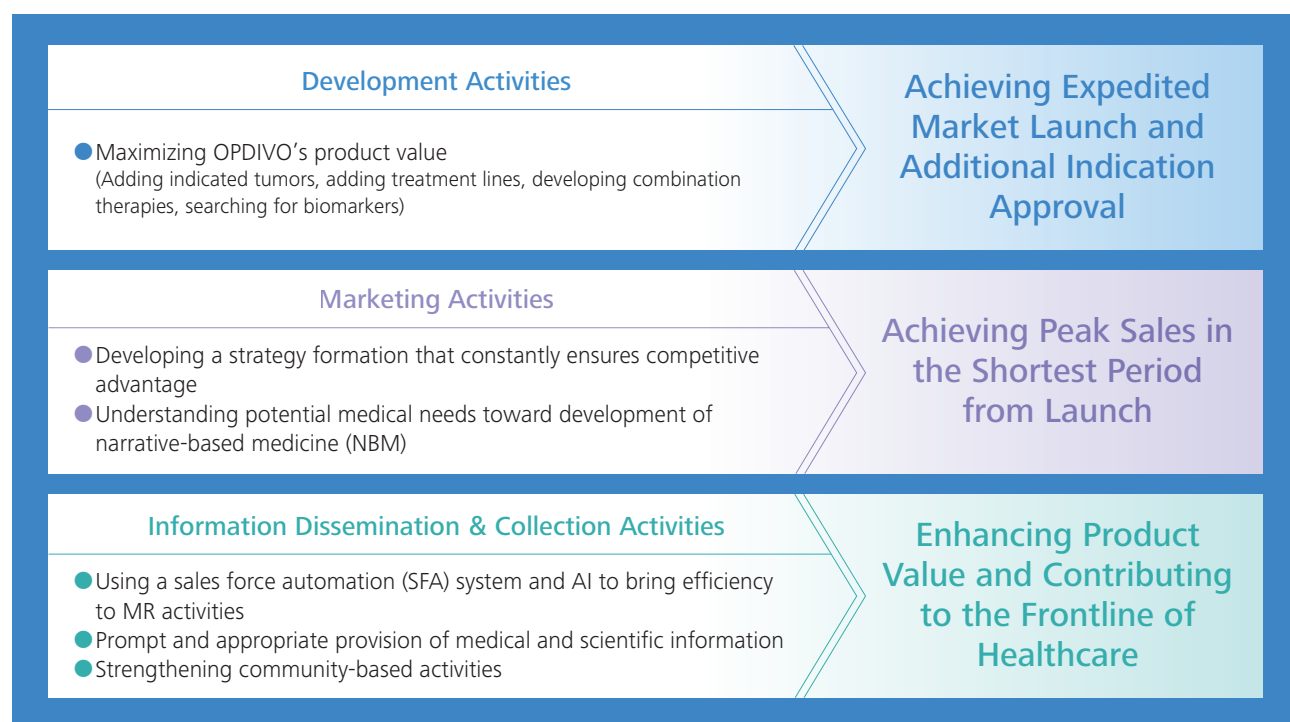


Maximizing Product Value



We actively pursue R&D activities to achieve expedited market launch and additional indication approval. We also develop a strategy formation that constantly ensures competitive advantage by adjusting with agility to environmental changes in each stage of the product life cycle, to achieve peak sales in the shortest period from launch and to maximize the potential of every product we offer.



Stable Supply of High-Quality Drugs and Drug Reliability Assurance ▶ P57

- Having a quality assurance system in place that is compliant with global regulations
- Upgrading of risk management systems at manufacturing centers
- Strengthening production systems
- Initiatives for proper use of pharmaceuticals
- Supply chain management, etc.

Maximizing OPDIVO's Product Value

To maximize OPDIVO's product value, we work with our partner Bristol-Myers Squibb (US) with focus on the four perspectives.

Adding indicated tumors	We have already obtained approval for 9 cancers in Japan and are continuing to work on development to obtain approval for additional cancer indications. In FY2020, the drug was approved for esophageal cancer in Japan, South Korea, and Taiwan.
Adding treatment lines	We are moving ahead with clinical trials to enable OPDIVO to be used at earlier stages in patients with advanced or recurrent cancer. We are also developing the drug for use in adjuvant therapy for some types of cancer before and after surgery. In FY2020, the drug was approved for the first-line treatment of non-small cell lung cancer in Japan, South Korea, and Taiwan.
Developing combination therapies	We proceed with development, searching for combinations of boosting its therapeutic effects by combining OPDIVO with other drugs or treatments.
Searching for biomarkers	We advance the search for optimal biomarkers that will predict which patients are more likely to be expected to exhibit the therapeutic effects of OPDIVO.

