

Our Philosophy

Medicines and beyond, creating the next generation of healthcare



Our Philosophy

The Company Policy of Shionogi

Shionogi's Purpose

Shionogi strives constantly to supply the best possible medicine to protect the health and wellbeing of the patients we serve.

For this purpose, Shionogi will need to

Pursue the search for even better medicines.

Produce even better medicines.

Promote awareness of these better medicines to more people so that more people will be able to use these medicines.

Research, produce, and promote in an even more economical manner.

For this purpose, Shionogi will need to

Strive ceaselessly day after day to improve their skills.

Strive ceaselessly day after day to improve as human beings.

As a result, Shionogi people will

Find even greater satisfaction in their daily work and in their daily lives.

Find even greater improvement in the quality of their lives.

Find even greater prosperity in their lives.

Established in 1957

Building Innovation Platforms
to Shape the Future of
Healthcare

- Be trustworthy
- Be bold
- Be dauntless in spirit
- Build greatness out of diversity
- Contribute to society

Heritage

The foundation that
supports Shionogi

Vision

What we want to achieve
by 2030

Values

Our psyche that is indispensable for
achieving vision

Our Purpose

—Shionogi strives constantly to supply the best possible medicine to protect the health and wellbeing of the patients we serve—

The unwavering purpose of the Shionogi Group's corporate activities is expressed in the opening of "The Company Policy of Shionogi (Heritage)" as the image of what Shionogi should be and the Company's social existence values. With the changes taking place in our environment, we are broadening our interpretation of "medicine" to encompass health-care solutions.

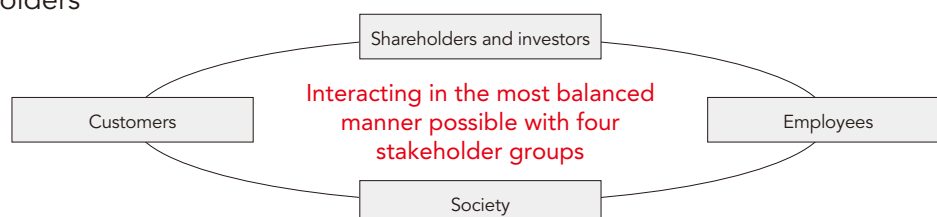
Medicines and beyond, creating the next generation of healthcare
Accelerating Shionogi's transformation

Revision of the Code of Conduct

In January 2021, we revised the Shionogi Group Code of Conduct, which sets forth our criteria for all Shionogi people in their daily behavior as embodied in our policy. We will also ask all our business partners to endorse this charter. As a company contributing to the health and well-being of people throughout the world, we will strive to resolve issues affecting all of society and achieve a sustainable and healthy society.

Shionogi Group Code of Conduct <https://www.shionogi.com/global/en/company/business.html>

Our Stakeholders



Infectious diseases can take so much away from us

Commitment to fighting COVID-19



<https://www.shionogi.com/global/en/sustainability/information-for-id/covid19-initiative.html>

Pre-symptomatic phase/detection



- Providing wastewater epidemiology surveillance services

Support to local governments



- Support to health centers in Tokyo and Osaka prefectures

Development of preventive vaccines

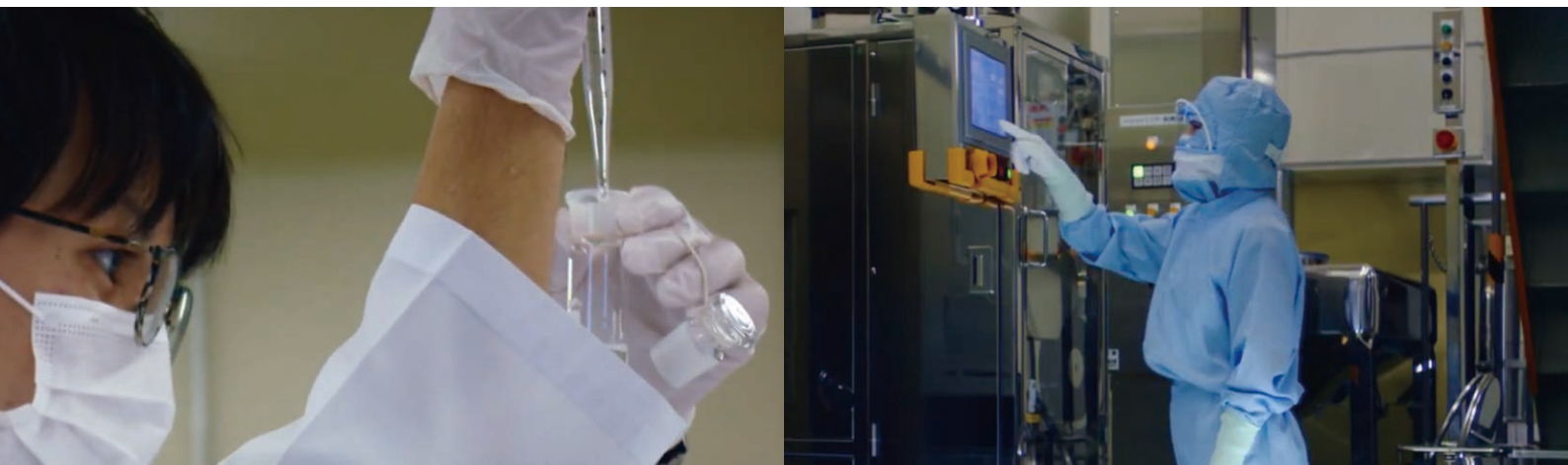


- Development of a recombinant protein vaccine
- Development of a nasal vaccine

Stable supply of pharmaceuticals



- Thorough-going inventory management
- Thorough-going employee health management and measures to prevent the spread of infections



As society remains in disarray from the global spread of COVID-19, as a leading company in infectious diseases, Shionogi is tirelessly pursuing development of a broad range of medical solutions to the COVID-19 pandemic, including therapeutic drugs, vaccines, and diagnostic drugs in collaboration with public institutions, academia, and our partner companies.

**“Medicines and beyond, creating the next generation of healthcare.”
Shionogi will continue to challenge.**



Development and supply of diagnostic drugs



- Joint Sales of COVID-19 antigen test agents and dedicated measuring devices
- Sales of kits to measure biomarkers for assisting in predicting exacerbation
- Development of a new rapid diagnostic method (SATIC method)
- Sales of IgG/IgM antibody test kits

Discovery of therapeutic agents



- Discovery of new antiviral drugs

Exacerbation suppression



- Out-licensing of asapiprant to prevent severe disease

Providing disease information



- Provide information to patients and their families via websites

Business continuity initiatives



- Respond in line with our business continuity plan (BCP)
- Introduced systems in response to new workstyles, such as telework and staggered work hours

Cooperation/alliances with international societies



- Described our programs in a video submission to the UN's #United Business to Respond to COVID-19 campaign

Message from the President



Isao Teshirogi, Ph.D.

Representative Director,
President and CEO

As a leading company in infectious diseases, we seek to provide total care for COVID-19 through a number of approaches, placing our top priority on bringing the pandemic to an early end.

Looking back on our business in the pandemic year of fiscal 2020

First, I would like to convey my sincere condolences with respect to all who have perished due to COVID-19, and I pray from the bottom of my heart that everyone who has contracted this disease will have a quick recovery and that this pandemic will come to an end as soon as possible. I would also like to express my deep gratitude to all the healthcare workers and others who have been doing everything they can to prevent the spread of this disease.

With our mission to “constantly supply the best possible medicines (healthcare solutions) to protect the health and wellbeing of the patients we serve,” Shionogi has been contributing to healthcare for more than 140 years. The pharmaceutical industry must always strive to continually discover and deliver the medicines that patients need, regardless of disasters or other situations. When Japan experienced the Great East Japan Earthquake a decade ago, it reinforced our commitment to contribute to society by stably supplying needed medicines, and we have been practicing comprehensive risk management, starting from the training of our employees, ever since. As a result, we are proud to say that, during the pandemic of fiscal 2020, we were able to fulfill our social obligation to steadily produce and provide our medicines without any stockouts. However, we did experience our second year of large declines in revenue and profit metrics. The global spread of COVID-19 caused a contraction in the infectious disease field and in the pharmaceutical market overall, and so, while we made proactive growth investments in R&D and other areas, we were unable to cover these expenses with revenues from new products, and this led to regrettable business performance for our shareholders and other stakeholders who had been counting on us. In particular, we did not make enough effort to counteract the expected contractual decline in royalty revenues for Crestor and other factors that we had anticipated in advance. As a company who continues to depend on royalty revenues, at present primarily from our HIV franchise, this represented a gap in our planning and action. From multiple perspectives, it was a year that drove home the importance of early

reconnaissance for changes in our environment and transformation of our corporate culture into one that can rapidly develop and execute a tactical recovery plan. At the same time, fiscal 2020 was also a year in which the issues in our infectious disease business, which could be considered dilemmas, became clearer. For example, the influenza market, which is a major area for us, has now seen large declines for two consecutive years, and revenues from influenza-related products have plunged to almost zero. For society at large, this can be viewed as a favorable trend, resulting from the population adopting strict precautions against contagion of respiratory diseases. However, for those with a business focus in infectious disease in general and influenza in particular, an environment in which the number of influenza patients, which had previously been a relatively consistent 10 million per year, suddenly swings to zero in one year and could conceivably rebound to 30 million or so in the year following, presents a tremendous challenge to navigate and maintain a sustainable business.

Turning to R&D, it was a year that we committed to the pursuit of a range of countermeasures to fight COVID-19, while maintaining steady progress in our key projects. Shionogi has been conducting infectious diseases R&D for more than 60 years, and, over this long history, we have built up a strong track record and knowhow, spanning discovery, development, and production and supply. Therefore, we believe that our mission as a leading company in infectious diseases is to deploy these capabilities to help end the COVID-19 pandemic. With this in mind, we have taken a number of steps, such as the development of Shionogi’s first vaccine, research into therapeutic drugs (which is our strength), and the establishment of wastewater epidemiology services that could become a future platform business. However, at this point in time, we regret that we have been unable to live up to society’s expectations. In fiscal 2021, we will provide safe and effective solutions for patients and society at an unprecedented speed and make an all-out effort to help bring the pandemic to an early end.

Transformation from a conventional drug discovery-based pharmaceutical company providing medicinal drugs into a HaaS company providing integrated healthcare products and services

Advent of the SDG-native, digital-native era

- Trend toward achieving a sustainable society
- Changes in discontinuous social systems and values
- Changes in healthcare needs

Sustainability of the existing business

- Large revenue declines in existing pharmaceutical business as patents expire
- Even after overcoming the patent cliff, other patent cliffs will come, and this is not sustainable

* Healthcare as a Service: Provide a range of healthcare services in line with customer needs, rather than only providing pharmaceuticals

Shionogi's initiatives vis-à-vis pandemic-induced environmental changes

Shionogi's business environment has changed at an unprecedented speed, and the pandemic has increased societal demands, particularly in healthcare. Some of these changes will probably be irreversible, even after the pandemic is over. With our Company Policy as our compass, Shionogi has been taking a flexible approach to our business as we carefully sense society's needs. Our Medium-Term Business Plan, entitled Shionogi Transformation Strategy 2030 (STS2030), unveiled in 2020, calls for us to achieve business sustainability by transforming ourselves from a drug discovery-based pharmaceutical company specialized in providing medicinal drugs into a HaaS company that provides integrated healthcare products and services. Also, from the standpoint of contributing additional value to society, we have embarked on a new direction, seeking to more comprehensively resolve the problems faced by patients and society. In line with this direction, we are driving our transformation to a more sustainable business model, one able to adapt to the rapid social changes that are now taking place.

Ending the pandemic is an urgent matter, and as a leading company in the area of infectious diseases, we are pursuing initiatives for total care of COVID-19, from the detection and pre-symptomatic stages to prevention, diagnosis, treatment, and suppression of exacerbations. Addressing this pandemic comprehensively will require a suite of linked products and services that extends far beyond medicinal drugs alone and exemplifies what is intended by HaaS.

