	50,248	10.2	49,457	9.9

3. Financing costs and other financial income (expense)

Financing costs in millions of yen

	2016	2015
Interest expense	(8)	(7)
Net interest cost of defined benefit plans	(8)	8
Net other financing costs	(69)	(68)
Total financing costs	**(86)**	**(67)**

Other financial income (expense) in millions of yen

	2016	2015
Dividend income	201	208
Gains on sale of equity securities	1,341	2
Losses on sale of equity securities	-	-
Write-downs and impairments of equity securities	(160)	(64)
Net income from equity securities	**1,382**	**146**
Interest income	81	148
Gains on sale of debt securities	-	-
Losses on sale of debt securities	-	-
Net interest income and income from debt securities	**81**	**148**
Foreign exchange gains (losses)	452	(585)
Gains (losses) on foreign currency derivatives	(804)	849
Net foreign exchange gains (losses)	**(352)**	**265**
Total other financial income (expense)	**1,111**	**559**

4. Other expense

Chugai has filed the Advance Pricing Arrangement covering the certain transactions with F. Hoffmann-La Roche Ltd., to Japanese and Swiss tax authorities in accordance with a tax treaty between Japan and Switzerland. Both tax authorities concluded the agreement that will decrease taxable income of Chugai and increase that of Roche. As a result of this agreement, Chugai will transfer a part of the deducted amount of corporate tax, etc. to Roche as the estimated tax payable for Roche, in accordance with the license agreement between Chugai and Roche, and also posted ¥3,460 million of adjustment from transfer pricing taxation.

5. Income taxes

Income tax expenses in millions of yen

	2016	2015
Current income taxes	(22,804)	(25,471)
Deferred taxes	2,728	548
Total income tax (expense)	**(20,076)**	**(24,923)**

Reconciliation of the Group's effective tax rate

	2016	2015
Avarage expected tax rate	32.0%	34.4%
Tax effect of		
- Non-taxable income/non-deductible expenses	0.5%	0.6%
- Effect of changes in applicable tax rates on deferred tax balances	2.1%	1.6%
- Research and development tax credits	(5.5)%	(7.8)%
- Transfer pricing taxation related	(3.6)%	-%
- Other differences	1.3%	(0.2)%
Group's effective tax rate	**27.0%**	**28.6%**

Tax effects of other comprehensive income in millions of yen

	2016			2015		
	Pre-tax amount	Tax benefit	After-tax amount	Pre-tax amount	Tax benefit	After-tax Amount
Remeasurements of defined benefit plans	(4,758)	1,285	(3,472)	(1,782)	263	(1,519)
Available-for-sale investments	(2,518)	783	(1,735)	2,415	(571)	1,844
Cash flow hedges	7,588	(2,384)	5,204	(2,598)	857	(1,741)
Currency translation of foreign operations	(3,296)	-	(3,296)	(3,461)	-	(3,461)
Other comprehensive income	**(2,984)**	**(316)**	**(3,300)**	**(5,425)**	**548**	**(4,877)**

Income tax assets (liabilities) in millions of yen

	December 31, 2016	December 31, 2015
Current income taxes		
- Assets	1	49
- Liabilities	(10,533)	(13,133)
Net current income tax assets (liabilities)	**(10,532)**	**(13,084)**
Deferred taxes		
- Assets	27,474	26,025
- Liabilities	(9,146)	(10,028)
Net deferred tax assets (liabilities)	**18,328**	**15,997**

Current income taxes: movements in recognized net assets (liabilities) in millions of yen

	2016	2015
Net current income tax assets (liabilities) at January 1	(13,084)	(16,505)
Income taxes paid	25,339	29,141
(Charged) credited to the income statement	(22,804)	(25,471)
Currency translation effects and other	17	(248)
Net current income tax assets (liabilities) at December 31	**(10,532)**	**(13,084)**

Deferred taxes: movements in recognized net assets (liabilities) in millions of yen

	Property, plant and equipment	Intangible assets	Provisions	Employee benefits	Other temporary differences	Total
Year ended December 31, 2015						
At January 1, 2015	(18,808)	(940)	628	3,613	30,457	14,950
(Charged) credited to the income statement	(496)	(291)	(370)	262	1,444	548
(Charged) credited to other comprehensive income	-	-	-	263	286	548
Currency translation effects and other	9	(3)	(5)	(2)	(48)	(50)
At December 31, 2015	**(19,295)**	**(1,235)**	**252**	**4,136**	**32,139**	**15,997**
Year ended December 31, 2016						
At January 1, 2016	(19,295)	(1,235)	252	4,136	32,139	15,997
(Charged) credited to the income statement	600	(1,175)	(180)	149	3,332	2,728
(Charged) credited to other comprehensive income	-	-	-	1,285	(1,601)	(316)
Currency translation effects and other	6	(2)	(4)	(2)	(80)	(81)
At December 31, 2016	**(18,689)**	**(2,411)**	**69**	**5,568**	**33,790**	**18,328**

Other temporary differences mainly relate to prepaid expenses, amortization of deferred assets and supplies.

Deferred tax assets are not recognized for deductible temporary differences of ¥1,377 million (2015: ¥1,586 million).

Deferred tax assets are recognized for tax losses carried forward only to the extent that realization of the related tax benefit is probable.

Unrecognized tax losses: expiry in millions of yen

	2016	2015
Less than one year	-	-
Over one year and less than five years	-	-
Over five years	480	410
Tax losses not recognized in deferred tax assets	**480**	**410**

Deferred tax assets for unused tax credits are recognized only to the extent that realization of the related tax benefit is probable.

Unrecognized unused tax credits: expiry in millions of yen

	2016	2015
Less than one year	-	-
Over one year and less than five years	-	-
Over five years	144	122
Unused tax credits not recognized in deferred tax assets	**144**	**122**

Deferred tax liabilities have not been established for the withholding tax and other taxes that would be payable on the unremitted earnings of wholly owned foreign subsidiaries of the Group, where such amounts are currently regarded as permanently reinvested. The temporary differences relating to the unremitted earnings were ¥1,792 million (2015: ¥1,746 million).

6. Property, plant and equipment

Property, plant and equipment: movements in carrying value of assets in millions of yen

	Land	Buildings and land improvements	Machinery and equipment	Construction in progress	Total
At January 1, 2015					
Cost	9,973	117,796	160,610	4,262	292,642
Accumulated depreciation and impairment	(608)	(57,476)	(94,312)	-	(152,396)
Net book value	**9,365**	**60,320**	**66,298**	**4,262**	**140,245**
Year ended December 31, 2015					
At January 1, 2015	9,365	60,320	66,298	4,262	140,245
Additions	-	63	1,261	27,409	28,733
Disposals	(253)	(340)	(556)	(3)	(1,153)
Transfers	-	3,780	15,722	(19,503)	-
Depreciation charge	-	(3,928)	(10,036)	-	(13,964)
Impairment charge	-	(114)	(88)	-	(202)
Currency translation effects	-	(6)	(107)	(2)	(115)
At December 31, 2015	**9,112**	**59,775**	**72,494**	**12,164**	**153,545**
Cost	9,141	115,036	171,457	12,164	307,798
Accumulated depreciation and impairment	(28)	(55,261)	(98,964)	-	(154,253)
Net book value	**9,112**	**59,775**	**72,494**	**12,164**	**153,545**
Year ended December 31, 2016					
At January 1, 2016	9,112	59,775	72,494	12,164	153,545
Additions	-	71	374	18,981	19,425
Disposals	-	(107)	(311)	-	(418)
Transfers	-	3,282	8,402	(11,684)	-
Depreciation charge	-	(4,247)	(10,514)	-	(14,761)
Impairment charge	-	(51)	(10)	-	(61)
Other	-	-	(497)	-	(497)
Currency translation effects	-	(31)	(121)	(1)	(153)
At December 31, 2016	**9,112**	**58,693**	**69,817**	**19,459**	**157,081**
Cost	9,141	117,163	175,949	19,459	321,712
Accumulated depreciation and impairment	(28)	(58,470)	(106,133)	-	(164,631)
Net book value	**9,112**	**58,693**	**69,817**	**19,459**	**157,081**

In 2016, no borrowing costs were capitalized as property, plant and equipment (2015: none).

Impairment charge

The carrying value was reduced to the value in use as the recoverable amount of assets was less than the carrying value.

Classification of impairment of property, plant and equipment in millions of yen

	2016	2015
Cost of sales	55	139
Marketing and distribution	-	-
Research and development	6	63
General and administration	-	-
Total impairment charge	**61**	**202**

Finance leases

The capitalized cost of property, plant and equipment under finance leases was ¥768 million (2015: ¥741 million) and the net book value of these assets was ¥439 million (2015: ¥527 million). The carrying value of the leasing obligation was ¥476 million (2015: ¥570 million), which is reported as part of Debt (see Note 15).

Operating leases
Group companies are party to a number of operating leases, mainly for machinery and equipment, motor vehicles and property rentals. The arrangements do not impose any significant restrictions on the Group. Total operating lease rental expense was ¥6,979 million (2015: ¥7,123 million).

Operating leases: future minimum lease payments under non-cancellable leases in millions of yen

	December 31, 2016	December 31, 2015
Within one year	4,271	4,732
Between one and five years	4,538	6,755
More than five years	216	350
Total minimum payments	**9,025**	**11,837**

Capital commitments
The Group has non-cancellable capital commitments for the purchase or construction of property, plant and equipment totaling ¥27,339 million (2015: ¥29,918 million).

7. Intangible assets

Intangible assets: movements in carrying value of assets in millions of yen

	Product intangibles: in use	Product intangibles: not available for use	Marketing intangibles: in use	Technology intangibles: in use	Total
At January 1, 2015					
Cost	16,577	5,271	717	103	22,668
Accumulated amortization and impairment	(10,997)	(259)	(107)	(17)	(11,381)
Net book value	**5,580**	**5,012**	**609**	**85**	**11,286**
Year ended December 31, 2015					
At January 1, 2015	5,580	5,012	609	85	11,286
Additions	616	4,466	744	-	5,826
Disposals	-	-	-	-	-
Transfers	1,136	(1,136)	-	-	-
Amortization charge	(1,386)	-	(200)	(17)	(1,603)
Impairment charge	-	(1,852)	-	-	(1,852)
Currency translation effects	20	(166)	-	-	(146)
At December 31, 2015	**5,966**	**6,324**	**1,153**	**68**	**13,511**
Cost	18,027	8,435	1,460	103	28,026
Accumulated amortization and impairment	(12,061)	(2,112)	(307)	(35)	(14,515)
Net book value	**5,966**	**6,324**	**1,153**	**68**	**13,511**
Year ended December 31, 2016					
At January 1, 2016	5,966	6,324	1,153	68	13,511
Additions	687	7,678	1,574	-	9,939
Disposals	-	-	-	-	-
Transfers	-	-	-	-	-
Amortization charge	(1,207)	-	(384)	(17)	(1,608)
Impairment charge	-	(2,380)	-	-	(2,380)
Currency translation effects	(41)	(121)	-	-	(161)
At December 31, 2016	**5,405**	**11,500**	**2,344**	**51**	**19,299**
Cost	18,479	15,992	3,035	103	37,608
Accumulated amortization and impairment	(13,074)	(4,492)	(691)	(52)	(18,309)
Net book value	**5,405**	**11,500**	**2,344**	**51**	**19,299**

Significant intangible assets
The product intangibles in use and not available for use are mainly acquired through in-licensing agreements of products with related parties. The remaining amortization periods for product intangibles in use are from 2 to 15 years.