Marketing Activities to Enhance Product Value

The Sales & Marketing Division collaborates, from early stages, with other divisions, such as Clinical Development, CMC & Production, and Medical Affairs, to collect medical needs from multiple perspectives both in the oncology and primary care domains for maximization of the potential of every product we offer. The division develops and implements strategies and tactics based on market research that constantly ensures competitive advantage by adjusting with agility to environmental changes in each stage of the product life cycle.

In addition, we make every effort to collect patient opinions through meetings with healthcare professionals to understand potential healthcare needs toward development of narrative based medicine (NBM), which is based on the actual clinical experiences of patients. Based on needs obtained through these efforts, we will conduct future information dissemination activities to enhance product value.

Promotion of Information Dissemination Activities Using Digital Technology

With the COVID-19 pandemic making it increasingly difficult for us to visit medical institutions, we are actively engaged in information dissemination activities, including the use of our own websites (ONO Medical Navi, ONO ONCOLOGY, etc.) for medical professionals, in addition to delivering online interviews, briefings, and lectures. In FY2020, we upgraded our website infrastructure, doubling the contents therein. As a result, the physician membership has increased to almost double. We also launched a chatbot with a plan to provide responses starting with information about new products. In addition, we newly established the Remote Communication Section in October

2020, and it serves as e-MR to provide information to medical professionals via email or Zoom. Based on data that will be accumulated in the future, MRs will take the lead in promoting seamless hybrid activities that integrate physical and digital information dissemination. A system is under construction that will deliver appropriate information to medical professionals at appropriate times, in appropriate places, and by appropriate methods.

Prompt and Appropriate Provision of Medical and Scientific Information

One role of drug manufacturers is to relay up-to-date information as quickly as possible about daily advances in healthcare to the frontline of healthcare and to provide opportunities for information exchange. We actively provide information by organizing symposiums and seminars in conjunction with academic conferences held in Japan and through workshops and lectures in regional areas. In addition, we put effort into disseminating up-to-date drug information through operating several websites for medical professionals. In FY2020, we held web-based seminars and product presentations in line with various needs, including more than 500 live webinars, to relay up-to-date drug information to the frontline of healthcare.

Our Medical Affairs Department works to attain a high level of expertise and academic knowledge in oncology and primary care domains to assess and collect medical and scientific needs of healthcare professionals through meeting with experts or attendance at advisory board meetings. In response to requests from healthcare professionals, we provide such evidence-based medical and scientific information with transparency to contribute to the healthcare frontline.

TOPICS

Remote Communication Section Newly Established

External environmental changes, such as the COVID-19 pandemic and tighter regulations on visiting physicians as part of "work-style reform for doctors," are making it more difficult to deliver information on our products by conventional face-to-face communication to healthcare professionals who truly need such information.

To respond to these changes in the external environment and diverse needs for information dissemination, the Remote Communication Section was newly established in October 2020, and it promotes web-based dissemination, collection, and interactive communication of information on our products. The section will proceed with activities to ensure that healthcare professionals can benefit from being connected to information under any circumstances, as well as to deliver our products to patients and their families in need.