1 Toward an early and stable domestic vaccine supply

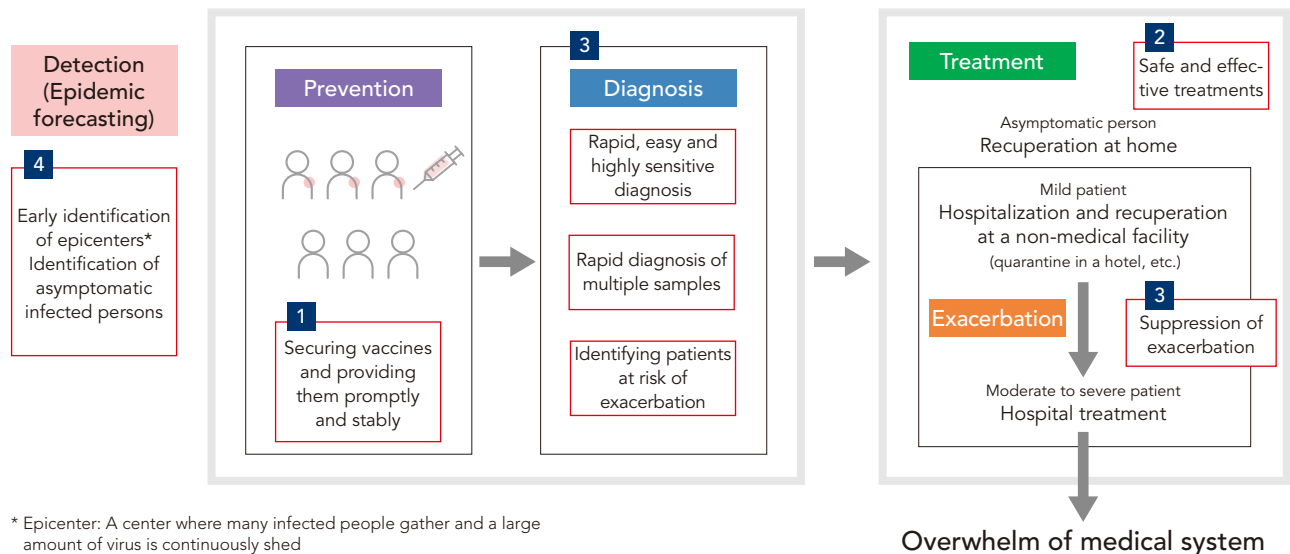
As COVID-19 rages on and variants spread, Japan is awaiting the availability of a domestic vaccine. Japan is the world's number-two country in terms of new drug discovery, and so, rather than being reliant on buying vaccines from overseas, Japan should instead become a vaccine supplier itself. Furthermore, in the event that a highly lethal variant should appear in Japan, a Japanese company will feel the greatest sense of urgency and dedication to make a vaccine to fight it. Shionogi officially entered the vaccine business when it made UMN Pharma into a wholly owned subsidiary in fiscal 2019. The pandemic hit immediately thereafter, so we made the early supply of a COVID-19 vaccine a top priority and have been pouring our efforts into vaccine R&D. As vaccines are now available around the world, it is difficult to conduct large-scale clinical trials on a global basis, so we are

holding ongoing discussions and brain-storming sessions with the relevant government ministries and regulatory authorities regarding flexible administration of the existing approval system, reflecting the need for an alternative evaluation method. Shionogi is developing a recombinant protein COVID-19 vaccine which employs technology commonly used in influenza vaccines and is thus expected to have a good safety profile. Several vaccines using this technology have already been approved and are being used for other diseases in Japan, so we believe that using the same type of technology should gain ready acceptance. For instance, if vaccine booster shots are to be periodically administered going forward, a vaccine with fewer side-effects would be preferable, so if Shionogi's vaccine is proven to be very safe, we will be able to fulfill society's needs. Also, if we use UMN Pharma's vaccine technology, we could simultaneously inoculate not only against SARS-CoV-2 but also against influenza and other viruses as well. We are also doing research on a nasal vaccine. In addition to supporting Japan's national security, we would also like to contribute to global health by providing the world with vaccines from Japan through direct supply or technological transfer.

2 Development of truly safe and effective therapeutic drugs

Even if a superior vaccine becomes available, it will not be 100% effective against the disease, so a supply of safer, more effective antiviral therapeutic drugs will be needed to eliminate people's fears and restore normalcy to society. In fiscal 2020, we selected a compound that is highly effective against SARS-CoV-2 from our compound library and embarked on research. Unfortunately we had to halt development of the initial candidate prior to clinical trials because we determined that this compound would not meet everyone's expectations, for example, for a similar degree of safety to our existing anti-influenza virus drugs. To replace that candidate and move with urgency, we conducted research using various drug-discovery approaches on targets of the specific proteins making up SARS-CoV-2. As a result, over the course of a few months, we generated several interesting leads in the form of medium-sized molecules such as peptides and macromolecules, as well as some promising small-molecule compounds. Among these, in July 2021, we began clinical trials on a small-molecule compound that could become an orally administered antiviral drug. We will continue our fight to meet the needs of society

■ What Shionogi Wants to Achieve Regarding COVID-19 (□ are the issues that we aim to solve by providing solutions)



and to relieve the strain on the healthcare system as rapidly as possible.

3 Supply of diagnostic drugs, suppression of exacerbation in disease patients

For COVID-19 and other infectious diseases, the presence of an infection needs to be correctly ascertained. Since it is not possible to ward off such diseases completely through awareness or prevention at the pre-symptomatic stage, infected people—or the pathogens themselves—need to be identified with a rapid diagnostic system, in order to trigger the correct response, such as proper treatment procedures. For COVID-19 in particular, a high proportion of people are asymptomatic or have mild cases compared to conventional viral infections, and the progression of symptoms varies from person to person. Therefore, we believe that the option to address mild/moderate symptomatic cases by having the patient convalesce at home or at a lodging facility, reserving intensive care hospitalization for those individuals at specific risk of severe exacerbation, is key to alleviating pressure on the healthcare system. To address this need, we have launched a Th2 Chemokine (TARC) kit (the HISCL®TARC Assay Kit), TARC being a useful biomarker for predicting exacerbation risk in COVID-19 patients. This product was developed in collaboration with the National Center for Global Health and Medicine. By predicting the risk of COVID-19 exacerbation from the disease's early stages, this test kit makes it possible to make the right choice for each individual, whether it be hospital care for high-risk patients or convalescence at a lodging facility, at home, or elsewhere for low-risk patients. Also, to

suppress exacerbation in high-risk patients, Shionogi has partnered with BioAge Labs, Inc. of the U.S. for the global development of asapiprant (prostaglandin D2 DP1 receptor antagonist, S-555739), which we discovered. Together with the prediction of patients at risk, we will contribute to suppressing exacerbation of disease.

4 Early prediction of outbreaks

Based on joint research with Hokkaido University, we have set up a framework for the early detection and observation of COVID-19 outbreak trends based on wastewater epidemiology. We believe that the social implementation of this framework will enable the early prediction of outbreaks so that steps can be taken to lessen the next wave of the pandemic. While this initiative seems uncharacteristic for a typical pharmaceutical company, it is one that utilizes Shionogi's know-how in dealing with bacteria and viruses, and we have high expectations for this service, which takes advantage of this expertise.

■ Sustaining and stabilizing our infectious disease business

One company, or the pharmaceutical industry alone, can only go so far in dealing with a global pandemic like COVID-19. Actually, most of Shionogi's initiatives are being implemented through partnerships. The current pandemic has uncovered many issues that are not specific to a single country, including the need to start preparing for pandemics during ordinary times. To protect



people's health and wellbeing, Shionogi wants to continue fighting by employing its capabilities to the greatest extent possible, so that the world may be protected from the threat of another pandemic, once COVID-19 is over. Both preparing in ordinary times and fighting back require the construction of a global collaborative framework and the strengthening of institutions, as well as securing funding for continued R&D and stable production and supply, all of which require alignment amongst governments and administrations worldwide. We there-

fore intend to be to be proactively involved in advocacy programs through partnerships and industry bodies as well in negotiations for the creation of new incentive and reward structures, including subscription models for products and services and strategic reserves. Now that concern and awareness about pandemics is at an all-time high, we will do our utmost to engage in dialog with our many stakeholders for collective understanding and alignment to create a stably growing infectious disease business meeting the needs of society.

Creating the healthcare of the future

Shionogi's Vision for 2030 is "Building Innovation Platforms to Shape the Future of Healthcare." This Vision speaks directly to our business sustainability, overcoming the upcoming expiration of patents for key products in our drug business, and addressing the shifts in healthcare needs as society changes and social values become more diverse. The current pandemic is accelerating social change, but, even if there had been no pandemic, such changes would have happened eventually. In accordance with our 2030 Vision and STS2030, which we announced in 2020, we are confident that we will be able to deal with dramatic changes in our business environment, if we succeed in our goal of becoming a HaaS company.

Examples of our progress in fiscal 2020 include gaining a great amount of vaccine know-how over the course of the year, and building a vaccine production framework with assistance from the Japanese government. Going forward, we will continue to expand the vaccine business so that we can earn stable profits and increase our contribution to society. Also, programs such as the epidemiology monitoring service using highly sensitive detection technology for COVID-19 in wastewater, represent new fields of business activity for Shionogi. This is a program that arose from the "I want to do it" project, which is a bottom-up initiative for fulfilling our Vision. The "I want to do it" project solicits employee ideas for

new business opportunities that they want to pursue immediately. It challenges them to form an in-house business venture. Every year, we receive many interesting and enthusiastic proposals, so I feel that the culture and framework for internalizing the pursuit of HaaS is spreading throughout the entire company. In addition, our China business, which was established through our new joint venture with China's Ping An Insurance Group, is off to a promising start, despite some initial start-up hurdles, like restrictions on personnel transfers. We started placing Shionogi products on the Ping An Group's online healthcare platform, and sales have begun. The key next growth step for the joint venture is to gain approval in China for Shionogi's innovative drugs, cefiderocol and naldemedine, and discussions in this regard with the Chinese authorities are progressing without delay with the support of our partner, the Ping An Group. We are working steadily to build a platform that offers one-stop healthcare services utilizing both companies' strengths, including AI-led drug discovery and the smart factory concept.

One way that the current pandemic has drastically affected society is that it has accelerated the advancement of digitization. As this advancement proceeds, the healthcare paradigm is shifting and customers' needs continue to evolve. We therefore established the DX

Promotion Division in July 2021 with the goal of facilitating a discontinuous transformation and creating new value in response to these shifts. The DX Promotion Division is responsible for creating healthcare solutions using digital technology, making use of data to support the realization of the solutions, and building IT and security infrastructure. Also, to develop and secure human resources, we are retraining employees to become IT/digital personnel and hiring IT and digital human resources from the outside. Furthermore, we are holding DX training sessions for all managers as part of the PJ-KANAME, so that we can transform our organizational culture and strengthen our IT and digital capabilities company-wide.

We know that reforming how we conduct R&D and reforming our business processes are two points on which we especially need to focus if Shionogi is to transform itself into a HaaS company in the future.

■ Accelerating R&D

In response to the current COVID-19 pandemic, Shionogi has been conducting R&D at a pace that is much faster than we previously thought possible. These efforts include moving a candidate vaccine into clinical trials within one year, even though we had no prior experience in this area; identifying of promising candidate compounds for COVID-19 therapeutic drugs, an effort restarted in November 2020 and that took only several months; and launching clinical trials of those drugs in July 2021. At the same time, the world's major pharma companies have worked even faster to develop vaccines, antibodies, and other therapeutic drugs and have begun to supply them commercially. Of course, there are differences in the magnitude of available resources, but we can learn a lot from them, including with respect to the speed of their assessments, and their risk-taking and radically streamlined processes designed for COVID-specific efforts. For Shionogi, it made us aware that we should

reconsider how we conduct R&D, especially during emergencies. I think that our next step should be to see how much we can apply this "emergency" R&D process to "normal" times as well. If this part goes well, I think that we should have enough capability to accelerate our current pipeline development schedule and make it more efficient. By further cultivating our strengths of creativity and expertise as a drug discovery-based pharmaceutical company and continuing to challenge preconceived ideas both internally and externally, we will strive to the best of our ability to become a hub of co-creation, so that companies with different capabilities and from different industries will choose to partner with us to create new healthcare products and businesses.

■ More sophisticated decision making

To transform ourselves into a HaaS company, we need to further enhance the speed and quality of our business decision-making process. To date, our decision-making process has had some issues, including the transparency of the discussions and detail of record-keeping, as well as in terms of maintaining traceability sufficient to support third party review. If people are not able to see the rationale behind a certain decision, the proper response to a change in external conditions or emerging project findings may not be apparent, such that subsequent appropriate steps (e.g. suspending the project) may not be taken. Also, such a state of affairs prevents us from learning from our past successes and failures. With the unveiling of STS2030, we are improving our awareness of risk and return and our assessment capabilities, monitoring our organizational decision making as a company, and quickly building a framework that will further enhance our abilities for the future. One year into our plan, we have completed awareness-raising among all managers and have created the physical infrastructure, so we are now focused on improving decision-making speed and quality and tightening the linkage to budgets.