Impairment charge
Impairment charge was mainly related to the cessation of R&D projects.

Classification of amortization and impairment expenses in millions of yen

	2016		2015	
	Amortization	Impairment	Amortization	Impairment
Cost of sales	1,270	-	1,386	-
Marketing and distribution	107	-	154	-
Research and development	104	2,380	63	1,852
General and administration	128	-	-	-
Total	**1,608**	**2,380**	**1,603**	**1,852**

Internally generated intangible assets
The Group currently has no internally generated intangible assets from development as the criteria for the recognition as an asset are not met.

Intangible assets with indefinite useful lives
The Group currently has no intangible assets with indefinite useful lives.

Product intangibles not available for use
These mostly represent in-process research and development assets acquired either through in-licensing arrangements or separate purchases. Due to the inherent uncertainties in the research and development processes, intangible assets not available for use are particularly at risk of impairment if the project is not expected to result in a commercialized product.

Impairment of intangible assets
Impairment charges arise from changes in the estimates of the future cash flows expected to result from the use of the asset and its eventual disposal. Factors such as the presence or absence of competition, technical obsolescence or lower than anticipated sales for products with capitalized rights could result in shortened useful lives or impairment.

Potential commitments from alliance collaborations
The Group is party to in-licensing and similar arrangements with its alliance partners. These arrangements may require the Group to make certain milestone or other similar payments dependent upon the achievement of agreed objectives or performance targets as defined in the collaboration agreements.

The Group's current estimate of future commitments for such payments is set out in the table below. These figures are undiscounted and are not risk adjusted, meaning that they include all such potential payments that can arise assuming all projects currently in development are successful. The timing is based on the Group's current best estimate.

Potential future collaboration payments at December 31, 2016 in millions of yen

	Third party	Related party	Total
Within one year	4,017	2,456	6,473
Between one and two years	2,712	1,271	3,983
Between two and three years	1,767	715	2,482
Total	**8,496**	**4,442**	**12,938**

8. Financial non-current assets

Financial non-current assets in millions of yen

	December 31, 2016	December 31, 2015
Available-for-sale investments	9,706	13,715
Total financial non-current assets	**9,706**	**13,715**

Financial non-current assets are held for the Group's business purposes to strengthen and maintain the relationship with business partners. The available-for-sale investments are mainly equity securities in Japanese listed companies.

9. Other non-current assets

Other non-current assets in millions of yen

	December 31, 2016	December 31, 2015
Long-term prepaid expenses	9,481	8,240
Other assets	4,483	4,591
Total other non-current assets	**13,965**	**12,832**

Long-term prepaid expenses are mainly payments to related parties for start-up and validation costs at plants used for outsourcing to the related parties.

10. Inventories

Inventories in millions of yen

	December 31, 2016	December 31, 2015
Raw materials and supplies	72,459	59,146
Work in process	21	32
Intermediates	46,404	34,336
Finished goods	69,449	69,009
Less: Provision for slow-moving and obsolete inventory	(2,894)	(1,388)
Total inventories	**185,440**	**161,135**

Inventories expensed through cost of sales totaled ¥236,048 million (2015: ¥225,144 million). Expenses relating to inventory write-down totaled ¥2,239 million (2015: ¥1,481 million).

11. Accounts receivable

Accounts receivable in millions of yen

	December 31, 2016	December 31, 2015
Trade receivables – third party	123,391	120,926
Trade receivables – related party	17,314	13,529
Notes receivables	20	22
Other receivables – third party	5,343	4,986
Other receivables – related party	21,420	19,210
Allowances for doubtful accounts	(5)	(6)
Total accounts receivable	**167,482**	**158,668**

12. Marketable securities

Marketable securities in millions of yen

	December 31, 2016	December 31, 2015
Available-for-sale financial assets		
Money market instruments and time accounts over three months	105,177	134,419
Debt securities	4,999	-
Total marketable securities	**110,176**	**134,419**

Marketable securities are held for fund management purposes. The money market instruments are mainly certificates of deposit, cash in trust and commercial papers. Debt financial instruments are mainly corporate bonds.

13. Cash and cash equivalents

Cash and cash equivalents in millions of yen

	December 31, 2016	December 31, 2015
Cash - cash in hand and in current or call accounts	91,580	97,902
Cash equivalents - time accounts with a maturity of three months or less	3,788	3,805
Total cash and cash equivalents	**95,368**	**101,707**

14. Other current assets

Other current assets in millions of yen

	December 31, 2016	December 31, 2015
Derivative financial instruments	10,733	3,409
Total financial current assets	**10,733**	**3,409**
Prepaid expenses	8,662	8,387
Other	898	-
Total non-financial current assets	**9,560**	**8,387**
Total other current assets	**20,293**	**11,796**

15. Debt

Debt: movements in carrying value of recognized liabilities in millions of yen

	2016	2015
At January 1	735	214
Increase in debt	47	606
Decrease in debt	(137)	(85)
At December 31	**645**	**735**
Finance lease obligations	476	570
Other debt	169	165
Total debt	**645**	**735**
Long-term debt	510	604
Short-term debt	135	131
Total debt	**645**	**735**

16. Provisions and contingent liabilities

Provisions: movements in recognized liabilities in millions of yen

	Environmental provisions	Restructuring provisions	Other provisions	Total
Year ended December 31, 2015				
At January 1, 2015	453	42	2,602	3,097
Additional provisions created	458	-	107	565
Unused amounts reversed	(1)	(22)	(163)	(185)
Utilized	(488)	(21)	(808)	(1,317)
Other	-	1	(5)	(5)
At December 31, 2015	**421**	**-**	**1,733**	**2,154**
Long-term provisions	345	-	1,629	1,974
Short-term provisions	77	-	104	180
At December 31, 2015	**421**	**-**	**1,733**	**2,154**
Year ended December 31, 2016				
At January 1, 2016	421	-	1,733	2,154
Additional provisions created	12	-	364	376
Unused amounts reversed	-	-	(24)	(24)
Utilized	(77)	-	(209)	(286)
Other	-	-	(4)	(4)
At December 31, 2016	**356**	**-**	**1,859**	**2,216**
Long-term provisions	356	-	1,783	2,140
Short-term provisions	-	-	76	76
At December 31, 2016	**356**	**-**	**1,859**	**2,216**
Expected outflow of resources				
Within one year	-	-	76	76
Between one to two years	14	-	44	58
Between two to three years	-	-	-	-
More than three years	342	-	1,739	2,081
At December 31, 2016	**356**	**-**	**1,859**	**2,216**

Environmental provisions

Provisions for environmental matters include various separate environmental issues. By their nature the amounts and timings of any outflows are difficult to predict. Significant provisions are discounted where the time value of money is material.

Restructuring provisions

These arise from planned programs that materially change the scope of business undertaken by the Group or the manner in which business is conducted. Such provisions include only the costs necessarily entailed by the restructuring which are not associated with the recurring activities of the Group. The timings of these cash outflows are reasonably certain. These provisions are not discounted as the time value of money is not material in these matters.

Other provisions

Other provisions arise mainly from asset retirement obligations and removal costs with respect to property, plant and equipment. The timings of cash outflows are by their nature uncertain. Significant provisions are discounted where the time value of money is material.

Contingent liabilities

The operations and earnings of the Group continue, from time to time and in varying degrees, to be affected by political, legislative, fiscal and regulatory developments, including those relating to environmental protection. The industries in which the Group operates are also subject to other risks of various kinds. The nature and frequency of these developments and events, not all of which are covered by insurance, as well as their effect on future operations and earnings, are not predictable.

The Group has entered into strategic alliances with various companies in order to gain access to potential new products or to utilize other companies to help develop the Group's own potential new products. Potential future payments may become due to certain collaboration partners achieving certain milestones as defined in the collaboration agreements. The Group's best estimates for future commitment payments are given in Note 7.

17. Other non-current liabilities

Other non-current liabilities in millions of yen

	December 31, 2016	December 31, 2015
Deferred income	14,352	11,004
Other long-term liabilities	1,191	1,104
Total other non-current liabilities	**15,543**	**12,108**

18. Accounts payable

Accounts payable in millions of yen

	December 31, 2016	December 31, 2015
Trade payables – third party	9,564	7,194
Trade payables – related party	32,965	33,979
Other taxes payable	4,343	3,920
Accounts payable - purchase of property, plant and equipment	4,250	15,309
Other payables – third party	6,819	3,770
Other payables – related party	14,405	14,180
Total accounts payable	**72,346**	**78,353**

19. Other current liabilities

Other current liabilities in millions of yen

	December 31, 2016	December 31, 2015
Deferred income	1,387	1,095
Accrued bonus and related items	10,312	11,300
Derivative financial instruments	6,347	6,180
Other accrued liabilities	22,523	22,685
Total other current liabilities	**40,570**	**41,260**