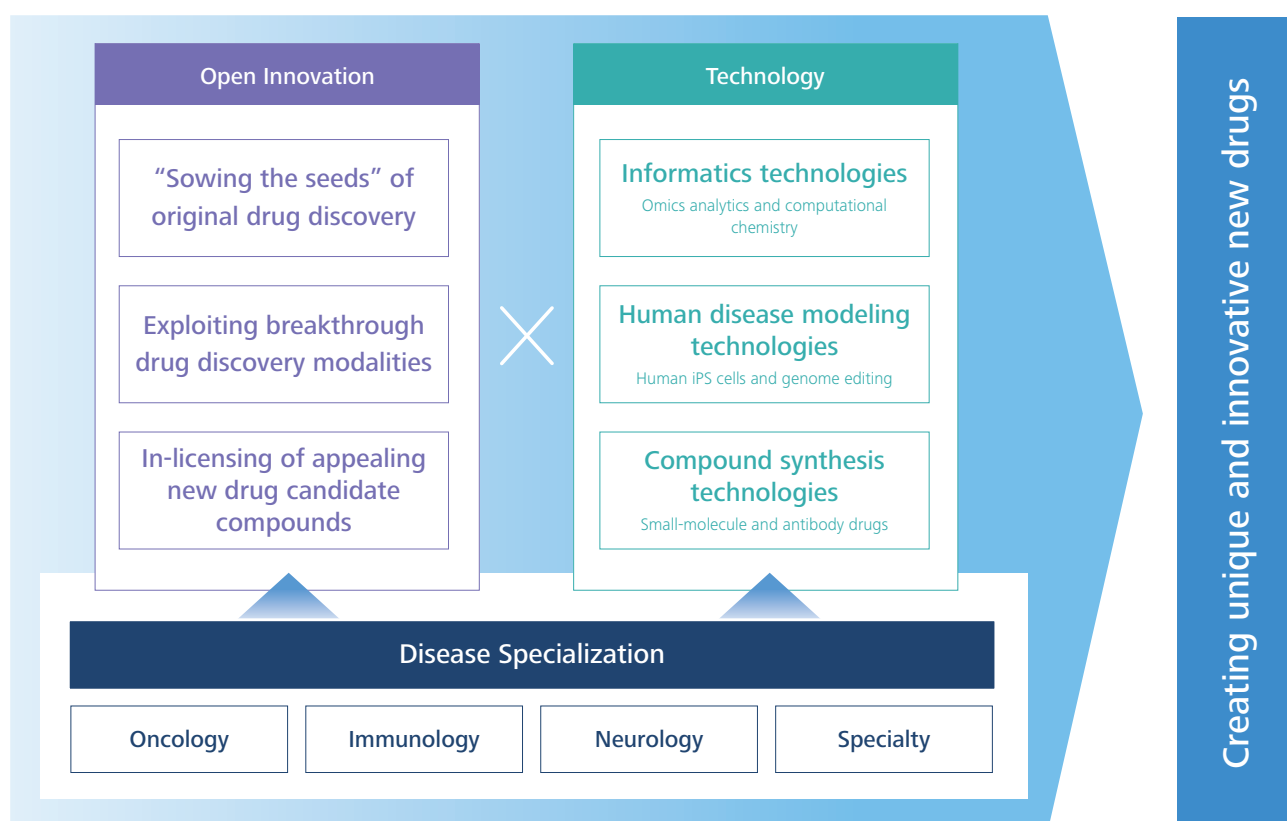
Strengthening R&D



We are constantly improving our disease expertise with a focus on therapeutic areas with high unmet medical needs, engaging in initiatives as part of our “Open Innovation” strategy, and promoting in-house drug discovery by exploiting drug discovery technologies including informatics and human disease modeling technologies.

Our Mission in Research and Development

Deliver our contribution to society by developing drugs that truly benefit patients



Drug Discovery Strategy

We have established the Research Center of Oncology, the Research Center of Immunology, the Research Center of Neurology and the Research Center of Specialty to boost our competitiveness in drug discovery in the areas of oncology, immunology, neurology and specialties; all of which include diseases with high medical needs. We will continue to accumulate disease expertise at each of our research centers and promote initiatives to accurately identify medical needs. Through our strategy of "Open Innovation," we are acquiring original drug seeds and are pursuing the discovery and development of innovative new drugs with a significant medical impact by exploiting the latest technologies in fields such as informatics, human disease modeling, and compound synthesis.

A total of 7 new drug candidates in our priority therapeutic areas have proceeded to the clinical stage, and we will also continue to bolster our efforts in translational research bridging the gap between basic and clinical research to accelerate drug discovery timelines and boost success rates. By organically leveraging bioinformatics technologies and research tools such as human genome data and human iPS cells in the early stages of research, we intend to garner a deeper understanding of the relationship between target molecules and diseases to more accurately predict the efficacy of new drug candidates in humans, and to develop physiological indicators (biomarkers) for evaluating efficacy against disease in clinical trials.

TOPICS

Applied use of human-type general-purpose experimental robot "Maholo"

ONO has been pursuing applications for human iPS cells as a means of predicting the efficacy of drug compounds in humans. However, the handling of iPS cells requires highly-skilled techniques and involves the problem of difficulty in stably preparing iPS cells. To address these challenges, ONO introduced a human-type general-purpose experimental robot called "Maholo" in August 2020 for use at the Minase Research Institute. Maholo is not only capable of automating experiment-based tasks, but can also quantify the skills and tacit knowledge of skilled laboratory test personnel and then systematize them into "technology". Maholo can also perform precise and accurate operations impossible for humans. Furthermore, by combining Maholo with artificial intelligence (AI), it can rapidly optimize experiments to an equivalent or higher level than those of human operators. Maholo has already learned how to perform a series of iPS cell experiments, and has started performing them. In the future, we will integrate Maholo's capabilities with AI and cell analysis technologies to evolve it into a next-generation technology platform that can contribute to research geared toward highly unique drug discovery.