Shionogi's pledge to all stakeholders

Shionogi lists "protect people worldwide from the threat of infectious diseases" as one of our core objectives. As a leading company in the infectious disease area, and also as a HaaS company, we want to be able to make real contributions to SDGs by achieving total care for COVID-19, which is a pressing social issue. We therefore place top priority on bringing the pandemic to an early end, and thereby restoring the safety and well-being of society. As this

process unfolds, we will continue to drive to achieve further growth of the company and to contribute to creation of a sustainable society through balanced engagement with all four of our major stakeholder groups—our shareholders and investors, our customers, society, and our employees—so that we can apply our capabilities and resources to provide all of them with meaningful value. I request your continuing guidance and support in this endeavor.

Our History

Both the world and Shionogi have changed significantly over time, but we have not forgotten our founding spirit, and our head office is still located where we were founded, in Osaka's Doshomachi. Here, we describe how Shionogi has grown in response to the changes that have taken place over the past century and a half.

Chronology

1878 Founded

On March 17, 1878, his 24th birthday, Gisaburo Shiono, Sr., who learned about the drug wholesaling business from his father, Kichibe, strikes out on his own and establishes a drug wholesaling business named Shiono Gisaburo Shoten at 12, Doshomachi 3-chome in Osaka.



Founder Gisaburo Shiono, Sr.

1886 From Japanese and Chinese medicines to Western medicines

At that time, Western medicines were available through foreign trading houses in Yokohama and Kobe, but they were expensive because drug wholesalers who were not familiar with trading bought the medicines at whatever price the foreign traders asked for. Gisaburo soon added people experienced in trading and fluent in English and imported medicines directly so that even the common people would be able to buy them at a reasonable price.

1909 Registered the corporate emblem FUNDOK

Reliability and trust are necessary qualities for corporate management. Since our founding as Shiono Gisaburo Shoten, we have regarded reliability and trust as our most valuable "capital." Shionogi's corporate emblem is derived from the *fundoh*, which is the balance weight traditionally used to weigh medicine on a scale. The *fundoh* also symbolizes "accuracy," "honesty," and "trust," meaning that we always pursue accuracy.



FUNDOK from the Edo era



Corporate emblem

1910 Constructed the Shiono Seiyakusho manufacturing plant

A new pharmaceutical manufacturing plant, called Shiono Seiyakusho, was built in Nishinari-gun, Osaka (the present-day Fukushima-ku, Osaka) to formally launch the business of manufacturing new drugs. This gave Shionogi a pharmaceutical division in both name and reality and was also the moment that Shionogi embarked on a new path as a drug manufacturer. Gisaburo's second son and director of the plant, Chojiro, wanted to get the company through tough operating conditions, so he invited Heizaburo Kondo, a doctor of pharmacology who had just returned from studying in Germany, to serve as an advisor.

1943 Renamed the Company Shionogi Seiyaku K.K. (now Shionogi & Co., Ltd.)

In 1919, the year following the end of World War I, Shiono Gisaburo Shoten, the drug wholesaler led by Gisaburo's eldest son, Shotaro, and Shiono Seiyakusho K.K., the pharmaceutical business led by his second son, Chojiro, were merged in order to further expand the company. The new company was named Shionogi Shoten Co., Ltd. In 1943, the name was changed again, to Shionogi Seiyaku K.K. (the present Shionogi & Co., Ltd. in English) to demonstrate that the company would focus on the drug manufacturing business.

1870 1880 1890 1900 1910 1920 1930 1940 1950 1960

1909

Our first in-house drug, the anti-indigestion Antacidin



Advertisement for Antacidin

1911

The syphilis treatment Salvarsan

1912

The new cardiac drug, Digitamin

1950

The analgesic Sedes

1953

The multivitamin supplement Popon-S



Popon-S

1959

The sulfonamide drug Sinomin



Sinomin

1982

The oxacephem antibiotic Shiomarin



Shiomarin

1988

The oxacephem antibiotic Flumarin

1997

The cephem antibiotic Flomox

Major products

Shionogi and society

Salvarsan: Shionogi's first step in fighting infectious diseases

In the early 1900s, syphilis was a serious infectious disease for which no cure existed. We started importing Salvarsan in 1911, two years after it was developed overseas in 1909, and this was a major step in the treatment of patients suffering from syphilis.

Sinomin: Our first in-house developed drug that made a global contribution

In the 1950s, infectious diseases like tuberculosis and pneumonia ranked among the most common causes of death. We therefore began R&D into infectious diseases, having made the management decision to become fully involved in the major social issue of infectious disease. Sinomin, a sulfonamide we discovered in 1959, was out-licensed to Roche of Switzerland, and it has been instrumental in treating infectious diseases throughout the world. Even now, more than 50 years since its launch, it continues to contribute to people's health as Baktar, a combination with trimethoprim.

1957 Shionogi's Company Policy established

Since our founding, Shionogi has survived the changing times and developed our own philosophy and thinking. Our Company Policy, which is our eternal goal, has enabled us to move forward without losing sight of our basic direction as a pharmaceutical company, which is "to serve people's health."

1958 The Detail Person Declaration

The Detail Person Declaration set forth by President Kotaro Shiono stated, "Shionogi's detailing activities will entail enquiring about patients' medical benefit and recommending Shionogi drugs to be used for those patients for whom they are appropriated. You must not focus solely on price and participate in price war." This further clarified that our activities are based on our long-held belief that justice comes before profit.

1983 Construction of the Kanegasaki Plant

The Kanegasaki Plant was built in the town of Kanegasaki, Isawa-gun, Iwate Prefecture, as one of our key factories, based on a long-term plan for the future expansion of our pharmaceutical manufacturing facilities.



Kanegasaki Plant

1998 Establishment of the Shionogi Code of Conduct

The Shionogi Code of Conduct was established to complement the Shionogi Corporate Policy as a criterion for behavior as the company went global and developed into a global corporation. The Company Policy describes our business purpose, while the Code of Conduct sets forth the type of conduct that Shionogi should practice as a member of society and as a pharmaceutical company.

2020 Revising our management philosophy

To continue growing as the external environment and values evolve, we need to reflect society's and customers' needs in our targeted Vision and in the Values that are essential to achieving this Vision, and to have the flexibility to take action. We therefore established a new Vision and Values for our Company Policy, which is the foundation we call Heritage that serves as the basis for all of our activities.

1970

1980

1990

2000

2010

2020

2003

The cancer pain analgesic *OxyContin*

2005

The hyperlipidemia treatment *Crestor*

The carbapenem antibiotic *Finibax*



Finibax

2008

The hypertension treatment *Irbesartan*

The acne vulgaris treatment *Differin*

The idiopathic pulmonary fibrosis treatment *Pirespa*

2010

The anti-influenza virus drug *Rapivacta*

The antidepressant drug *Cymbalta*

2012

The injectable cancer pain analgesic *OxiFast*

The hypertension treatment *Aimix*

2013

The hypertension treatment *Irtra*

2014

The HIV treatment *Tivicay*



Tivicay

2015

The HIV treatment *Triumeq*

The allergen immunotherapy *Actair*

The thrombocytopenia treatment *Mulpleta*

2016

The hypercholesterolemia treatment *Crestor OD* tablets

2017

The cancer pain treatment *Methapain*

The attention-deficit/hyperactivity disorder (ADHD) treatment *Intuniv*

The opioid-induced constipation treatment *Symproic*

The chronic cancer pain treatment *OxyContin TR* tablets

2018

The anti-influenza virus drug *Xofluza*



Xofluza

2019

The attention-deficit/hyperactivity disorder (ADHD) treatment *Vyvanse*

2020

A siderophore cephalosporin antibiotic *Fetroja* (cefiderocol)



Fetroja (cefiderocol)

The long-acting HIV treatment *Cabenuva* (cabotegravir + rilpivirine)

The IgG/IgM antibody test kit for COVID-19 (research reagent)

Tivicay: Helping to improve quality of life for everyone living with HIV

In 1988, we founded our Laboratory for Medicinal Chemistry Research and began researching HIV and other antiviral medicines. After many failures, we launched the HIV drug Tivicay in 2014. Tivicay possesses superior effectiveness and safety, and it is an HIV integrase inhibitor for which it is difficult to develop resistance. We are therefore making a major contribution to treating people around the world so that they can live with HIV and have a better quality of life.

Xofluza: An anti-influenza virus drug with a new mechanism of action

We launched the anti-influenza virus drug Xofluza in 2018. By combining the power of our value chain and alliances and utilizing the SAKIGAKE designation system, we were able to obtain approval in Japan and launch the drug with the short time period of about three years from the start of Phase 1 clinical trials. This drug is both effective and convenient, and it is helping influenza patients and their families, as well as the healthcare community.

Fetroja: The trump card in antimicrobial (AMR) treatment

In 2020, we launched the multi-drug resistant antibiotic Fetroja in the U.S. This drug could become the trump card for saving patients whose lives have been endangered due to the lack of treatment options. We are providing cefiderocol to many countries and regions, including low- and middle-income countries, through alliances and other means by employing Compassionate Use and Early Access Programs (EAP), thus contributing to the treatment of patients.

Value Creation Model

Shionogi's Company Policy is to strive "constantly to supply the best possible medicine to protect the health and wellbeing of the patients we serve." Based on this, we are working on material issues (materiality) so that we will provide new value to customers and society through our business activities and thus attain growth and a sustainable society. Shionogi's value creation process consists of creating innovative products and services as a drug discovery-based pharmaceutical company while resolving social issues and responding to healthcare needs so that we can grow as a company that society needs, and sharing the fruits of these efforts with all our stakeholders. We are going to transform ourselves into a HaaS company that continues developing its strengths cultivated as a drug discovery-based pharmaceutical company that works with diverse partners who possess different strengths to supply healthcare solutions.

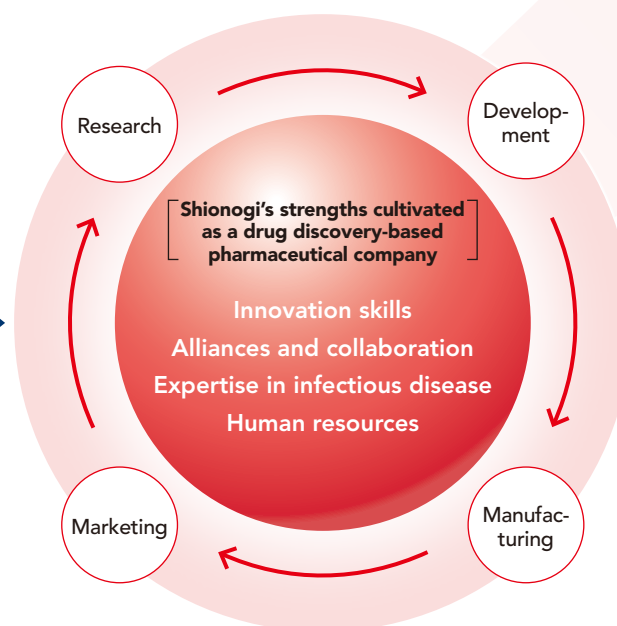
Shionogi strives constantly to supply the best possible solutions to protect the health and wellbeing of the patients we serve.