20. Equity attributable to Chugai shareholders

Changes in equity attributable to Chugai shareholders in millions of yen

	Share capital	Capital surplus	Retained earnings	Other reserves			Total
				Fair value reserve	Hedging reserve	Translation reserve	
Year ended December 31, 2015							
At January 1, 2015	72,967	60,817	457,720	4,755	111	(271)	596,099
Net income attributable to Chugai shareholders	-	-	61,125	-	-	-	61,125
Available-for-sale investments							
- Fair value gains (losses) taken to equity	-	-	-	2,353	-	-	2,353
- Transferred to income statement on sale or impairment	-	-	-	62	-	-	62
- Income taxes	-	-	-	(571)	-	-	(571)
Cash flow hedges							
- Effective portion of fair value gains (losses) taken to equity	-	-	-	-	(4,207)	-	(4,207)
- Transferred to income statement	-	-	-	-	335	-	335
- Transferred to initial carrying amount of hedged items	-	-	-	-	1,274	-	1,274
- Income taxes	-	-	-	-	857	-	857
Currency translation of foreign operations							
- Exchange differences	-	-	-	-	-	(3,461)	(3,461)
- Non-controlling interests	-	-	-	-	-	132	132
Defined benefit plans							
- Remeasurement gains (losses)	-	-	(1,782)	-	-	-	(1,782)
- Income taxes	-	-	263	-	-	-	263
Other comprehensive income, net of tax	**-**	**-**	**(1,519)**	**1,844**	**(1,741)**	**(3,329)**	**(4,745)**
Total comprehensive income	**-**	**-**	**59,605**	**1,844**	**(1,741)**	**(3,329)**	**56,380**
Dividends	-	-	(28,372)	-	-	-	(28,372)
Equity compensation plans	-	(44)	-	-	-	-	(44)
Own equity instruments	-	1,801	-	-	-	-	1,801
Changes in non-controlling Interests	-	(8)	-	-	-	-	(8)
At December 31, 2015	**72,967**	**62,567**	**488,954**	**6,599**	**(1,630)**	**(3,600)**	**625,857**

Changes in equity attributable to Chugai shareholders in millions of yen

	Share capital	Capital surplus	Retained earnings	Other reserves			Total
				Fair value reserve	Hedging reserve	Translation reserve	
Year ended December 31, 2016							
At January 1, 2016	72,967	62,567	488,954	6,599	(1,630)	(3,600)	625,857
Net income attributable to Chugai shareholders	-	-	53,592	-	-	-	53,592
Available-for-sale investments							
- Fair value gains (losses) taken to equity	-	-	-	(1,337)	-	-	(1,337)
- Transferred to income statement on sale or impairment	-	-	-	(1,181)	-	-	(1,181)
- Income taxes	-	-	-	783	-	-	783
Cash flow hedges							
- Effective portion of fair value gains (losses) taken to equity	-	-	-	-	(3,619)	-	(3,619)
- Transferred to income statement	-	-	-	-	(635)	-	(635)
- Transferred to initial carrying amount of hedged items	-	-	-	-	11,841	-	11,841
- Income taxes	-	-	-	-	(2,384)	-	(2,384)
Currency translation of foreign operations							
- Exchange differences	-	-	-	-	-	(3,296)	(3,296)
- Non-controlling interests	-	-	-	-	-	101	101
Defined benefit plans							
- Remeasurement gains (losses)	-	-	(4,758)	-	-	-	(4,758)
- Income taxes	-	-	1,285	-	-	-	1,285
Other comprehensive income, net of tax	**-**	**-**	**(3,472)**	**(1,735)**	**5,204**	**(3,195)**	**(3,199)**
Total comprehensive income	**-**	**-**	**50,119**	**(1,735)**	**5,204**	**(3,195)**	**50,393**
Dividends	-	-	(31,675)	-	-	-	(31,675)
Equity compensation plans	-	276	-	-	-	-	276
Own equity instruments	-	657	-	-	-	-	657
At December 31, 2016	**72,967**	**63,500**	**507,399**	**4,864**	**3,574**	**(6,796)**	**645,508**

Share capital (Number of shares)

	December 31, 2016	December 31, 2015
Authorized shares	799,805,050	799,805,050
Issued shares (Non-par value common stock)	559,685,889	559,685,889

Dividends

Date of resolution	Type of shares	Total dividends (millions of yen)	Dividend per share (yen)	Record date	Effective date
March 26, 2015 (Resolution of the Annual General Meeting of shareholders)	Common stock	14,181	26	December 31, 2014	March 27, 2015
July 23, 2015 (Board resolution)	Common stock	14,190	26	June 30, 2015	September 1, 2015
March 24, 2016 (Resolution of the Annual General Meeting of shareholders)	Common stock	17,473	32	December 31, 2015	March 25, 2016
July 21, 2016 (Board resolution)	Common stock	14,202	26	June 30, 2016	September 1, 2016
March 23, 2017 (Resolution of the Annual General Meeting of shareholders)	Common stock	14,203	26	December 31, 2016	March 24, 2017

Own equity instruments

	Number of shares	
	2016	2015
At January 1	13,641,743	14,258,437
Issue of common stocks	-	-
Exercises of equity compensation plans	(225,800)	(621,900)
Increase/decrease in own equity instruments	2,010	5,206
At December 31	**13,417,953**	**13,641,743**
Book value (millions of yen)	**31,413**	**31,935**

Other reserves

Fair value reserve: The fair value reserve represents the cumulative net change in the fair value of available-for-sale financial assets until the asset is sold, impaired or otherwise disposed of.

Hedging reserve: The hedging reserve represents the effective portion of the cumulative net change in the fair value of cash flow hedging instruments related to hedged transactions that have not yet occurred.

Translation reserve: The translation reserve represents the cumulative currency translation differences relating to the consolidation of foreign subsidiaries of the Group that use functional currencies other than the Japanese yen.

21. Non-controlling interests

Changes in equity attributable to non-controlling interests in millions of yen

	2016	2015
At January 1	1,414	1,657
Net income attributable to non-controlling interests	780	1,228
Currency translation of foreign operations	(101)	(132)
Other comprehensive income, net of tax	**(101)**	**(132)**
Total comprehensive income	**680**	**1,096**
Dividends to non-controlling shareholders	(1,105)	(1,064)
Changes in non-controlling interests	-	(275)
At December 31	**989**	**1,414**

Non-controlling interests are attributable to the minority shareholders of Chugai sanofi-aventis S.N.C.

22. Employee benefits

Employee benefits expense in millions of yen

	2016	2015
Wages and salaries	66,976	68,227
Social security costs	8,358	8,292
Defined contribution plans	1,099	1,020
Operating expenses for defined benefit plans	4,145	3,806
Equity compensation plans	433	387
Other employee benefits	3,939	4,373
Employee benefits expense included in operating results	**84,951**	**86,106**
Net interest cost of defined benefit plans	8	(8)
Total employee benefits expense	**84,959**	**86,097**

Other employee benefits consist mainly of welfare costs.

23. Post-employment benefits plans

Post-employment benefit plans are classified as “defined contribution plans” if the Group pays fixed contributions into third-party financial institutions and will have no further legal or constructive obligation to pay further contributions. All other plans are classified as “defined benefit plans”, even if Chugai’s potential obligation is relatively minor or has a relatively remote possibility of arising.

Employees are covered by defined contribution and defined benefit plans sponsored by Group companies, most of which are classified as defined benefit plans.

A resolution was passed in the 98th Annual General Meeting of shareholders held in March 2009 to abolish the retirement benefits system for directors. In addition, a resolution was passed in the 95th Annual General Meeting of shareholders held in March 2006 to abolish the retirement benefits system for outside directors and audit & supervisory board members (including outside audit & supervisory board members).

Defined contribution plans
Defined contribution plans are funded through payments by the Group to funds administered by third parties. The Group’s expenses for these plans were ¥1,099 million (2015: ¥1,020 million).

Defined benefit plans
The Group has defined benefit plans mainly comprising a corporate pension fund and a lump-sum retirement benefit plan. Under the corporate pension fund, employees can receive a lump-sum payment based on the number of accumulated points received during their years of service. Employees with over a certain period of service can receive part of or all of the payment as certain annuity or life annuity. Under the lump-sum retirement benefit plan, employees can receive a lump-sum payment based on the number of accumulated points received during their years of service.

A retirement benefit trust has been established for the lump-sum retirement benefit plan. Certain employees may be entitled to additional special retirement benefits apart from the defined benefit plans based on the conditions under which termination occurs.

The corporate pension fund and retirement benefit plan trust are independent of the Group and are funded only by payments from the Group. These plan assets are invested in various financial instruments while taking into consideration long-term performance over the duration of the plan liabilities. The funding status is closely monitored at the corporate level and valuations at the balance sheet date are carried out annually.

The defined benefit obligation is calculated using the projected unit credit method. If potential assets arise since defined benefit plans are over-funded, the recognition of pension assets is limited to the present value of any economic benefits available from refunds from the plans or reductions in future contributions to the plan.

In 2016, certain domestic subsidiaries converted their defined benefit lump-sum retirement benefit plan to a defined benefit corporate pension fund and defined contribution plans. Due to this change, the Group recognized past service cost and settlement loss.

Defined benefit plans: income statement in millions of yen

	2016	2015
Current service cost	3,983	3,806
Past service cost	139	-
Settlement loss	23	-
Total operating expenses	**4,145**	**3,806**
Net interest cost of defined benefit plans	8	(8)
Total expense recognized in income statement	**4,154**	**3,797**

Defined benefit plans: funding status in millions of yen

	December 31, 2016	December 31, 2015
Fair value of plan assets	76,551	76,543
Defined benefit obligation	(85,341)	(78,901)
Over (under) funding	**(8,790)**	**(2,358)**
Defined benefit plan assets	-	-
Defined benefit plan liabilities	(8,790)	(2,358)
Net recognized asset (liability)	**(8,790)**	**(2,358)**

Defined benefit plans: fair value of plan assets in millions of yen

	2016	2015
At January 1	76,543	74,897
Interest income on plan assets	815	805
Remeasurements on plan assets	155	298
Currency translation effects	(10)	(11)
Employer contributions	2,209	3,665
Benefits paid – funded plans	(3,162)	(3,110)
At December 31	**76,551**	**76,543**
Composition of plan assets		
- Equity securities	11,267	11,421
- Debt securities	46,046	44,880
- Cash and cash equivalents	8,866	9,886
- Other investments	10,373	10,356
Total plan assets	**76,551**	**76,543**

Equity securities and debt securities have quoted market prices (Level 1 of fair value hierarchy).

Defined benefit plans: present value of defined benefit obligation in millions of yen

	2016	2015
At January 1	78,901	75,567
Current service cost	3,983	3,806
Past service cost	139	-
Settlement loss	(67)	-
Interest cost	824	796
Remeasurements – demographic assumption	(1)	1,206
Remeasurements – financial assumptions	4,694	144
Remeasurements – experience adjustments	220	731
Currency translation effects	(18)	(20)
Benefits paid – funded plans	(3,334)	(3,328)
At December 31	**85,341**	**78,901**
Duration in years	15.6	15.2

Actuarial assumptions

Actuarial assumptions are unbiased and mutually compatible estimates of variables that determine the ultimate cost of providing post-employment benefits. They are set on an annual basis by the responsible departments of the Group based on advice from actuaries. Actuarial assumptions consist of demographic assumptions on matters such as mortality and employee turnover, and financial assumptions on matters such as interest rates.