■ Material issues addressed by Shionogi p.24

- Material issues to create new value for customers and society
- Material issues to realize a sustainable society and support Shionogi's growth

■ Inputs (FY2020)

Human capital	<ul style="list-style-type: none"> Employees who share our philosophy 93% (FY2019) Education & training expenses ¥190 million SCD* education & training expenses + divisional education and training expenses *Shionogi Career Development Center Human resources development programs and all manager improvement programs Pool of future organizational leadership human resources (cumulative number of new registrations over 5 yrs.) 215 persons Work-life balance framework
	<ul style="list-style-type: none"> Expertise accumulated since our founding
Intellectual capital	<ul style="list-style-type: none"> R&D expenses ¥54.2 billion Library of bacterial strains Compound libraries SAR engine (SAR cycle)
Social and relationship capital	<ul style="list-style-type: none"> Diverse partnerships Assistance based on the expectations of national & local governments and society Brand strength
Financial capital	<ul style="list-style-type: none"> Total capital ¥999.0 billion Shareholders' equity ¥864.6 billion
Manufactured capital	<ul style="list-style-type: none"> R&D laboratories (Kanzakigawa, Kuise) Group Company facilities (Kane-gasaki, Settsu, Tokushima, UMN Pharma, C&O, etc.) Antimicrobial manufacturing facility Medical narcotic drug manufacturing facility Vaccine manufacturing facility
Natural capital	<ul style="list-style-type: none"> Energy consumption 1,665 thousand GJ Water usage 1,217 thousand m³



■ Outputs

Fetroja® (cefiderocol) for the treatment of multidrug-resistant Gram-negative bacterial infections



Xofluza® anti-influenza virus drug



Tivicay® anti-HIV drug



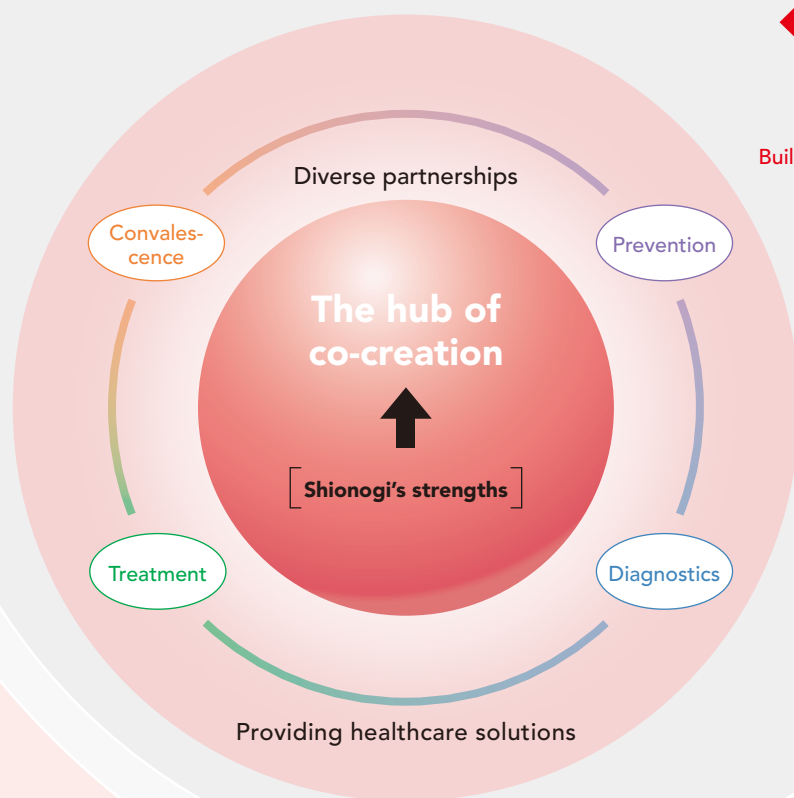
Shionogi now

Supplies medicines



See for details on the development pipeline

<https://www.shionogi.com/global/en/innovation/pipeline.html>



■ Outcomes (as of March 31, 2021)

Human capital

- Employees who share our philosophy **94%**
- Amount of self-investment assistance **¥170 million** (actual)
- Achievement of work-life balance (percent taking childcare leave **Men 41.1% up 8.3% from prior year**)
- Number of appointments to organizational leadership from the human resources pool (cumulative number of new appointments over 5 yrs.) **67 persons**
- Number of new projects launched from the "I want to do it!" employee-initiated program **2 projects**
- Percent of female managers **11.5% up 0.1% from prior year**

Intellectual capital

- Accumulated expertise in R&D, production, distribution, sales and guaranteed reliability of pharmaceutical products
- Percent of drugs discovered in-house **71%**

Social and relationship capital

- Number of countries offering dolutegravir (including the Medicine Patent Pool) More than **140 countries**
- Number of partnerships for approaching LMICs with cefiderocol **2 partnerships** (as of July 2021)
- Number of programs where formulation changed to increase accessibility **2 programs** (as of July 2021)
- Vaccine subsidies Granted **¥37.3 billion (maximum)**
- Number of subscription-model adopting partner countries **2 countries**
- Mother to Mother Project with World Vision

Financial capital

- Profit before tax **¥143.0 billion**
- TSR (**14.0%** for the past yr.; **21.0%** for the past 5 yrs.)
- ROE **13.9%**

Manufactured capital

- Facilities with continuous manufacturing capability
- High-potency manufacturing facility (Nagase)
- Vaccine manufacturing facility (UNIGEN)

Natural capital

- Effluent management of antimicrobial agents in wastewater (audits of relevant suppliers **86% completed**)
- Greenhouse gas (GHG) emissions (Scopes 1 & 2) Vs. FY2018 **Down 8.9%**
- Controls on water usage Vs. FY2019 Reduced by **46 thousand m³**

■ Impact

Society

- Contribute to SDGs (contribute to a healthy society)

Customers

- Extend healthy lifespans, improve QOL, create new value

Employees

- A workplace where one can work safely, a workplace where one can grow and feel satisfaction

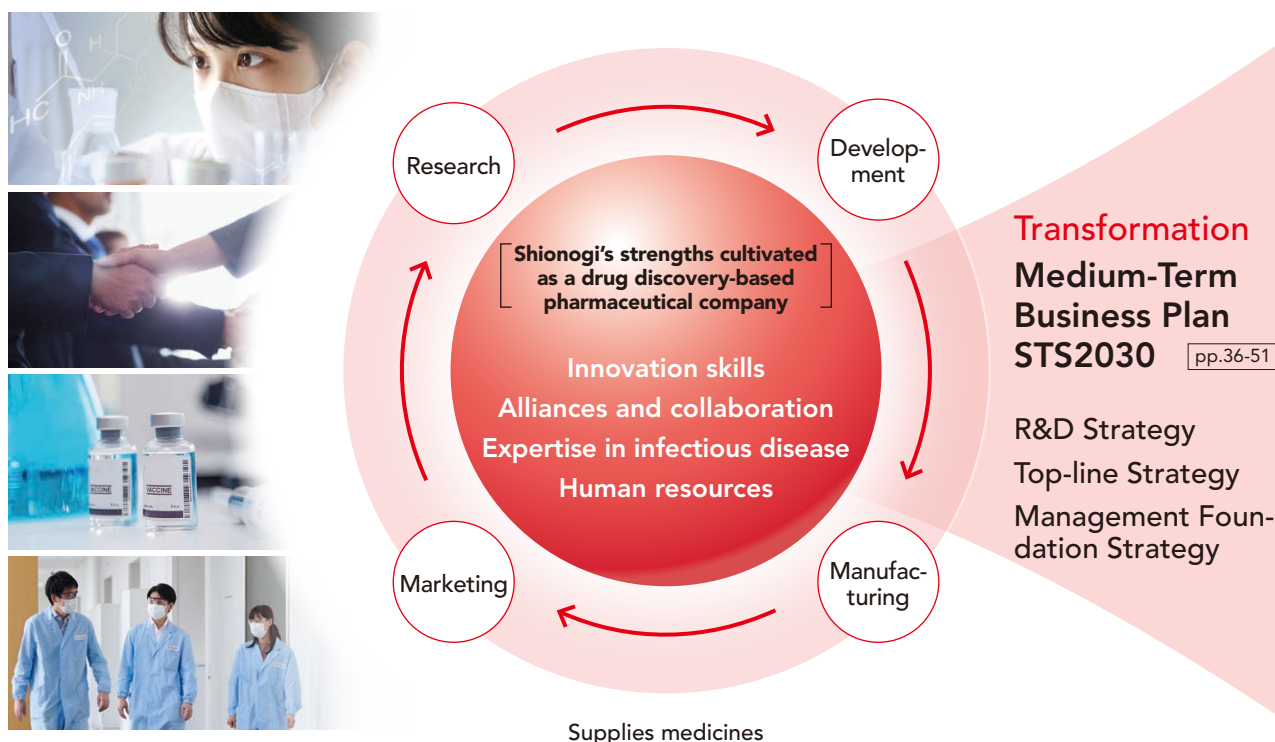
Shareholders/investors

- Sustainable growth and return of profits

Transformation into a HaaS Company

If Shionogi is to grow sustainably as a member of society, we need to tackle the problems (needs) of patients and society and continuously create innovations that will solve wide range of healthcare issues affecting customers and society. Day after day we are sparing no effort to achieve our transformation into a HaaS company that provides value beyond the conventional framework of medical treatment and to deliver to more people as soon as possible the value born from our innovations.

Shionogi now



Shionogi's strengths

■ Innovation skills

As a drug discovery-based pharmaceutical company, Shionogi is involved in drug discovery activities on a daily basis, especially in-house drug discovery, and we maintain a high ratio of pipeline originated in-house (71% as of March 2021). We are fortifying our small-molecule drug discovery engine, which is one of our strengths, and are tackling a number of drug-discovery modalities, including vaccines, medium-sized molecules such as peptides and nucleic acids, and macromolecule antibodies.

■ Alliances and collaborations

To date, Shionogi has entered into win-win partnerships that are necessary for achieving sustainable growth when we are acquiring modalities, spurring development, maximizing product value, and resolving the various issues facing the pharmaceutical business. We believe that collaborations with diverse partners, both inside and outside our industry, will become increasingly important for dealing with more sophisticated healthcare needs in the future.

■ Expertise in infectious disease

Shionogi has a long history of more than 60 years of R&D in the field of infectious diseases, and we have provided society with very many infectious disease medicines. While many pharmaceutical companies are exiting this low-profit disease area, Shionogi continues to fight against the threat of infectious disease by making investments and expanding therapeutic drugs, disease awareness programs, prevention, diagnostics, and ways to prevent conditions from worsening, which amounts to total care.

■ Human resources

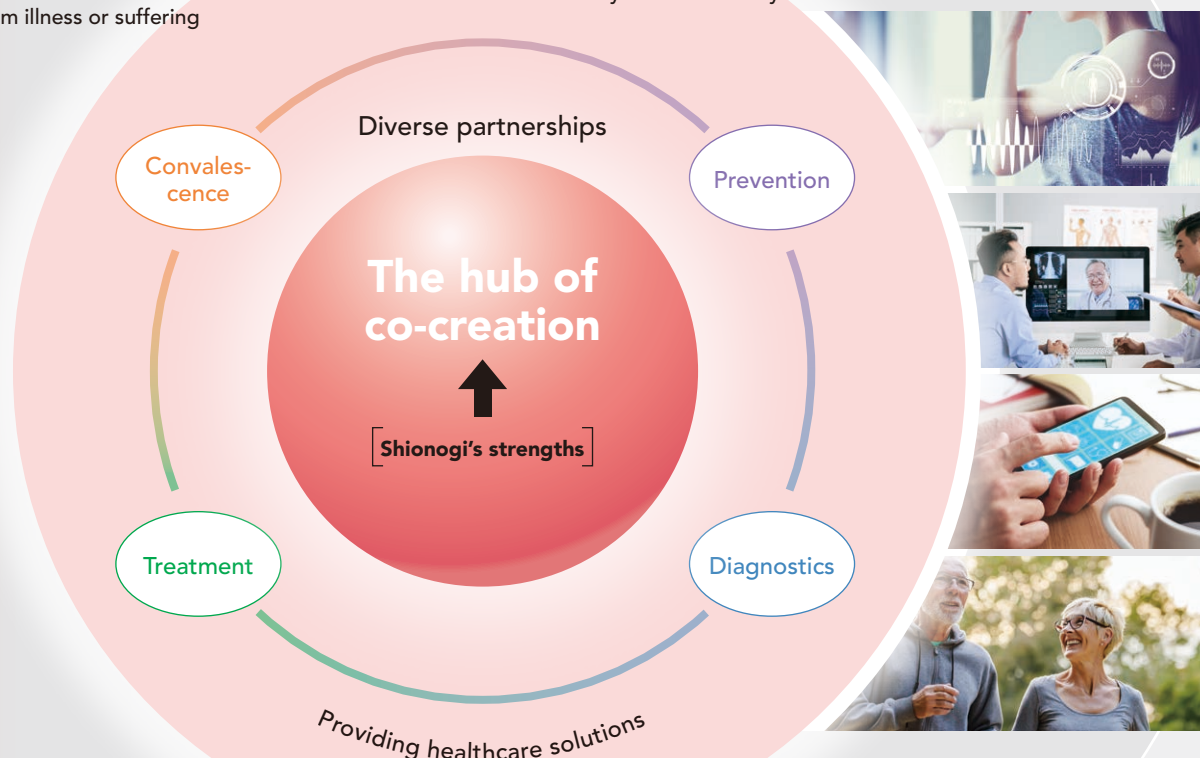
At Shionogi, human resources support the Company's sustainable growth and constitute its source for the creation of new value. We are focusing our efforts on developing managers who will lead in reforming at the workplace and on nurturing independent-minded human resources who will solve the problems of the future. By providing our employees with opportunities for future growth, we are cultivating a corporate culture that will work hard to tackle challenges.