Demographic assumptions: Demographic assumptions relate to mortality and employee turnover rates. Mortality rates are based on the standard mortality rate stated in the Ordinance for Enforcement of the Defined-Benefit Corporate Pension Act. Rates of employee turnover are based on historical behavior within the Group companies.

Financial assumptions: Discount rates are determined mainly with reference to interest rates on high-quality corporate bonds and reflect the period over which the obligations are to be settled.

	December 31, 2016	December 31, 2015
Discount rates (%)	0.71	1.07

Defined benefit plans: sensitivity of defined benefit obligation to actuarial assumption in millions of yen

The impact resulting from changes of actuarial assumption on the defined benefit obligation is shown in the table below. It is based on the assumption that variables other than the stated assumption used for the calculation are held constant.

	2016
Discount rates	
- 0.25% increase	(3,211)
- 0.25% decrease	3,421
Life expectancy	
- 1 year increase	1,505

Future cash flows

Based on the most recent actuarial valuations, the Group expects that employer contributions for defined benefit plans in 2017 will be approximately ¥2,236 million.

24. Equity compensation plans

The Group operates equity-settled equity compensation plans for directors and certain employees. IFRS 2 "Share-based Payment" requires that the value be estimated by fair value at grant date and recorded as an expense over the vesting period.

Expenses for equity compensation plans in millions of yen

	2016	2015
Cost of sales	3	3
Marketing and distribution	48	41
Research and development	71	58
General and administration	311	285
Total	**433**	**387**
Equity-settled plans		
- Chugai common stock options	311	273
- Chugai stock options as stock-based compensation	122	115

Cash inflow from equity compensation plans in millions of yen

	2016	2015
Equity-settled plans		
- Exercises of Chugai common stock options	506	1,391
- Exercises of Chugai stock options as stock-based compensation	-	-

Chugai common stock options

The Group has issued stock acquisition rights to directors and certain employees as common stock options since 2003. Each right entitles the holder to purchase 100 Chugai shares at a specified exercise price. The rights are non-tradable and have an exercise period of around ten years after receiving the rights under the condition of approximately two years of continuous service of the holder after the grant date.

Chugai common stock options – movement in number of rights outstanding

	2016		2015	
	Number of rights	Weighted average exercise price (yen)	Number of rights	Weighted average exercise price (yen)
Outstanding at January 1	15,698	252,938	19,201	221,330
Granted	2,764	374,600	2,814	400,700
Forfeited	(40)	387,650	-	-
Exercised	(2,258)	224,268	(6,219)	223,596
Expired	(198)	228,833	(98)	164,900
Outstanding at December 31	**15,966**	**278,016**	**15,698**	**252,938**
- of which exercisable	10,428	219,730	9,784	205,858

Chugai common stock options – terms of rights outstanding at December 31, 2016

Year of grant	Rights outstanding			Rights exercisable	
	Number outstanding	Weighted average years remaining contractual life	Weighted average exercise price (yen)	Number exercisable	Weighted average exercise price (yen)
2007	1,002	0.22	303,900	1,002	303,900
2008 – no awards	-	-	-	-	-
2009	813	2.23	169,600	813	169,600
2010	1,048	3.31	188,100	1,048	188,100
2011	840	4.40	139,700	840	139,700
2012	2,025	5.31	152,800	2,025	152,800
2013	1,823	6.31	250,000	1,823	250,000
2014	2,877	7.31	267,400	2,877	267,400
2015	2,794	8.31	400,700	-	-
2016	2,744	9.31	374,600	-	-
Total	**15,966**	**6.34**	**278,016**	**10,428**	**219,730**

Chugai stock options as stock-based compensation

The Group has issued stock acquisition rights to directors as stock options as stock-based compensation since 2009 in lieu of the retirement benefit system for directors which was abolished. Each right entitles the holder to purchase 100 Chugai shares at an exercise price of ¥100. The rights are non-tradable and have an exercise period of 30 years after receiving the rights, which may be vested upon the holder's retirement as a director of Chugai.

Chugai stock options as stock-based compensation – movement in number of rights outstanding

	2016		2015	
	Number of rights	Weighted average exercise price (yen)	Number of rights	Weighted average exercise price (yen)
Outstanding at January 1	3,724	100	3,411	100
Granted	354	100	313	100
Forfeited	-	-	-	-
Exercised	-	-	-	-
Expired	-	-	-	-
Outstanding at December 31	**4,078**	**100**	**3,724**	**100**
- of which exercisable	-	-	-	-

Chugai stock options as stock-based compensation – terms of rights outstanding at December 31, 2016

Year of grant	Rights outstanding			Rights exercisable	
	Number outstanding	Weighted average years remaining contractual life	Weighted average exercise price (yen)	Number exercisable	Weighted average exercise price (yen)
2009	519	22.31	100	-	-
2010	579	23.31	100	-	-
2011	672	24.40	100	-	-
2012	723	25.31	100	-	-
2013	457	26.31	100	-	-
2014	461	27.31	100	-	-
2015	313	28.31	100	-	-
2016	354	29.31	100	-	-
Total	**4,078**	**25.41**	**100**	**-**	**-**

Fair value measurement

The inputs used in the measurement of the fair values at grant date of the stock acquisition rights in 2016 are set out below. Expected volatility was determined primarily based on historically observed prices of the underlying equity (same as exercise period).

Chugai common stock options in 2016

Number of rights granted	2,764
Granted common stocks per right	100
Date of grant	May 10, 2016
Vesting period	May 10, 2016 – April 23, 2018
Contractual life	May 10, 2016 – April 22, 2026
Fair value of rights at grant date	¥1,151
Model used	Binominal
Inputs to option pricing model	
- Share price at grant date	¥368,000
- Exercise price	¥374,600
- Expected volatility	32.05%
- Expected dividend yield	1.41%
- Risk-free rate	(0.11)%

A person granted stock acquisition rights cannot exercise the rights during the first two years after the date of approval for issuance.

Chugai stock options as stock-based compensation in 2016

Number of rights granted	354
Granted common stocks per a right	100
Date of grant	May 10, 2016
Vesting period	-
Contractual life	May 10, 2016 – April 22, 2046
Fair value of rights at grant date	¥3,546
Model used	Binominal
Inputs to option pricing model	
- Share price at grant date	¥368,000
- Exercise price	¥100
- Expected volatility	33.90%
- Expected dividend yield	1.41%
- Risk-free rate	(0.25)%

A person granted stock acquisition rights can exercise all stock acquisition rights at one time within ten days from the day following the date on which he/she loses the position as a director.

Exercise of stock acquisition rights

	2016		2015	
	Number of rights	Weighted average share price (yen)	Number of rights	Weighted average share price (yen)
Chugai common stock options	2,258	3,546	6,219	3,990
Chugai stock options as stock-based compensation	-	-	-	-

25. Earnings per share

Basic earnings per share

	2016	2015
Net income attributable to Chugai shareholders (millions of yen)	**53,592**	**61,125**
Weighted average number of common stock	559,685,889	559,685,889
Weighted average number of treasury stock	(13,506,255)	(13,912,427)
Weighted average number of shares in issue	**546,179,634**	**545,773,462**
Basic earnings per share (yen)	**98.12**	**112.00**

Diluted earnings per share

	2016	2015
Net income attributable to Chugai shareholders (millions of yen)	**53,592**	**61,125**
Weighted average number of shares in issue	546,179,634	545,773,462
Adjustment for assumed exercise of equity compensation plans, where dilutive	821,617	1,028,628
Weighted average number of shares in issue used to calculate diluted earnings per share	**547,001,251**	**546,802,090**
Diluted earnings per share (yen)	**97.97**	**111.79**

There were 5,538 rights in equity compensation plans, which are anti-dilutive, and therefore excluded from the calculation of diluted earnings per share (2015: 2,814 rights).

26. Statement of cash flows

Cash flows from operating activities

Cash flows from operating activities arise from the Group's primary activities including research and development, manufacturing and sales in the Pharmaceuticals business. These are calculated by the indirect method by adjusting the Group's operating profit for any operating income and expenses that are not cash flows (for example depreciation, amortization and impairment) in order to derive the cash generated from operations. Operating cash flows also include income taxes paid on all activities.

Cash generated from operations in millions of yen

	2016	2015
Net income	54,372	62,353
Financing costs	86	67
Other financial income (expense)	(1,111)	(559)
Other expense	3,460	-
Income taxes	20,076	24,923
Operating profit	**76,884**	**86,784**
Depreciation of property, plant and equipment	14,761	13,964
Amortization of intangible assets	1,608	1,603
Impairment of property, plant and equipment	61	202
Impairment of intangible assets	2,380	1,852
Operating expense for defined benefit plans	4,122	3,806
Operating expense for equity-settled equity compensation plans	433	387
Net (income) expense for provisions	12	436
Inventories write-down	2,239	1,481
Other adjustments	298	(358)
Cash generated from operations	**102,797**	**110,159**

Cash flows from investing activities

Cash flows from investing activities are principally those arising from the Group's investments in property, plant and equipment and intangible assets. Cash flows connected with the Group's portfolio of marketable securities and other investments are also included, as are any interest and dividend payments received in respect of these securities and investments.

Interest and dividends received in millions of yen

	2016	2015
Interest received	100	147
Dividends received	201	208
Total	**301**	**355**

Cash flows from financing activities

Cash flows from financing activities are primarily dividend payments to Chugai shareholders.

Significant non-cash transactions

There were no significant non-cash transactions (2015: none).

27. Risk management

1) Financial risk management
The Group is exposed to various financial risks arising from its underlying operations and corporate finance activities. The Group's financial risk exposures are predominantly related to changes in foreign exchange rates, interest rates and equity prices as well as the creditworthiness and the solvency of the Group's counterparties.

Financial risk management within the Group is governed by policies approved by the board of directors of Chugai. These policies cover credit risk, liquidity risk and market risk. The policies provide guidance on risk limits, type of authorized financial instruments and monitoring procedures. Policy implementation and day-to-day risk management are carried out by the relevant functions and regular reporting on these risks is performed by the relevant finance & accounting and controlling functions within Chugai.

(i) Credit risk
Accounts receivable are exposed to customer credit risk. The main accounts receivable are trade receivables. The management of trade receivables is focused on the assessment of country risk, setting of credit limits, ongoing credit evaluation and account monitoring procedures. As part of the credit risk management, sales administration departments regularly monitor the financial position of major customers by checking payment term and balances of trade receivables for each customer according to the accounting manuals to ensure early identification and mitigation of overdue balances and potential bad debts associated with the deterioration of customers' financial position.

The objective of the management of trade receivables is to sustain the growth and profitability of the Group by optimizing asset utilization while maintaining risks at an acceptable level. The Group obtains credit insurance and similar enhancements when appropriate to protect the collection of trade receivables. No collateral was held for trade receivables (2015: none).

Of the Group's accounts receivable, trade receivables from third parties are mainly to Japanese customers, of which major customers account for 71 % as of December 31, 2016.

Trade receivables: major customers in millions of yen

	December 31, 2016	December 31, 2015
Alfresa Corporation	30,979	29,866
Mediceo Corporation	23,767	24,065
Suzuken Co., Ltd.	20,115	18,942
Toho Pharmaceutical Co., Ltd.	12,688	11,876
Total	**87,549**	**84,748**

Aging of accounts receivable that are not impaired in millions of yen

	December 31, 2016	December 31, 2015
Neither overdue nor impaired	167,276	158,472
Overdue less than 1 month	199	187
Overdue 1-3 months	6	7
Overdue 4-6 months	1	1
Overdue 7-12 months	-	-
Overdue more than 1 year	-	-
Total	**167,482**	**158,668**

Derivative transactions and money market instruments are restricted to financial institutions with high credit ratings in an effort to mitigate the counterparty risks.

The maximum exposure to credit risk resulting from financial activities, without taking into account any collateral held or other credit enhancements, is equal to the carrying value of the Group's financial assets.

Impairment losses by asset class
The Group's impairment loss on available-for-sale investments was ¥160 million (2015: ¥64 million).

(ii) Liquidity risk

Liquidity risk arises through a surplus of financial obligations over available financial assets due at any point in time. The Group's approach to liquidity risk is to maintain sufficient readily available reserves in order to meet its liquidity requirements at any point in time. The Group manages liquidity risks based on a cash management plan prepared and updated as appropriate by finance and accounting departments based on the reporting from each department.

Chugai is rated as highly creditable by more than one major credit rating agency. The ratings will permit efficient access to the international capital markets in the event of major financing requirements. Chugai has unused committed credit lines with various financial institutions totaling ¥40,000 million (2015: ¥40,000 million).

Contractual maturities of financial liabilities in millions of yen

	Total	0-3 months	4-6 months	7-12 months	Over 1 year
At December 31, 2016					
Accounts payable	72,346	68,238	4,105	1	2
Other current liabilities					
- Derivative financial instruments*	6,347	2,007	1,190	2,188	963
Total financial liabilities	**78,693**	**70,245**	**5,295**	**2,189**	**965**
At December 31, 2015					
Accounts payable	78,353	72,223	6,129	1	-
Other current liabilities					
- Derivative financial instruments*	6,180	6,180	-	-	-
Total financial liabilities	**84,533**	**78,403**	**6,129**	**1**	**-**

*Derivative financial instruments are for risk management purposes and will not be canceled before the maturity date.

(iii) Market risk

Market risk arises from changing market prices, mainly due to foreign exchange rates and interest rates, of the Group's financial assets or financial liabilities which affect the Group's net income and equity.

Foreign exchange risk: Accounts receivable and accounts payable denominated in foreign currencies are exposed to foreign exchange risk. The objective of the Group's foreign exchange risk management activities is to preserve the economic value of its current and future assets and to minimize the volatility of the Group's financial result. The Group enters into derivative transactions such as foreign exchange forward contracts and currency options to reduce the risk of foreign currency exchange fluctuations related to assets and liabilities denominated in foreign currencies. Some of these transactions qualify as cash flow hedges at the point that the forecast transaction is expected.

When making use of derivatives for hedging foreign exchange risk on assets and liabilities denominated in foreign currencies, Chugai conducts such operations in accordance with its internal regulations and monthly reports are prepared on the balance of such transactions, valuation gains and losses, and other related matters at fair value. Consolidated subsidiaries do not utilize derivative transactions.

Sensitivity analysis: Chugai has financial instruments denominated in currencies other than its functional currency. The table below shows the impact to profit before taxes resulting from a 1% decrease of the Swiss franc, euro and US dollar against the Japanese yen, which is Chugai's functional currency. The effective portion of derivative financial instruments for which hedge accounting is applied is excluded from the calculation. All calculations are based on the assumption that exchange rates for other currencies are constant and there are no changes in other variables such as interest rates.

Foreign currency sensitivity analysis

	2016	2015
Average exchange rate (yen per each currency)		
CHF	110.46	125.74
EUR	120.42	134.36
USD	108.83	121.03
Profit before taxes (millions of yen)		
CHF	(237)	(567)
EUR	12	10
USD	(140)	(327)

(Note) Positive numbers are the amount of positive impact on profit before taxes resulting from a 1% decrease of each currency against the Japanese yen. The amounts above do not reflect the impact on Chugai's cash flows or forecast result.

The impact resulting from a 1% decrease of each currency against the Japanese yen on the financial instruments denominated in foreign currency is shown in the tables below.

	2016			2015		
	Exposure (m CHF)	Exposure (m YEN)	Impact (m YEN)	Exposure (m CHF)	Exposure (m YEN)	Impact (m YEN)
CHF						
Accounts receivable	210	23,877	(239)	217	26,462	(265)
Accounts payable	(403)	(45,868)	459	(357)	(43,535)	435
Financial non-current assets	-	-	-	-	-	-
Cash and cash equivalents	55	6,268	(63)	54	6,622	(66)
Notional amounts of derivative financial instruments						
- Effective portion of hedge	330	39,423	(394)	464	56,580	(566)
- Other than above	-	-	-	87	10,601	(106)
Total	**192**	**23,700**	**(237)**	**465**	**56,730**	**(567)**

	Exposure (m EUR)	Exposure (m YEN)	Impact (m YEN)	Exposure (m EUR)	Exposure (m YEN)	Impact (m YEN)
EUR						
Accounts receivable	6	788	(8)	10	1,364	(14)
Accounts payable	(17)	(2,023)	20	(18)	(2,364)	24
Financial non-current assets	-	-	-	-	-	-
Cash and cash equivalents	-	-	-	-	-	-
Notional amounts of derivative financial instruments						
- Effective portion of hedge	-	-	-	-	-	-
- Other than above	-	-	-	-	-	-
Total	**(10)**	**(1,235)**	**12**	**(8)**	**(1,000)**	**10**

	Exposure (m USD)	Exposure (m YEN)	Impact (m YEN)	Exposure (m USD)	Exposure (m YEN)	Impact (m YEN)
USD						
Accounts receivable	56	6,586	(66)	20	2,379	(24)
Accounts payable	(36)	(4,206)	42	(39)	(4,645)	46
Financial non-current assets	-	-	-	-	-	-
Cash and cash equivalents	-	-	-	-	-	-
Notional amounts of derivative financial instruments						
- Effective portion of hedge	100	11,581	(116)	262	31,345	(313)
- Other than above	-	-	-	30	3,594	(36)
Total	**120**	**13,961**	**(140)**	**273**	**32,672**	**(327)**

Interest rate risk: The amounts of debt and loans were insignificant and therefore the Group is not exposed to material interest rate risk.

2) Financial instruments fair value

Carrying value and fair value of financial instruments

The Group's financial instruments are mainly comprised of financial non-current assets, accounts receivable, marketable securities, cash and cash equivalents, derivative financial instruments included in other current assets, accounts payable, derivative financial instruments included in other current liabilities and debt. The carrying values of these financial instruments are equal to or reasonably approximate fair values.

Fair value hierarchy

The table below analyses financial instruments carried at fair value, by valuation method. The different levels have been defined as follows:

- Level 1 – quoted prices (unadjusted) in active markets for identical assets and liabilities.
- Level 2 – observable inputs other than quoted prices in active markets for identical assets and liabilities.
- Level 3 – fair value determined using valuation method which includes unobservable inputs.

Fair value hierarchy of financial instruments in millions of yen

	Level 1	Level 2	Level 3	Total
At December 31, 2016				
Marketable securities:				
- Money market instruments and time accounts over 3 months	-	105,177	-	105,177
- Debt securities	4,999	-	-	4,999
Other current assets				
- Derivative financial instruments	-	10,733	-	10,733
Financial non-current assets				
- Available-for-sale investments	8,154	-	1,552	9,706
Financial assets recognized at fair value	**13,153**	**115,910**	**1,552**	**130,615**
Other current liabilities				
- Derivative financial instruments	-	(6,347)	-	(6,347)
Financial liabilities recognized at fair value	**-**	**(6,347)**	**-**	**(6,347)**
At December 31, 2015				
Marketable securities:				
- Money market instruments and time accounts over 3 months	-	134,419	-	134,419
- Debt securities	-	-	-	-
Other current assets				
- Derivative financial instruments	-	3,409	-	3,409
Financial non-current assets				
- Available-for-sale investments	12,262	-	1,453	13,715
Financial assets recognized at fair value	**12,262**	**137,828**	**1,453**	**151,543**
Other current liabilities				
- Derivative financial instruments	-	(6,180)	-	(6,180)
Financial liabilities recognized at fair value	**-**	**(6,180)**	**-**	**(6,180)**

Level 1 financial assets consist of government bonds, corporate bonds and quoted shares. Level 2 financial assets consist primarily of certificates of deposit, cash in trust, commercial paper and derivative financial instruments.

Fair values Level 2 financial assets are determined as follows:

・Marketable securities and derivative financial instruments are based on valuation models that use observable market data for interest rates, yield curves, foreign exchange rates and implied volatilities for similar instruments at the measurement date.

The Group recognizes transfers between levels of the fair value hierarchy as of the end of the reporting period during which the transfer has occurred. There were no significant transfers between Level 1 and Level 2 and vice versa.

Level 3 financial assets consist of unquoted shares. Valuation is based on latest financial data.

Reconciliation of financial instruments classified into level 3 in millions of yen

	Fair value through other comprehensive income	Fair value through income statement	Total
At January 1, 2015	1,438	-	1,438
Gains or losses	(87)	-	(87)
Purchases	104	-	104
Disposals	(1)	-	(1)
Transfers	-	-	-
Currency translation effects	(0)	-	(0)
At December 31, 2015	**1,453**	**-**	**1,453**
At January 1, 2016	1,453	-	1,453
Gains or losses	97	-	97
Purchases	-	-	-
Disposals	-	-	-
Transfers	-	-	-
Currency translation effects	1	-	1
At December 31, 2016	**1,552**	**-**	**1,552**

3) Derivative financial instruments

Derivative financial instruments in millions of yen

Assets	December 31, 2016	December 31, 2015
Forward exchange contracts	10,733	3,409
Currency options	-	-
Total derivative financial instruments	**10,733**	**3,409**

Liabilities	December 31, 2016	December 31, 2015
Forward exchange contracts	(6,347)	(6,180)
Currency options	-	-
Total derivative financial instruments	**(6,347)**	**(6,180)**

Hedge accounting

The Group has the following cash flow hedges which are designated in a qualifying hedge relationship.