The Future Shionogi (a HaaS Company)

2030 Vision:

Building Innovation Platforms to Shape the Future of Healthcare

- Collaborate with a wide range of partners to create new added value and provide solutions to the issues faced by patients and society
- Enhance our strengths built up through the discovery of prescription drugs and leverage those strengths to form the core of partnerships
- Work to achieve the SDGs and contribute to the realization of daily life where everyone does not suffer from illness or suffering



The HaaS concept that Shionogi is pursuing

Healthcare needs are becoming increasingly sophisticated and diverse as we approach an age when patients will choose their healthcare. Shionogi wants to be a company that has an accurate grasp of changing healthcare needs and provides new value in the form of innovative medicines and healthcare products and services for these many needs. We will strive to

become a HaaS company that provides the healthcare solutions that people and society need as we hone our strengths as a drug discovery-based pharmaceutical company, become other industries' partner of choice, and serve as the hub of co-creation that breaks with conventional concepts to open up a new age of healthcare.

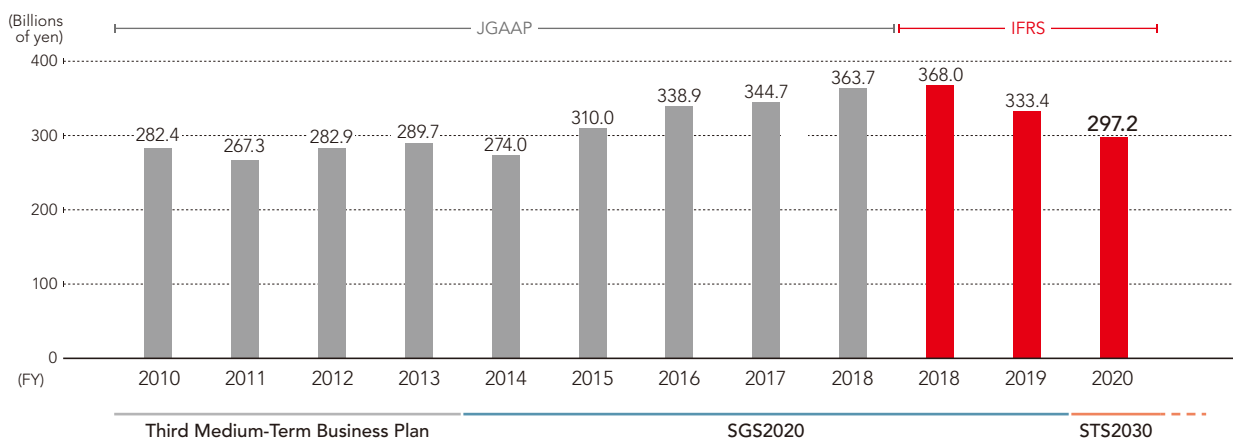


Financial Highlights

Shionogi has adopted International Financial Reporting Standards (IFRS) from fiscal 2019.

The financial figures for fiscal 2018 are shown according to both Japanese Generally Accepted Accounting Principles (JGAAP) and IFRS.

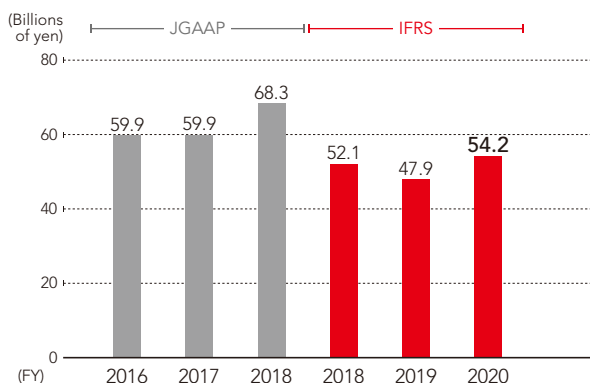
Revenue



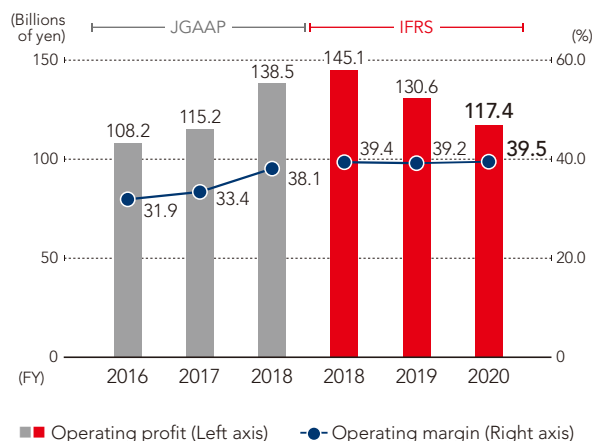
■ Revenue

Revenue was ¥297.2 billion, down 10.9% year on year. Domestic prescription drug sales and exports/overseas subsidiary sales were ¥94.7 billion (down 10.9% year on year) and ¥24.6 billion (down 20.0% year on year), respectively, due to the impact of changes in the business environment during COVID-19. Royalty income related to anti-HIV agents from Viiv Healthcare Ltd. was ¥123.4 billion (down 3.7% year on year), due to the effect of exchange rate movements.

R&D expenses



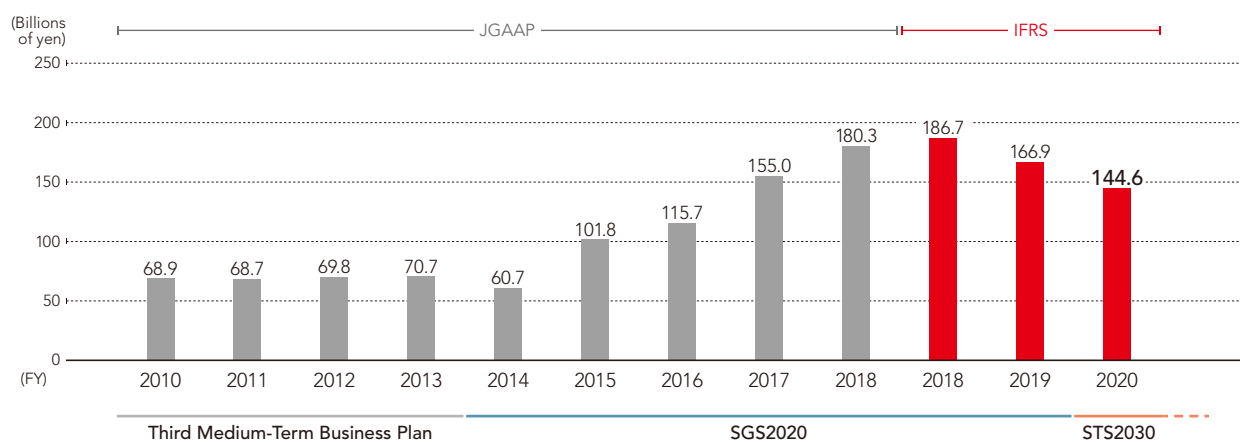
Operating profit/Operating profit margin



■ Operating profit (Left axis) ● Operating margin (Right axis)

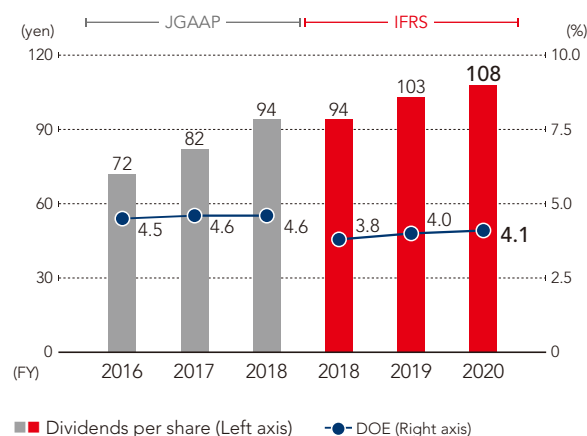
Operating profit was ¥117.4 billion (down 10.1% year on year), due to higher R&D investments in key projects and projects related to COVID-19. Excluding special items, such as the gain on exchange from redevelopment of the Shionogi Shibuya Building, core operating profit was ¥94.0 billion (down 26.2% year on year).

Royalty income



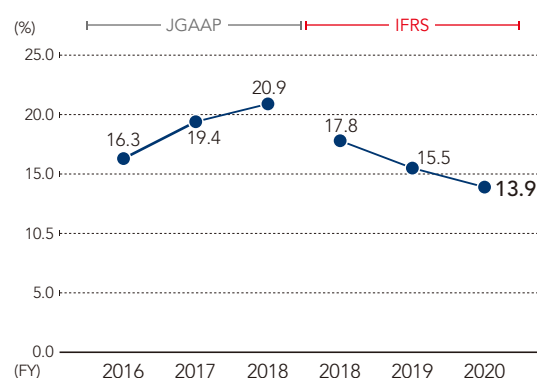
Royalty income was ¥144.6 billion (down 13.3% year on year). Although ViiV Healthcare's global sales of the anti-HIV agents *Tivicay*, *Triumeq*, *Juluca*, and *Dovato* remained firm, exchange rate movements caused sales to decline of 3.7% year over year. Other reasons for the decline were the absence of milestone payments received from Roche in the previous year in connection with progress in global development of *Xofluza* and lower receipts of royalty income from *Crestor* sales since the fourth quarter of fiscal 2020 under the terms of the license agreement with AstraZeneca.

Dividends per share/DOE



Dividends per share were ¥108, up ¥5 from the previous year and our ninth consecutive year of dividend growth. DOE was 4.1%, exceeding our KPI of 4.0%.

ROE



ROE was 13.9%, exceeding our KPI of 12.5%. This was primarily because, while ROE declined with the adoption of IFRS, this was due to an increase in equity items (equity attributable to owners of parent).

Non-Financial Highlights

Code of Conduct signature rate (FY2020)

100%

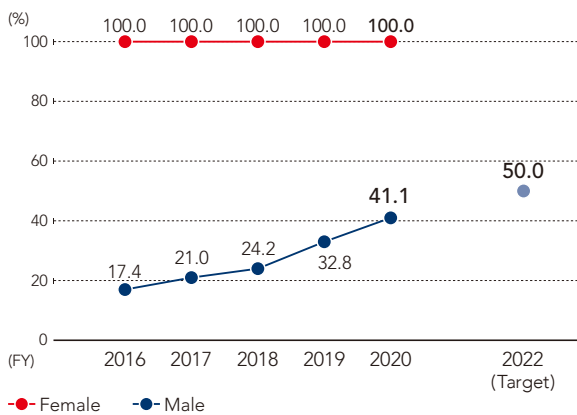
* Shionogi & Co., Ltd. and its domestic group companies, with some exceptions

Education and training expenses per person (FY2020)

¥140 thousand

*(Education and training expenses + amount of self-investment support)/number of employees (Nonconsolidated)

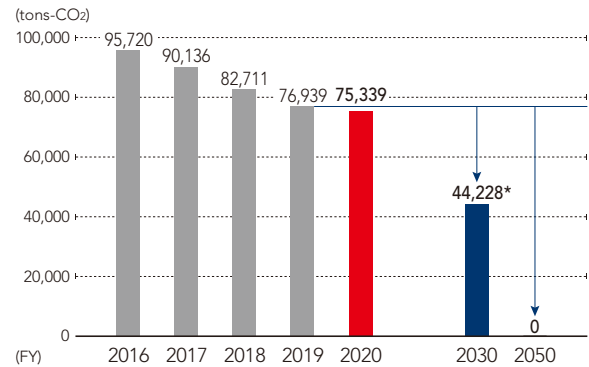
Acquisition rate of childcare leave



FY2022 target (Male)

Acquisition rate of childcare leave/days off for childcare purposes of 50% or more

GHG emissions (Scope 1 and 2)



FY2030 target*

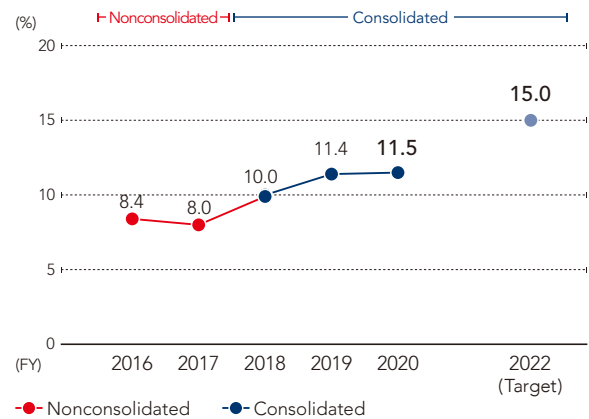
down 46.2% (FY2019 benchmark)

FY2050 target

Zero

* The base year (FY2019) emissions for the FY2030 target (SBT) were 82,209 tons-CO₂, including the FY2019 emissions of UMN Pharma Inc. and Nagase Medicals Co., Ltd.