Cash flow hedges

The Group is exposed to foreign exchange risk from transactions for inventories and other materials in foreign currencies with foreign related parties. The Group has entered into foreign exchange forward contracts and currency options to hedge a part of foreign exchange risk. Such instruments are recorded as fair value assets of ¥5,162 million (2015: fair value liabilities of ¥2,425 million). There was no ineffective portion.

The present value of expected cash flows from qualifying cash flow hedges is shown in the table below.

Present value of expected cash flows of qualifying cash flow hedges in millions of yen

	Total	0-6 months	7-12 months	Over 1 year
Year ended December 31, 2016				
Cash inflows	175,272	43,872	94,775	36,625
Cash outflows	(170,110)	(42,697)	(91,670)	(35,742)
Total cash inflow (outflow)	**5,162**	**1,174**	**3,105**	**883**
Year ended December 31, 2015				
Cash inflows	193,497	58,845	102,470	32,182
Cash outflows	(195,922)	(59,655)	(103,722)	(32,545)
Total cash inflow (outflow)	**(2,425)**	**(810)**	**(1,252)**	**(362)**

4) Capital management

The Group defines the capital that it manages as the Group's total capitalization, being the sum of debt plus equity including non-controlling interests. The Group's objectives when managing capital are:

- To safeguard the Group's ability to continue as a going concern, so that it can continue to provide benefits for patients and returns to investors.
- To provide an adequate return to investors based on the level of risk undertaken.
- To have available the necessary financial resources to allow the Group to invest in areas that may deliver future benefits for patients and returns to investors.
- To maintain sufficient financial resources to mitigate against risks and unforeseen events.

Capitalization is monitored and reported to the Chief Financial Officer as part of the Group's regular internal management reporting.

The Group is not subject to regulatory capital adequacy requirements.

Capital in millions of yen

	December 31, 2016	December 31, 2015
Capital and reserves attributable to Chugai shareholders	645,508	625,857
Equity attributable to non-controlling interests	989	1,414
Total equity	646,497	627,271
Total debt	645	735
Capitalization	**647,142**	**628,006**

28. Related parties

1) Controlling shareholder

Effective October 1, 2002, Roche and Chugai completed an alliance to create a leading research-driven Japanese pharmaceutical company, which was formed by the merger of Chugai and Roche's Japanese pharmaceuticals subsidiary, Nippon Roche. Through the merger, Chugai became a member of the Roche Group as the surviving company.

Chugai has entered into certain agreements with Roche, which are discussed below:

Basic Alliance Agreement: As part of the Basic Alliance Agreement signed in December 2001, Roche and Chugai entered into certain arrangements covering the future operation and governance of Chugai. Amongst other matters these cover the following areas:

- The structuring of the alliance.
- Roche's rights as a shareholder.
- Roche's rights to nominate members of Chugai's Board of Directors.
- Certain limitations to Roche's ability to buy or sell Chugai's common stock.

Chugai issues additional shares of common stock in connection with its convertible debt and equity compensation plans, and may issue additional shares for other purposes, which affects Roche's percentage ownership interest. The Basic Alliance Agreement provides, amongst other matters, that Chugai will guarantee Roche's right to maintain its shareholding percentage in Chugai at not less than 50.1%.

Licensing Agreements: Under the Japan Umbrella Rights Agreement signed in December 2001, Chugai has exclusive rights to market Roche's pharmaceutical products in Japan. Chugai also has right of first refusal on the development and marketing in Japan of all development compounds advanced by Roche.

The Rest of the World Umbrella Rights Agreement (excluding Japan and South Korea) signed in May 2002 was revised and the Amended and Restated Rest of the World Umbrella Rights Agreement (excluding Japan, South Korea and Taiwan) was signed in August 2014. Under this Agreement, Roche has the right of first refusal on the development and marketing of Chugai's development compounds in markets outside Japan, excluding South Korea and Taiwan.

Further to these agreements, Roche and Chugai have signed a series of separate agreements for certain specific products. Depending on the specific circumstances and the terms of the agreement, this may result in payments on an arm's length basis between Roche and Chugai, for any or all of the following matters:

- Upfront payments, if a right of first refusal to license a product is exercised.
- Milestone payments, dependent upon the achievement of agreed performance targets.
- Royalties on future product sales.

These specific product agreements may also cover the manufacture and supply etc. of the respective products to meet the other party's clinical and/or commercial requirements on an arm's length basis.

Research Collaboration Agreements: Roche and Chugai have entered into research collaboration agreements in the areas of small-molecule synthetic drug research and biotechnology-based drug discovery.

Dividends: The dividends distributed to Roche by Chugai in respect to its holdings of Chugai shares totaled ¥19,443 million (2015: ¥17,432 million).

2) Material transactions and balances with related parties

Transactions with F. Hoffmann-La Roche in millions of yen

	2016	2015
Sales	62,780	63,084
Purchases of inventory and other materials	120,923	131,025

Balances with F. Hoffmann-La Roche in millions of yen

	December 31, 2016	December 31, 2015
Trade accounts receivable	17,314	13,529
Trade accounts payable	(32,965)	(33,974)

3) Remuneration of key management personnel

Remuneration of members of the board and audit & supervisory board members in millions of yen

	2016	2015
Board of Directors		
- Regular remuneration	364	355
- Bonuses	191	238
- Chugai common stock options	123	117
- Chugai stock options as stock-based compensation	122	115
Total	**801**	**825**
Audit & supervisory board members		
- Regular remuneration	85	85
Total	**85**	**85**

29. Subsidiaries

Subsidiaries	Country of incorporation	Equity interest %	
		2016	2015
Consolidated subsidiaries			
Chugai Research Institute for Medical Science, Inc.	Japan	100 %	100 %
Chugai Clinical Research Center Co., Ltd.	Japan	100 %	100 %
Chugai Business Support Co., Ltd.	Japan	100 %	100 %
Medical Culture, Inc.	Japan	100 %	100 %
Chugai Distribution Co., Ltd.	Japan	100 %	100 %
Chugai Pharma Manufacturing Co., Ltd.	Japan	100 %	100 %
Forerunner Pharma Research Co., Ltd.	Japan	100 %	100 %
Chugai Pharma USA, Inc.	United States	100 %	100 %
Chugai Pharma Europe Ltd.	United Kingdom	100 %	100 %
Chugai Pharma U.K. Ltd.	United Kingdom	100 %	100 %
Chugai Pharma Development Ltd.	United Kingdom	100 %	100 %
Chugai Pharma France S.A.S.	France	100 %	100 %
Chugai sanofi-aventis S.N.C.	France	55 %	55 %
Chugai Pharma Taiwan Ltd.	Taiwan	100 %	100 %
Chugai Pharma (Shanghai) Consulting Co., Ltd.	China	100 %	100 %
Chugai Pharma Science (Beijing) Co., Ltd.	China	100 %	100 %
Chugai Pharma China Co., Ltd.	China	100 %	100 %
Chugai Pharma Technology Taizhou Co., Ltd.	China	100 %	-
Chugai Pharmabody Research Pte. Ltd.	Singapore	100 %	100 %

30. Subsequent events

There were no material subsequent events.

Independent Auditor's Report

Independent Auditor's Report

To the Board of Directors of Chugai Pharmaceutical Co., Ltd.:

We have audited the accompanying consolidated financial statements of Chugai Pharamaceutical Co., Ltd. and its consolidated subsidiaries, which comprise the consolidated balance sheet as at December 31, 2016, and the consolidated income statement, statement of comprehensive income ,statement of changes in equity and statement of cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in Japan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgement, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, while the objective of the financial statement audit is not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Chugai Pharmaceutical Co., Ltd. and its consolidated subsidiaries as at December 31, 2016, and their financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards.

KPMG AZSA LLC

March 23, 2017
Tokyo, Japan

Network (As of April 1, 2017)

Chugai Pharmaceutical

Head Office

2-1-1 Nihonbashi-Muromachi,
Nihonbashi Mitsui Tower (Reception 15F)
Chuo-ku, Tokyo 103-8324 Japan
Tel +81-(0)3-3281-6611 (main switchboard)
URL: https://www.chugai-pharm.co.jp/english/

Research Laboratories

Fuji Gotemba Research Laboratories
1-135 Komakado, Gotemba City,
Shizuoka Pref. 412-8513 Japan
Tel +81-(0)550-87-3411

Kamakura Research Laboratories
200 Kajiwara, Kamakura City,
Kanagawa Pref. 247-8530 Japan
Tel +81-(0)467-47-2260

Ukima Research Laboratories
5-5-1 Ukima, Kita-ku,
Tokyo 115-8543 Japan
Tel +81-(0)3-3968-6111

Plants (Chugai Pharma Manufacturing Co., Ltd.)

Ukima Plant
5-5-1 Ukima, Kita-ku, Tokyo 115-8543 Japan
Tel +81-(0)3-3968-6200

Fujieda Plant
2500 Takayanagi, Fujieda City,
Shizuoka Pref. 426-0041 Japan
Tel +81-(0)54-635-2311

Utsunomiya Plant
16-3 Kiyohara-Kogyodanchi, Utsunomiya City,
Tochigi Pref. 321-3231 Japan
Tel +81-(0)28-667-7611

Branches

Hokkaido Branch
8F Nihon Seimei Sapporo Bldg., 4-1-1
Kita-sanjo-Nishi, Chuo-ku, Sapporo City,
Hokkaido 060-0003 Japan
Tel +81-(0)11-271-5311

Miyagi and Yamagata Branch
Sankyo Sendai Bldg., 1-12-7 Honcho,
Aoba-ku, Sendai City,
Miyagi Pref. 980-0014 Japan
Tel +81-(0)22-225-8551

Kita-Tohoku Branch (Iwate/Aomori/Akita)
Higashi-nihon Fudousan Morioka Ekimae
Bldg., 15-20 Morioka-ekimae-dori,
Morioka City, Iwate Pref. 020-0034 Japan
Tel +81-(0)19-625-2811

Fukushima Branch
Gibraltar Seimei Koriyama Bldg., 1-14-1
Omachi, Koriyama City,
Fukushima Pref. 963-8001 Japan
Tel +81-(0)24-933-6303

Saitama Branch
8F Omiya Center Bldg., 1-9-6 Sakuragicho,
Omiya-ku, Saitama City,
Saitama Pref. 330-0854 Japan
Tel +81-(0)48-642-4771

Ibaraki Branch
8F Nissei Mito Bldg., 2-2-27 Izumi-cho,
Mito City, Ibaraki Pref. 310-0026 Japan
Tel +81-(0)29-227-1951

Gunma and Tochigi Branch
9F East Tower, 16-11 Sakae-cho,
Takasaki City, Gunma Pref. 370-0841 Japan
Tel +81-(0)27-321-6511

Niigata Branch
9F Niigata Ekimae Bldg., 3-2-3 Benten,
Chuo-ku, Niigata City,
Niigata Pref. 950-0901 Japan
Tel +81-(0)25-247-7331

Nagano and Yamanashi Branch
8F Kenshin Matsumoto Fukashi Bldg.,
2-5-2 Fukashi, Matsumoto City,
Nagano Pref. 390-0815 Japan
Tel +81-(0)263-34-1373

Tokyo Branch 1
Tokyo Branch 2
Tokyo Branch 3
17F Osaki Bright Core Bldg.,
5-5-15 Kita-shinagawa, Shinagawa-ku,
Tokyo 141-0001 Japan
Tel +81-(0)5449-6760

Tokyo Tama Branch
Tachikawa Nishiki-cho Bldg., 1-8-7 Nishiki-cho,
Tachikawa City, Tokyo 190-0022 Japan
Tel +81-(0)42-523-6661

Chiba Branch
5F Fujimi Hainesu Bldg., 2-7-5 Fujimi, Chuo-ku,
Chiba City, Chiba Pref. 260-0015 Japan
Tel +81-(0)43-224-1511

Yokohama Branch
3F Yokohama East Square, 1-4 Kinkou-cho,
Kanagawa-ku, Yokohama City,
Kanagawa Pref. 221-0056 Japan
Tel +81-(0)45-450-7670

Atsugi Branch
8F Nihon Seimei Hon-atsugi Bldg,
1-2-1 Asahi-cho, Atsugi City,
Kanagawa Pref., 243-0014 Japan
Tel +81-(0)46-229-2700

Aichi Branch
KDX Sakura-dori Bldg., 3-20-17
Marunouchi, Naka-ku, Nagoya City,
Aichi Pref. 460-0002 Japan
Tel +81-(0)52-961-8511

Gifu and Mie Branch
11F Nouhi Nissei Bldg., 2-8 Hashimoto-cho,
Gifu City, Gifu Pref. 500-8856 Japan
Tel +81-(0)58-252-7400

Shizuoka Branch
4F Nissei Shizuoka Ekimae Bldg.,
59-7 Kurogane-cho, Aoi-ku, Shizuoka City,
Shizuoka Pref. 420-0851 Japan
Tel +81-(0)54-252-5125

Kyoto and Shiga Branch
7F Karasuma Chuo Bldg., 659 Tearaimizu-cho,
Nishikikoji-agaru, Karasuma-dori, Nakagyo-ku,
Kyoto City, Kyoto 604-8152 Japan
Tel +81-(0)75-212-6090

Hokuriku Branch (Ishikawa/Toyama/Fukui)
13F Visage, 16-1 Showa-cho, Kanazawa City,
Ishikawa Pref. 920-0856 Japan
Tel +81-(0)76-232-6766

Osaka-Kita Branch
13F Uemura Nissei Bldg., 3-3-31 Miyahara,
Yodogawa-ku, Osaka City,
Osaka 532-0003 Japan
Tel +81-(0)6-6350-6355

Osaka-Minami Branch
14F Portas Center Bldg., 4-45-1 Ebisujima-cho,
Sakae-ku, Sakae City,
Osaka 590-0985 Japan
Tel +81-(0)72-223-1575

Nara and Wakayama Branch
5F Nara Center Bldg., 7-1-33 Omiya-cho,
Nara City, Nara Pref. 630-8115 Japan
Tel +81-(0)742-33-6011

Hyogo Branch
9F Meiji Yasuda Seimei Kobe Bldg.,
8-3-5 Isogami-dori, Chuo-ku, Kobe City,
Hyogo Pref. 651-0086 Japan
Tel +81-(0)78-241-6851

Hiroshima Branch
6F Nissei Hiroshima Bldg.,
7-32 Nakamachi, Naka-ku, Hiroshima City,
Hiroshima Pref. 730-0037 Japan
Tel +81-(0)82-543-6100

Yamaguchi Branch
10F Square Shin-yamaguchi,
2-21 Ogori-kogane-machi, Yamaguchi City,
Yamaguchi Pref. 754-0021 Japan
Tel +81-(0)83-972-1666

Tottori and Shimane Branch
6F Yonago Shoko Kaigisho Kaikan,
2-204 Kamo-cho, Yonago City,
Tottori Pref. 683-0823 Japan
Tel +81-(0)859-34-3521

Okayama Branch
4F Lit City Bldg., 15-1 Ekimoto-machi, Kita-ku,
Okayama City, Okayama Pref. 700-0024 Japan
Tel +81-(0)86-214-3760

Kagawa and Tokushima Branch
7F Ichigo Takamatsu Bldg.,
2-2-7 Kotobuki-cho, Takamatsu City,
Kagawa Pref. 760-0023 Japan
Tel +81-(0)87-811-6988

Ehime and Kouchi Branch
8F Mitsui Seimei Matsuyama Bldg.,
4-1-1 Ichiban-cho, Matsuyama City,
Ehime Pref. 790-0001 Japan
Tel +81-(0)89-945-3600

Fukuoka and Oita Branch
Echo Bldg., 2-13-34 Hakataeki-higashi,
Hakata-ku, Fukuoka City,
Fukuoka Pref. 812-0013 Japan
Tel +81-(0)92-451-8181

Nagasaki and Saga Branch
Nagasaki Ekimae Daiichi Seimei Bldg.,
2-3 Nishizaka-machi, Nagasaki City,
Nagasaki Pref. 850-0051
Tel +81-(0)95-825-4772

Kumamoto Branch
Ichigo Kumamoto Bldg., 6-7 Karashima-cho,
Chuo-ku, Kumamoto City,
Kumamoto Pref. 860-0804 Japan
Tel +81-(0)96-359-6311

Kagoshima and Miyazaki Branch
KSC Kamoike Bldg., 2-4-35 Yojiro,
Kagoshima City,
Kagoshima Pref. 890-0062 Japan
Tel +81-(0)99-251-1600

Okinawa Branch
11F JPR Naha Bldg., 1-1-19 Matsuyama,
Naha City,
Okinawa Pref. 900-0032 Japan
Tel +81-(0)98-861-1211

Regional Management Offices (RMO)

Domestic

Hokkaido and Tohoku RMO
Sankyo Sendai Bldg., 1-12-7 Honcho,
Aoba-ku, Sendai City,
Miyagi Pref. 980-0014 Japan
Tel +81-(0)22-225-8551

Kanto-Kita and Koshinetsu RMO
8F Omiya Center Bldg., 1-9-6 Sakuragicho,
Omiya-ku, Saitama City,
Saitama Pref. 330-0854 Japan
Tel +81-(0)48-642-4771

Kanto-Minami RMO
17F Osaki Bright Core Bldg.,
5-5-15 Kita-shinagawa, Shinagawa-ku,
Tokyo 141-0001 Japan
Tel +81-(0)5449-6760

Tokai and Hokuriku RMO
KDX Sakura-dori Bldg., 3-20-17 Marunouchi,
Naka-ku, Nagoya City,
Aichi Pref. 460-0002 Japan
Tel +81-(0)52-961-8511

Kansai RMO
13F Uemura Nissei Bldg., 3-3-31 Miyahara,
Yodogawa-ku, Osaka City,
Osaka 532-0003 Japan
Tel +81-(0)6-6350-6355

Chugoku and Shikoku RMO
6F Nissei Hiroshima Bldg., 7-32 Nakamachi,
Naka-ku, Hiroshima City,
Hiroshima Pref. 730-0037 Japan
Tel +81-(0)82-543-6100

Kyushu RMO
Echo Bldg., 2-13-34 Hakataeki-higashi,
Hakata-ku, Fukuoka City,
Fukuoka Pref. 812-0013 Japan
Tel +81-(0)92-451-8181

Domestic Subsidiaries

Chugai Clinical Research Center Co., Ltd.
1-1 Nihonbashi-Muromachi 2-chome,
Chuo-ku, Tokyo 103-8324 Japan
(within the Chugai Pharmaceutical Head Office)
Tel+81-(0)3-3273-1173

Chugai Research Institute
for Medical Science, Inc.
1-135 Komakado, Gotemba City,
Shizuoka Pref. 412-8513 Japan
(within the Fuji Gotemba Research
Laboratories)
Tel +81-(0)550-87-5425

Chugai Business Support Co., Ltd.
5-5-1 Ukima, Kita-ku,
Tokyo 115-8543 Japan
(within the Ukima Representative Office)
Tel +81-(0)3-3968-8760

Medical Culture Inc.
Muromachi CS Bldg.,
4-6-5 Nihonbashi-Muromachi,
Chuo-ku, Tokyo 103-0022 Japan
Tel +81-(0)3-5202-8270

Chugai Distribution Co., Ltd.
1-20, Okuwa, Kazo City,
Saitama Pref. 347-0010 Japan
(within the Kazo Distribution Center)
Tel +81-(0)480-76-0381

Chugai Pharma Manufacturing Co., Ltd.
5-5-1 Ukima, Kita-ku,
Tokyo 115-8543 Japan
(within the Ukima Representative Office)
Tel +81-(0)3-3968-6200

Forerunner Pharma Research Co., Ltd.
1-6 Suehiro-cho, Tsurumi-ku, Yokohama City,
Kanagawa Pref. 230-0045 Japan
Tel +81-(0)45-500-4110

Overseas Subsidiaries, Affiliates and R&D Partners

Europe

Chugai Pharma U.K. Ltd.
Mulliner House, Flanders Road,
Turnham Green, London W4 1 NN U.K.
Tel +44-(0)20-8987-5680

Chugai Pharma Europe Ltd.
Mulliner House, Flanders Road,
Turnham Green, London W4 1NN U.K.
Tel +44-(0)20-8987-5600

Germany Branch
Lyoner Strasse 15 60528
Frankfurt am Main, Germany
Tel +49-(0)69-663000-0