Ratio of female managers



FY2022 target (domestic consolidation)

At least 15% of women occupying management positions

External evaluations

	FY2018	FY2019	FY2020
CDP	Climate change: C Water: No rating	Climate change: A- Water: A	Climate change: A- Water: A
FTSE	Not selected/2.9	Not selected/2.9	Selected/3.4
MSCI	A	AA	AA
DJSI	No response/17 points	No response/19 points	Response/45 points
S&P/JPX Carbon Efficient Index	Third decile	Third decile	Fourth decile
Toyo Keizai CSR Ranking	51st of 1,501 companies	63rd of 1,593 companies	34th of 1,614 companies
SOMPO Sustainability Index	Selected	Selected	Selected
Survey on Health and Productivity Management	Health and Productivity Stocks White 500	White 500	White 500

At a glance

■ Ratio of operating profit to revenue (FY2020)

39.5%

■ ROE (FY2020)

13.9%

■ Ratio of drugs discovered in-house (as of March 31, 2021)

71%

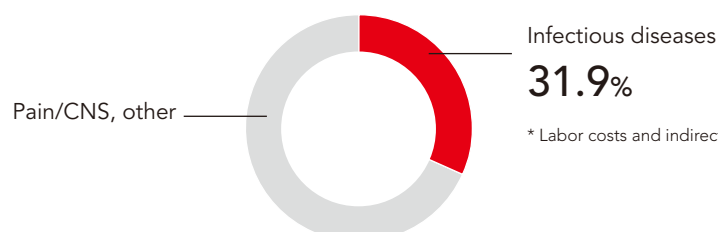
■ Infectious disease (COVID-19) pipeline (as of Aug. 2021)

Area	Pipeline	Indication	Status
Infectious disease (COVID-19)	S-268019	Prevention of COVID-19	Japan: Phase 1/2
	S-217622	Treatment of COVID-19	Japan: Phase 1
	S-555739 (asapirant)	Control of the aggravation of COVID-19	US: Phase2

■ 8 core pipeline projects (as of Aug. 2021)

Area	Pipeline	Indication	Status
Infectious disease	S-540956	① Infectious disease ② Cancer	Preparing for Phase 1 clinical trials
Pain/CNS	S-600918 (sivopixant)	① Refractory/unexplained chronic cough ② Sleep apnea syndrome	① Phase 2b clinical trials in progress ② Phase 2a clinical trials in progress
	S-637880	Neuropathic low back pain	Phase 2a clinical trials in progress
	S-812217 (zuranolone)	Depression	Phase 2a clinical trials in progress
	BPN14770 (zatolmilast)	① Alzheimer's disease ② Fragile X syndrome	① Phase 2 clinical trials in progress ② Preparing for US Phase 2b and Phase 3 clinical trials
	S-874713	Psychoneurological diseases	Preparing for Phase 1 clinical trials
New growth areas	S-531011	Solid tumors	Preparing for Phase1b/2 clinical trials
	S-005151 (redasemtide)	① Epidermolysis bullosa ② Stroke ③ Osteoarthritis ④ Chronic liver disease	① Preparing for application ② Phase 2 clinical trials in progress ③④ Investigator-initiated trials (Phase 2 clinical trials) in progress

■ Proportion of R&D expenses for the infectious disease area (FY2020)



* Labor costs and indirect spending not included.

Risks and Opportunities

In identifying our material issues (materiality), we analyzed and assessed the risks and opportunities for Shionogi from internal and external environmental changes. Going forward, as we pursue these initiatives, we will continuously evaluate our risks and opportunities and reflect them in the Shionogi Group's initiatives with respect to our material issues.

Risks

Changes in Society



- Changes in attitudes and lifestyles due to the global spread of COVID-19
- Diversity and changes in values
- Further globalization
- Aging of developed countries' populations, population growth in emerging countries (sudden changes in the economic paradigm)
- Movements toward realizing a sustainable society
- Contraction of the market for infectious disease drugs due to increasing hygiene awareness
- Supply chain disruption due to limits on the movement of people and things
- Damage to the business due to abnormal weather, etc.
- Stronger environmental regulations
- Lower productivity due to changes in work practices
- More awareness regarding personal information

The Pharmaceutical Industry Environment



- Increase awareness of social security costs
- Ongoing technological progress and data utilization
- Structural changes in the healthcare industry (entry of other industries)
- Diversification and sophistication of healthcare needs
- Restricted access to healthcare due to public health, education, income disparities, and other factors
- Market contraction due to cuts in social security costs (restrictions on drug costs)
- Lower earnings due to a decline in sales of existing products
- Higher hurdles to drug discovery and lower research efficiency
- Occurrence of patient disadvantage due to disruption of stable supplies and lower product quality

Shionogi's Internal Environment



- Unveiling of STS2030
- Dealing with the patent cliff
- Need to secure and develop the necessary human resources for the business model we seek
- Calls for strengthening transparency and traceability in governance
- Delay in achieving our vision due to employees' perceptions of the vision
- Insufficient global human resources, DX human resources and human resources for new businesses
- Reduced credibility due to insufficient response to greater awareness of ESG
- Occurrence of patient disadvantage due to the dissemination of incorrect information
- Increased information security risks

Opportunities

- Increased expectations and demand for global infectious disease countermeasures
- Increased global demand for vaccines
- Increased importance of stockpiling infectious disease drugs
- Market expansion from growth of the malaria region
- Market expansion from population growth and economic growth in emerging countries
- Prospect of realizing a society where people can be healthy and live their own lives
- Growing demand to improve quality of life in all regions and countries

- Expectations for drugs with excellent medical economy
- Increased demand for healthcare optimized to the individual
- Greater needs in the prevention and presymptomatic areas, as well as for ethical medicines
- Increase in unmet needs in such areas as psychoneurological diseases, cancer, and autoimmune diseases
- Development of technologies besides medicines that can influence physiological functions
- Utilization of AI and real-world data in drug discovery

- Growth of the pre-symptomatic, prevention, and self-medication markets (growth of business not dependent on patents)
- Dissemination of DX in work practices
- Increased employee awareness about our transformation

1 Material issues to create new value for customers and society

Protect people worldwide from the threat of infectious diseases

Improve social productivity and extend healthy lifespans

Contribute to sustainable social security

2 Material issues to realize a sustainable society and support Shionogi's growth

Improve access to healthcare

Secure human resources to support growth

Respect human rights

Reinforce supply chain management

Supply socially responsible products and services

Strengthen corporate governance

Ensure compliance

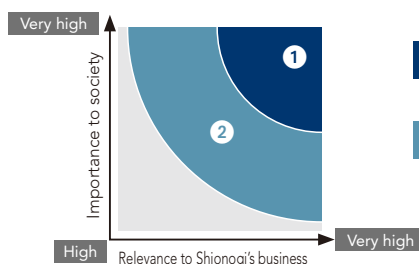
Protect the environment

The Shionogi Group's Key Material Issues

Through its business activities and in response to healthcare needs and social issues, Shionogi is growing as a company that society needs and is seeking outcomes that will be shared by our stakeholders. We are therefore identifying material issues (materiality) that we will prioritize in the light of our current situation and needs, as well as our business risks and opportunities. We constantly recognize the importance of growing in coexistence with society as we continue to provide value through our contributions to people's health in the future, and we are addressing these material issues throughout our Group.

	Materiality	Response
1 Material issues to create new value for customers and society	Protect people worldwide from the threat of infectious diseases	<ul style="list-style-type: none"> • Initiatives to fight COVID-19 • Strengthen readiness for new pandemics (build a stable infectious disease business model) • Provide products and services for viral infectious diseases • Provide products and services for the three major infectious diseases • Provide products and services for severe infectious diseases including AMR
	Improve social productivity and extend healthy lifespans	<ul style="list-style-type: none"> • Create products and services for disease areas with high unmet medical needs • Raise awareness of the characteristics of the disease and the problems faced by those affected by the disease to promote social understanding
	Contribute to sustainable social security	<ul style="list-style-type: none"> • Extension of healthy lifespans through total care • Minimize social losses through early prediction of infection status trends
2 Material issues to realize a sustainable society and support Shionogi's growth	Improve access to healthcare	<ul style="list-style-type: none"> • Contribute to AMR treatment • Supporting maternal and child healthcare in Africa
	Secure human resources to support growth	<ul style="list-style-type: none"> • Secure diverse human resources • Nurture human resources who possess exceptional strengths • Foster an environment and culture in which everyone can work comfortably
	Respect human rights	<ul style="list-style-type: none"> • Establish policies • Conduct risk assessments
	Reinforce supply chain management	<ul style="list-style-type: none"> • Start using EcoVadis, designate high-priority suppliers, and evaluate sustainability
	Supply socially responsible products and services	<ul style="list-style-type: none"> • Initiatives for stable supply • Strengthen monitoring systems
	Strengthen corporate governance	<ul style="list-style-type: none"> • High-performing corporate governance framework • Strengthen risk management
	Ensure compliance	<ul style="list-style-type: none"> • Instill compliance awareness
	Protect the environment	<ul style="list-style-type: none"> • Decrease the environmental impact of the antimicrobial manufacturing process • Reduce GHG emissions

Materiality Map



- 1 Material issues to create new value for customers and society
- 2 Material issues to realize a sustainable society and support Shionogi's growth

Associated indicators

Particularly contributing SDGs

- Realization of total care for early termination of COVID-19
- Ratio of infectious disease area to R&D expenses
- Pipeline for the infectious disease area
- Supply of in-house developed vaccines
- Construction of manufacturing facilities for in-house developed vaccines
- Contribution to improvement of QOL and acquisition of prophylactic indication by *cabotegravir*
- Number of people provided with information on proper use

pp.28-33

- Psychoneurological diseases, pain, and oncology Pipeline
- Conduct educational activities using webinars

pp.56-57

- Number of products/services in the pre-symptomatic care, prevention, diagnosis, and exacerbation prevention areas
- Understanding the infection situation through wastewater epidemiology surveys

pp.58-59

- Partnering to expand LMIC access
- Better access to maternal and child healthcare services

pp.60-63

- Manager training hours
- Amount of assistance for self-investment
- Share of female managers

pp.52-55

- Establishment of the Shionogi Group Human Rights Policy
- Hold workshops for employees/managers

p.66

- Number and percentage of suppliers evaluated
- Number of suppliers meeting the set standards

p.67

- No stockouts and no recalls
- Strict observance of laws and ordinances

pp.64-65

- Disclose the topics deliberated by the Board of Directors
- Build an Enterprise Risk Management framework

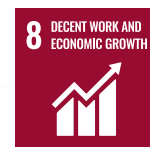
pp.72-85

- Renewed a handbook for bottom-up compliance that incorporating employee feedback (revised edition)

p.71

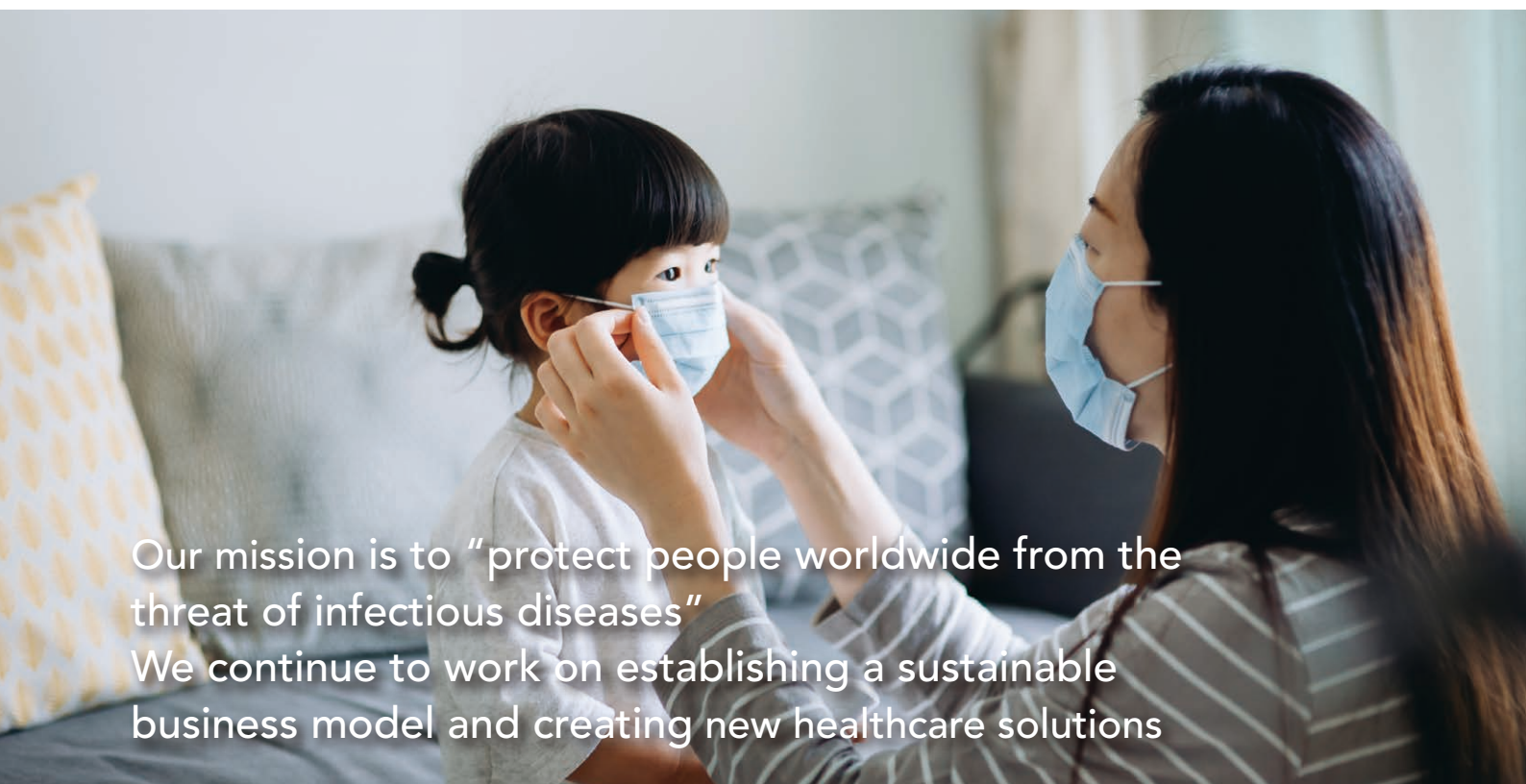
- Have proper control, including of the supply chain, by 2030 (completion of audit follow-up)
- Reduce Scope 1+2 by 46.2% and Scope 3 Category 1 by 20% in FY2030 and achieve zero emissions in FY2050.