Chugai Pharma France SAS
Tour Franklin, La Défense 8,
100/101 Quartier Boieldieu
92042 Paris La Défense cedex, France
Tel +33-(0)1-56-37-05-20

Chugai sanofi-aventis S.N.C.
Tour Franklin, La Défense 8,
100/101 Quartier Boieldieu,
Secteur Arche Sud,
92042 Paris La Défense cedex, France
Tel: +33-(0)1-56-37-05-20

United States

Chugai Pharma USA, Inc.
300 Connell Drive, Suite 3100
Berkeley Heights, NJ 07922 U.S.A.
Tel +1-908-516-1350

Asia

Chugai Pharma China Co., Ltd.
Building G31, No. 801 Jiankang Dadao,
Medical City, Taizhou, Jiangsu 225300 China
Tel +86-(0)523-8681-9823

Shanghai Branch
Unit 2901, Central Plaza,
No. 381 Central Huaihai Road,
Shanghai 200020 China
Tel +86-(0)21-6319-0388

Beijing Branch
1118 Beijing Fortune Bldg.
No. 5, Dong San Huan Bei Lu,
Chao Yang District,
Beijing 100004 China
Tel +86-(0)10-6590-8066

Guangzhou Branch
Unit 1508, Pearl River Tower, No. 15,
Zhujiang West Road,
Guangzhou 510623 China
Tel +86-(0)20-8363-3468

Chugai Pharma Science (Beijing) Co., Ltd.
1108 Beijing Fortune Bldg.
No. 5, Dong San Huan Bei Lu,
Chao Yang District, Beijing 100004 China
Tel +86-(0)10-6590-9556

Chugai Pharma Taiwan Ltd.
3F., No. 260, Dunhua N. Rd., Songshan
District, Taipei 10548 Taiwan, R.O.C.
Tel +886-(0)2-2715-2000

Chugai Pharmabody Research Pte. Ltd.
3 Biopolis Drive, #07-11 to 16 Synapse,
Singapore 138623
Tel +65-(0)6933-4888

C&C Research Laboratories
DRC, Sungkyunkwan University, 2066,
Seobu-ro, Jangan-gu, Suwon-si, Gyeonggi-do
16419 Korea
Tel +82-(0)31-8014-6606

Discovery Research Center
DRC, Sungkyunkwan University, 2066,
Seobu-ro, Jangan-gu, Suwon-si,
Gyeonggi-do 16419 Korea
Tel +82-(0)31-8014-6606

Clinical Research Center
#903 E&C Venture Dream Tower 3, 38-21,
Digital-ro 31-gil, Guro-gu,
Seoul 08376 Korea
Tel +82-(0)2-858-6226

Shareholder Information (As of December 31, 2016)

Major Shareholders

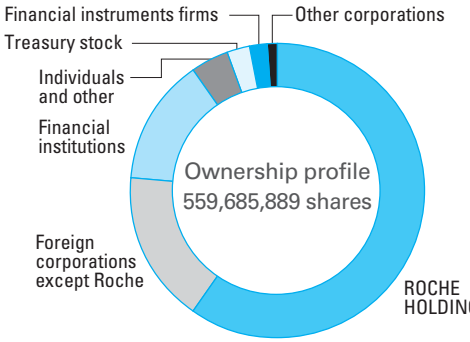
Name	Number of Shares Held (Thousands)	Percentage of Voting Rights (%)
ROCHE HOLDING LTD	335,223	61.38
The Master Trust Bank of Japan, Ltd. (Trust Account)	22,271	4.07
Japan Trustee Services Bank, Ltd. (Trust Account)	18,540	3.39
JP MORGAN CHASE BANK 385147	14,288	2.61
JP MORGAN CHASE BANK 380055	4,920	0.90
JP MORGAN CHASE BANK 385632	4,476	0.81
Trust & Custody Services Bank, Ltd. (Trust Collateral Account)	4,045	0.74
STATE STREET BANK WEST CLIENT - TREATY 505234	3,761	0.68
Chugai Pharmaceutical Employee Shareholders' Association	3,158	0.57
SUMITOMO LIFE INSURANCE COMPANY	3,000	0.54

Note: 13,417,953 shares of treasury stock held by the Company are not included in the above breakdown of major shareholders.

Stock Price Information (From January 1, 2016 to December 31, 2016)

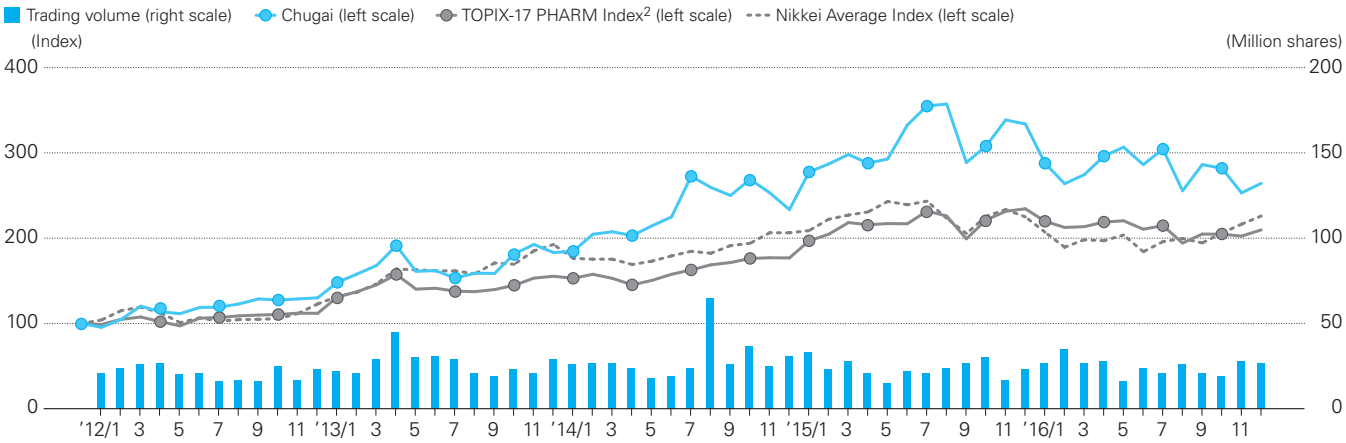
	Stock Price	
	Low	High
First Quarter	¥3,110	¥4,200
Second Quarter	3,245	3,995
Third Quarter	3,180	4,000
Fourth Quarter	3,010	3,725

Classification of Shareholders



- ROCHE HOLDING LTD — Shares: 335,223,645 — 59.89% — (Shareholder: 1)
- Foreign corporations except Roche — Shares: 93,192,783 — 16.65% — (Shareholders: 575)
- Financial institutions — Shares: 77,166,777 — 13.78% — (Shareholders: 79)
- Individuals and other — Shares: 24,224,760 — 4.32% — (Shareholders: 26,175)
- Treasury stock — Shares: 13,417,953 — 2.39% — (Shareholder: 1)
- Financial instruments firms — Shares: 11,068,940 — 1.97% — (Shareholders: 56)
- Other corporations — Shares: 5,391,031 — 0.96% — (Shareholders: 192)

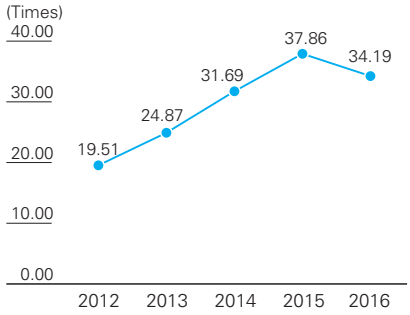
Share Performance[1] and Trading Volume



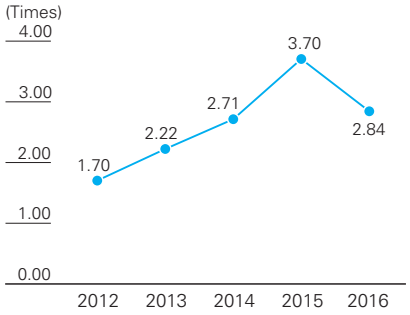
1. Closing price on December 30, 2011 = 100
2. A capitalization-weighted index that consists of pharmaceutical companies on the Tokyo Stock Exchange, First Section.

Share Price Indicators

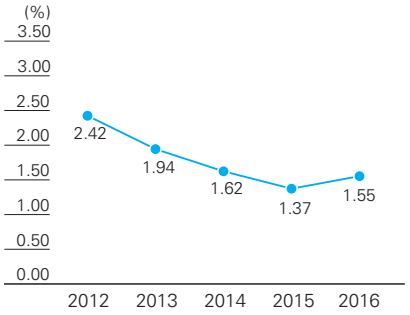
Price/Earnings Ratio
Year-end share price/Basic net income per share



Price/Book Ratio
Year-end share price/Equity per share attributable to Chugai shareholders



Dividend Yield
Dividends per share/Year-end share price



Corporate Overview (As of December 31, 2016)

Company Name
Chugai Pharmaceutical Co., Ltd.

Year of Foundation
1925

Year of Establishment
1943

Address
2-1-1, Nihonbashi-Muromachi, Chuo-ku,
Tokyo 103-8324 Japan

Stated Capital
¥72,967 million

Number of Employees
7,245 (Consolidated)

Number of Shares Issued of Common Stock
559,685,889

Number of Shareholders
27,079

Stock Listing
Tokyo Stock Exchange, First Section

Fiscal Year-End
December 31

General Meeting of Shareholders
March

Transfer Agent
Mitsubishi UFJ Trust and Banking Corporation

Public Notices
Public notices are made electronically on the Chugai website (https://www.chugai-pharm.co.jp/ir/) in Japanese. In case electronic communications are unavailable, public notices will be made in the newspaper *Nihon Keizai Shimbun*.

For further information, please contact:
Corporate Communications Dept.
Tel: +81-(0)3-3273-3313
Fax: +81-(0)3-3281-6607
E-mail: ir@chugai-pharm.co.jp

IR website
https://www.chugai-pharm.co.jp/english/ir/

CSR website
https://www.chugai-pharm.co.jp/english/csr/

Blue People in Flight?

In this report are the blue people seen flying in Chugai's corporate branding advertisements titled "Searching for the undiscovered in medicine." (Hint: On the front cover and pages 1 and 59.)

Innovation all for the patients

CHUGAI PHARMACEUTICAL CO., LTD.

A member of the Roche group

2-1-1 Nihonbashi-Muromachi, Chuo-ku, Tokyo 103-8324 Japan URL: https://www.chugai-pharm.co.jp/english/