pp.68-70



Shionogi Intensified Its Infectious Disease Efforts

—Taking on the challenge of our new infectious disease business model—



Our mission is to “protect people worldwide from the threat of infectious diseases”
We continue to work on establishing a sustainable business model and creating new healthcare solutions

Shionogi's most important materiality is to “protect people worldwide from the threat of infectious diseases,” and we believe that achieving this would be a true contribution to SDGs. As a leader in the infectious disease area, we are working to solve the problems posed by infectious diseases while also establishing a new business model.

Establishing a new infectious disease business model

The infectious disease business is characterized by large fluctuations in business performance depending on whether such diseases are spreading. Also, it is a business with significant business risks in terms of investment efficiency, because the medicines are used to treat symptoms in acute situations, the treatment periods are short, and dosages are small. However, constant preparation against the threat of infectious diseases is necessary for a society where people can live in peace, and due to our mission, Shionogi intends to remain in the infectious disease business going forward. We are there-

fore rebuilding our infectious disease business model from zero, because we need to ensure its stability and sustainability. We are transitioning from a business model for handling an indeterminate number of infectious disease patients to a business model that will enable us to achieve a certain level of profit stability, despite the ups and downs of the business, through stockpiling, subscription models (fixed payments), and supplies to low- and middle-income countries, along with a stable vaccine business.

Responses	Related indicators
<p>Bolster preparations for future pandemics (build a stable infectious disease business model)</p>	<ul style="list-style-type: none"> • Infectious disease area as a percentage of R&D expenses 31.9% • Infectious disease related costs in FY2020*1/Core operating profit in FY2019 19% • Pipeline for the infectious disease area (including out-licensing) 7 products • Number of Shionogi Group infectious disease-related products and services More than 50 • Number of countries provided with infectious disease-related products and services (including the Medicines Patent Pool) More than 140 countries • Cumulative holdings in the bacteria library Approx. 80,000 strains (domestic and foreign strains acquired from 1992 through 2019)

*1 R&D expenses, SG&A expenses, and surveillance expenses do not include labor and overhead costs; cost of sales and manufacturing expenses include labor costs

The need for stockpiles

There is no mistaking that the absence of an infectious disease pandemic is a good thing for humanity. However, if no one starts preparing for a pandemic during normal times, when disease breaks out, it will inflict a huge blow on society. Also, if the national government and other public bodies do not have any means for supporting companies that are gathering stockpiles, the number of companies engaged in the infectious disease business is decreasing. We believe that the COVID-19 pandemic was a wake-up call in this regard.

■ Procurement and stockpiling by governments and others

Sales of our anti-influenza virus drug Xofluza have been low because there have not been any influenza outbreaks for the past two years. However, just because no outbreaks occurred for two years does not mean that there will be no outbreak in coming years. On the contrary, having no outbreak of a virus for two years is reducing herd immunity and could increase people's risk of getting sicker and make the next major wave of infectious disease even more serious. Also, we do not know when a pandemic will break out with a strain of the flu virus that has antimicrobial resistance. In anticipation of such a situation, Shionogi is involved in discussions about the need for countries to stockpile a number of medicines with different action mechanisms in normal times.

■ The subscription-type reimbursement model

Our multi-drug resistant Gram-negative antibiotic Fetroja (cefiderocol) has been proven effective, and both the UK and Sweden have adopted subscription-type reimbursement models. A subscription-type reimbursement model allows a government to receive a supply of medicines when necessary in exchange for paying a fixed compensation to the developing company, regardless of the volume of drugs concerned. Because a fixed payment is guaranteed, we can get earnings from the drug regardless of whether an outbreak occurs, which stabilizes the business. Going forward, Shionogi will try to increase the number of countries using the subscription-type reimbursement model so that we can have a stable stream of earnings, while also being pandemic-ready and promoting proper use.

■ Push incentives*²

Among our R&D alliances with external organizations, which constitutes a push incentive, are the Broad Spectrum Antimicrobials Program of the Biomedical Advanced Research and Development Authority (BARDA), the Combating Antibiotic-Resistant Bacteria Biopharmaceutical Accelerator (CARB-X), the Global Antibiotic Research and Development Partnership (GARDP), the New Drugs 4 Bad Bugs (ND4BB) program of the Innovative Medicines Initiative (IMI), and the Joint Programming Initiative on Antimicrobial Resistance (JPIAMR), and we have high expectations for their progress.

Also, our efforts to date toward resolving the many issues involved in infectious disease treatment have entailed collaborating with partners in various areas of healthcare and taking initiatives to shape specific solutions. Shionogi has participated in the Global Health Initiative Technology (GHIT) Fund, Japan's first public-private partnership fund created to advance the research and development of innovative medicines for the treatment of infectious diseases in the developing world, since its inception in 2013.

*2 Push incentives include funding assistance for R&D, among other items

■ Pull incentives*³

Pull incentives are critical to a continuous supply of new antibiotics that will help patients. To date, there has been much discussion but little tangible action in terms of pull incentives. We recognize that pull incentives have to fit country and regional situations, so we are proposing the implementation of a suite of programs, such as partially delinked or fully delinked market-entry rewards, subscription payment schemes, and government purchases, in addition to innovative, anti-infective-specific, value-based pricing and reimbursement initiatives, such as Diagnosis-Related Group (DRG)-linked reimbursement reform. We welcome the ongoing discussion of pull incentives by governments and other organizations and strongly advocate for quickly moving from discussion to implementation.

*3 Pull incentives include financial assistance for product launches, among other items

Protect People Worldwide from the Threat of Infectious Diseases

Viral infectious disease initiatives

p.30

Current Situation

- Research and develop solutions for various viruses
- HIV, influenza virus, SARS-CoV-2, norovirus, respiratory syncytial virus (RSV), and others
- Build a vaccine business
- Development of a COVID-19 vaccine
 - Construction of manufacturing facilities

Issues/Needs

- Research and develop solutions for various viruses
- Provide solutions for various viruses
 - Provide effective and safe therapeutic drugs for SARS-CoV-2
- Build a vaccine business
- Provide a 100% domestically produced COVID-19 vaccine
 - Provide a nasal vaccine

Develop drugs for the three major infectious diseases

p.31

Current Situation

- HIV infections
- Launch of the long-acting HIV drug cabotegravir in North America and Europe
- Mycobacterium tuberculosis (TB) and Nontuberculous Mycobacteria (NTM)
- Research into new action mechanism mycobacterial treatments
- Malaria
- Research into innovative malaria drugs

Issues/Needs

- HIV infections
- Further improvements in lifelong drug regimens (fewer side effects and less frequent dosing)
 - Development of a prophylactic drug for HIV
- TB and NTM diseases
- Provision of effective therapeutic drugs for multi-drug resistant bacteria
 - Development of therapeutic drugs that make it easy to complete treatment
- Malaria
- Counter drug-resistant malaria
 - Development of an effective vaccine

Help to tackle serious infectious diseases including AMR bacteria

p.32

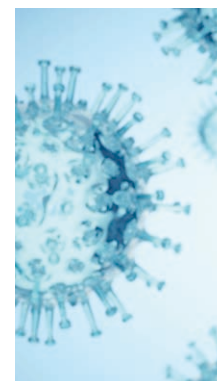
Current Situation

- Availability of cefiderocol
- Launched in the US and Europe
 - Using a subscription model for two countries
- Industry alliance for AMR
- Joined the AMR Action Fund
 - Implement activities to promote the proper use of infectious disease drugs

Issues/Needs

- Availability of cefiderocol
- Expand the number of countries using subscription models
 - Improving access to cefiderocol
- Industry alliance for AMR
- Further promotion of global collaboration to resolve the AMR problem
 - Continue activities to promote the proper use of infectious disease drugs

Shionogi has been busy trying to provide solutions to various viruses, including HIV, influenza virus, norovirus, and RSV. The infectious disease treatments that Shionogi has given to society so far, such as Tivicay and Xofluza, are the growth drivers that are currently supporting us. We are able to continually create new medicines in the virus field because we are experts in virus characteristics and the diseases that they cause and because we have built a solid platform for the discovery of new infectious disease drugs that can fight the progression of pathogens. We are currently putting top priority on employing our know-how to come up with solutions for COVID-19 (SARS-CoV-2).



Responses	Related indicators
Provide viral infectious disease products and services	<ul style="list-style-type: none"> • Viral infectious disease-related pipeline (including out-licensing) 6 products • Provide vaccines developed in-house • Build manufacturing facilities for vaccines developed in-house

While new infectious diseases such as COVID-19 are considered to be a problem, the three major infectious diseases cannot be controlled and continue to spread over the long term on a global scale, and they pose a serious threat and challenge to global health. At Shionogi, we believe that our infectious disease initiatives are tied to our efforts to achieve SDGs and that these initiatives are the priority business that will produce sustainable growth for both the Company and society. We are broadening the scope of our research from our original strength in HIV research to research into the three major infectious diseases, and we are accomplishing this through a number of external partnerships.



Responses	Related indicators
Provide products and services for the three major infectious diseases	<ul style="list-style-type: none"> • HIV-related product pipeline (including out-licensing) 2 products • Obtain approval of cabotegravir for prophylactic use • Contribute to better quality of life with cabotegravir • Development of an antimalarial drug and an anti-mycobacterial disease drug through alliances with partners

Antimicrobial resistance (AMR) is a serious problem, as it is difficult to detect and spreads relatively slowly. AMR has been referred to as "a slow tsunami that threatens to undo a century of medical progress." Currently, 700,000 people die every year from AMR, and estimates suggest that if nothing is done to address AMR, over 10 million lives will be lost each year by 2050.

To protect people worldwide from the threat of infectious diseases, Shionogi is working to develop new medicines to fight severe infections, including AMR, and is also promoting the proper use of infectious disease drugs. We will continue these efforts so that we can prevent the generation of new drug-resistant bacteria and viruses and so that patients will be able to receive treatment now and in the future.



Responses	Related indicators
Provide products and services for severe infectious diseases including AMR	<ul style="list-style-type: none"> • Provided cefiderocol through Compassionate Use programs • Number of countries with subscription model agreements 2 countries • Number of people given information on proper use on the website or in seminars by the Office for Stewardship to Proper Use of Medicine More than 1 million people to date

New initiatives for viral infectious diseases

Shionogi is expert in virus characteristics and the diseases that they cause and has given innovative antiviral drugs to society so far, such as anti-HIV drug *Tivicay* and anti-influenza drug *Xofluza*. Shionogi made UMN Pharma, Inc. a wholly owned subsidiary in March 2020, marking our full-scale entry into the vaccine business. The COVID-19 pandemic broke out immediately thereafter, and the development and provision of domestically produced vaccines have been long awaited. So, Shionogi is now tested to demonstrate its true value as a leading company in infectious disease. We are making every effort to advance R&D of COVID-19 therapeutic agents and prophylactic vaccines to restore safety and peace of mind to the world.

■ Hopes for vaccines as part of total care for infectious diseases

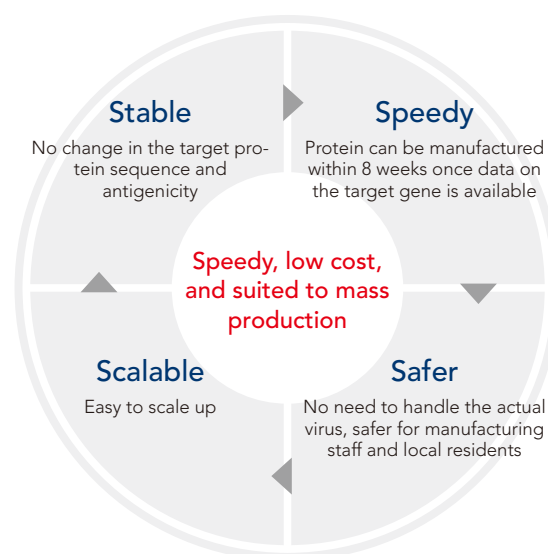
Vaccines prevent infections by inducing a specific immune response through the administration of safe antigens that correspond to the source of the target infection. Ever since the first smallpox vaccine was created by Edward Jenner, vaccines have been used against many infectious diseases and are a key part of modern healthcare. A move into the vaccine business has been one of Shionogi's goals for many years, as part of our drive to deliver total healthcare, not just treatments, for infectious diseases. Shionogi took an important first step under STS2030 when it made UMN Pharma, Inc. a wholly owned subsidiary.

■ Ideal vaccine profile and UMN Pharma's proprietary technologies

Prophylactic vaccines are given to healthy people, so they need to be even safer and have greater efficacy than therapeutic agents. Also, for new infectious diseases like COVID-19, which are highly infectious and most people are not immune to, stable manufacturing of a vaccine is key, because vaccines need to be administered to large numbers of people in a short period of time so that the population can achieve herd immunity. UMN Pharma owns a recombinant protein vaccine manufacturing technology called BEVS (baculovirus expression vector system) that can be used to produce a recombinant protein-based vaccine using viral antigen proteins. Compared with conventional vaccines that use attenuated or inactivated viruses, BEVS technology

makes production simple and very safe, and is expected to allow Japan to become a major manufacturer of vaccines. UMN Pharma has been working to develop more effective and convenient influenza vaccines, but the priority has now shifted to finding a vaccine against COVID-19, with no effort being spared in R&D to make the world a safer place and allow the resumption of economic activities.

■ Advantages of BEVS



■ Development of a nasal vaccine

In the interest of speed, the COVID-19 vaccine currently under development is an intramuscular injection, but Africa and emerging countries do not have the medical infrastructure to administer injections to multitudes of people. Therefore, from the standpoint of access to healthcare, we are also conducting R&D on a nasal vaccine as a preparation that would be easy to administer anywhere. We have therefore partnered with HanaVax Inc., a drug discovery venture company originating at the University of Tokyo, to speed up research for a nasal vaccine. A nasal vaccine using technology from HanaVax has the merits of being noninvasive, of being able to effectively induce immunity in the respiratory mucosa, which is the area that becomes infected, as well as the entire body, and of not requiring administration by an advanced healthcare system or healthcare professionals. Besides the aspect of Japan's national security, we want to help the entire world by providing a medication from Japan that is easy to use everywhere.

Develop drugs for the three major infectious diseases

■ HIV initiatives

The HIV integrase inhibitor *Tivicay* (generic name: dolutegravir) discovered by Shionogi exhibits superior efficacy and safety and is also associated with minimal risk of drug resistance. *Tivicay* has made a real contribution to both treatment of HIV infection and the Company's growth. It is now positioned as the treatment of choice for HIV in therapeutic guidelines worldwide and is at the top of the WHO's list of recommended treatments. Many HIV-positive people are now being treated with this drug. Until now, treatment for HIV infection involved a lifelong regimen of at least three different types of drugs. Therefore, an additional need appeared, which is to improve patient quality of life by reducing side effects and through less frequent drug dosing, while also maintaining efficacy. *Tivicay* is highly efficacious and not susceptible to the emergence of resistant viral strains. Its use as the key drug in HIV therapy reduces side effects and has allowed patients to be treated with a two-drug combination. This has led to the launch of Juluca (*Tivicay* + rilpivirine) and Dovato (*Tivicay* + lamivudine). In December 2019, Dovato was added to the US guidelines on the management of HIV infection, leading to increased prescribing of this two-drug combination.

To reduce the frequency of drug administration, Shionogi invented a long-acting formulation of the HIV integrase inhibitor cabotegravir (generic name). This medicine is already available in a number of countries, including in the US and Europe, in combination with a long-acting formulation of rilpivirine (U.S. product name: CABENUVA). Clinical studies on once monthly injection demonstrated viral suppression equivalent to current treatment methods, and many participants in clinical trials said that this drug formulation was better than current oral preparation for daily use. Furthermore, an application for a once-every-two-months formulation is also cur-

rently under review. Shionogi expects that the significant reduction in the number of days taken per year that patient will need to take treatments will help to improve patient QOL and adherence to the drug regimen.

Shionogi has developed cabotegravir as a single-agent HIV prophylaxis drug with high social needs, taking advantage of its first long-acting injectable formulation that is administered once every two months. We have filed for approval in the US and hope to be able to launch the product there sometime in fiscal 2021. Clinical studies have confirmed that injectable cabotegravir is more effective than the current once daily oral pre-exposure prophylactic (PrEP) treatment.

■ Initiatives for tuberculosis (TB) and nontuberculous mycobacterial (NTM) diseases

Shionogi started collaborating with Hsiri Therapeutics, Inc. in May 2018 on drug discovery research with the goal of discovering drugs with new mechanisms of action to treat mycobacterial diseases. In October 2019, Hsiri and Shionogi expanded their joint research partnership, signing a new agreement on joint research into different novel mechanisms of action. Shionogi aims to strengthen this partnership with Hsiri while focusing efforts on research into treatments for mycobacterial diseases with new mechanisms of action in order to discover a series of treatments over the medium-to-long term.

■ Initiatives for malaria

Every year, over 200 million people develop malaria and over 400,000 people die. This infectious disease occurs mostly in tropical regions, and mortality rates are particularly high among children under five. Malaria hampers economic development. Estimates suggest that if malaria was eradicated, some 10 million lives would be saved and it would have a positive economic effect of around \$4 trillion. Strains resistant to mainstay drugs have started spreading in recent years, and there is a real need for therapeutic agents that are effective against these resistant strains and have a good safety profile. Shionogi has been conducting discovery research by establishing a collaborative system with Nagasaki University since 2019 and with the National Institute of Infectious Diseases and Kitasato University since 2020. These partnerships aim to utilize these institutions' strengths in discovering innovative antimalarial drugs.

■ Advantages of cabotegravir

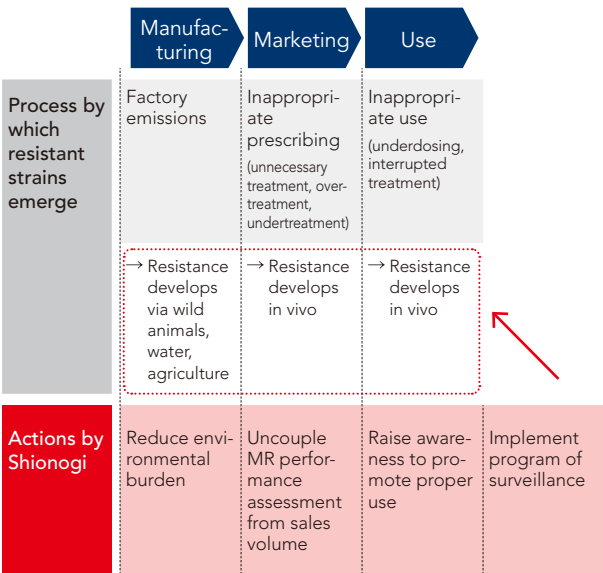


Help to tackle serious infectious diseases including AMR bacteria

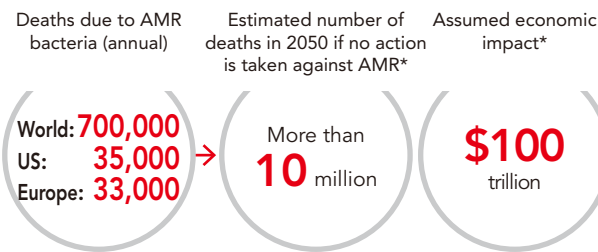
■ Proper use of anti-infectives

Shionogi has a long history of anti-infective R&D, manufacture, marketing, distribution, and programs to ensure their proper use. We believe that our essential responsibility as a company that handles anti-infectives is to take steps to curb the emergence of drug-resistant bacteria and viruses, and the Company is working on programs throughout the value chain.

■ Mechanism by which drug-resistant bacteria and viruses emerge and actions taken to control these



■ Current status of AMR



* O'Neill, J. Review on Antimicrobial Resistance (2016)

■ Cefiderocol

The rise of Gram-negative bacteria that have acquired resistance to existing treatments is a major issue for healthcare, as they are on the rise and mortality rates are high because they are difficult to treat. Shionogi discovered cefiderocol, the first-ever siderophore cephalosporin antibiotic, as a promising therapeutic option to tackle this issue and launched this drug in the US in February 2020 under the brand name *Fetroja*. Since April 2020, in Europe, cefiderocol is being approved and launched under the brand name *Fetroja*.

Shionogi has a policy governing the supply of unapproved drugs and has established a system that will give patients access to cefiderocol treatment, if they need it, but are in countries where the drug has not yet been launched despite already being approved. Cefiderocol has also been approved by the US Department of Health and Human Services for coverage under the New Technology Add-on Payment (NTAP) program, which is aimed at promoting the introduction of new medical technologies by reimbursing hospitals for in-hospital treatment costs. This is expected to improve access to cefiderocol for patients needing treatment with this drug. Also, the UK and Sweden have each adopted a subscription-type reimbursement model for the drug. (This mechanism allows a government to receive anti-bacterial drugs whenever necessary in exchange for paying a fixed fee to Shionogi.) We will continue working on initiatives to hasten the delivery of products and services to the patients who need them.

See the section “Improve Access to Healthcare” on pp. 60-63 for more information on how we are facilitating access to cefiderocol treatment.



FETROJA (cefiderocol)

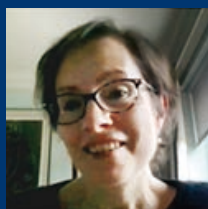
■ Cefiderocol Early Access Programs (EAP)

Since 2018, healthcare institutions in many countries, especially in Europe, have been increasingly requesting emergency use of cefiderocol. We therefore launched an internal project for providing patients with early access to cefiderocol, and these EAPs have made it possible for us to provide this medicine to many patients. This project embodies our Values of being dauntless in

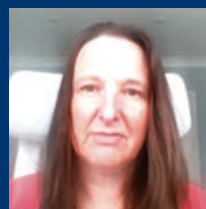
spirit and being bold. We expended much labor to get this program off the ground, but because we stuck to our goal of contributing to the prompt treatment of patients, many patients who would have died from serious infections were able to be treated and saved with cefiderocol.



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■ Partnerships for achieving our vision

Api Co., Ltd. and Unigen, Inc.

Shionogi is working to optimize manufacturing process for large-scale manufacturing, as well as equip and expand manufacturing facilities. In collaboration with Api Co., Ltd. (drug product manufacturing) and Unigen, Inc. (drug substance manufacturing), the first phase of construction was completed at the end of March 2021, and the manufacturing equip-

ment was ready. We are expanding our manufacturing facilities further, with completion targeted by the end of 2021. Unigen owns proprietary technology for cultivating viral proteins from insect cells and is already engaged in commercial manufacturing of influenza viruses. This cultivation technology can be used to produce a COVID-19 vaccine.

AMR Action Fund

Because AMR is a social issue with high risk that cannot be tackled by a single company alone, 22 major pharmaceutical companies from around the world came together in July 2020 to set up the AMR Action Fund, resolving to invest around US\$1 billion to respond to the AMR threat. The AMR Action Fund aims to provide patients with two to four new antibiotics by 2030 through the initiatives outlined below.

- Investment in companies engaged in R&D for new antibiotics
 - Provision of technological support by the investing pharmaceutical companies
 - Engagement with governments around the world on the formation of a healthy market that is structured to allow the continued development of new antibiotics
- Like-minded companies and foundations will work together on these new initiatives to tackle the threat posed by AMR.