▶ A Drug Discovery System and Major Initiative in Each of the Four Priority Areas

Priority Area	Organization	Major Initiative	Major New Drug Candidates under Development	Target Disease
Oncology	Research Center of Oncology	As a pioneer in cancer immunotherapy, the Center works toward discovering innovative drugs for cancer patients with our experience, and technology and know-how, nurtured through R&D of the immune checkpoint inhibitor OPDIVO. The Center is pursuing original and unique drug seeds and new drug modalities not only through "Open Innovation" with academia and bio-ventures companies around the world with cutting edge technologies, but also through promoting translational research.	ONO-4578	Colorectal cancer, Pancreatic cancer, Non-small cell lung cancer, Solid tumor, Gastric cancer
			ONO-7475	Acute leukemia, Solid tumor, Non-small cell lung cancer
Immunology	Research Center of Immunology	Based on its many years of experience in immunology research which has helped create OPDIVO, the Center works toward drug discovery in both areas of cancer immunotherapy and autoimmune therapy by establishing research capabilities with a primary focus on biopharmaceutical development in immunology. The Center is operated in accordance with the policy of advancing unique research with strong awareness of serendipity and the insight not to miss it.	ONO-4685	Autoimmune disease
Neurology	Research Center of Neurology	The Center focuses on not only neurons as major components of the nervous system, but also glial cells which maintain and support the environments necessary for survival and multiple functions of neurons. Through its intensive analysis of patient-derived tissues and iPS cells, the Center is dedicated to discovering innovative drugs to provide disease-modifying therapies, as well as symptomatic treatments, to patients with neurodegenerative diseases, which are becoming serious problems in the aging society, and those with mental disorders that are still largely detrimental to society, or chronic pain.	ONO-2808	Neurodegenerative disease
			ONO-2910	Diabetic polyneuropathy
			ONO-2909	Narcolepsy
Specialty	Research Center of Specialty	The Center is working toward discovery of clinically valuable pharmaceutical products for diseases for which treatment is high in unmet needs, free from the disease field. The Center has taken up the challenge of accurately identifying the diseases in society with genuine medical needs, and then leveraging this knowledge to discover and develop highly original new drugs.	ONO-7684	Thrombosis

Four Growth Strategies

Open Innovation

Even before the widespread use of the term “open innovation,” ONO was already involved in the discovery of new drug seeds through partnerships with universities and other research institutions, and had been using these seeds as a starting point to create innovative new drugs. The Discovery Research Alliance Department and the Business Development Department are presently taking the lead in forming drug discovery alliances with world-class researchers and bio-ventures with a focus on our priority research areas, and are actively in-licensing various drug candidates. We are working on these collaborative activities with a sense of urgency in order to obtain cutting-edge research data before our competitors and to leverage this data in expedited drug discovery. Our locally incorporated subsidiaries in the US and UK are permanently staffed by researchers with practical experience in drug discovery, and we are visiting world-leading researchers and venture companies in Europe and the US to launch more new partnerships.

In 2017, we established the Ono Pharma Foundation in the US to set up academic research grants with an eye to the future, and have succeeded in building a cutting-edge scientific research network of grant recipients. In FY2020, we launched US subsidiary Ono Venture Investment, Inc. to further enhance our competitiveness in drug discovery and R&D via strategic investments in drug targets and advanced technologies enabling breakthrough new drugs.

In the same year, we also concluded sponsorship agreements with LabCentral and MBC BioLabs—two private non-profit organizations supporting the development of emerging bio-ventures—thereby consolidating a framework for early access to the latest information on emerging bio-ventures. ONO also joined the University of California (UC) Drug Discovery Consortium, which boasts the largest network of academic biomedical researchers in the US. We will continue to promote R&D in our priority areas by pursuing collaboration on early-stage research projects at UC.

Development Policy

ONO is working to expedite clinical development and improve the success rate of drug candidates in order to fast-track the delivery of our proprietary and in-licensed compounds to patients suffering from diseases around the world. We are promoting translational research initiatives leveraging our extensive body of disease and clinical trial data to fast-track the designation of target diseases in conjunction with our Research Division with the aim of improving predictive

accuracy on efficacy and safety of drug candidates. Furthermore, we are flexibly utilizing our clinical development functions in Japan, the US and Europe to fast-track clinical trials in early stage with the goal of expediently identifying the potential product value of candidate compounds.

We will also continue the clinical development of our existing product lineup in order to enhance their product value. For instance, we will conduct clinical trials on OPDIVO with the three aims of realizing expanded oncology indications, earlier-stage therapeutic applications, and new combination therapies delivering improved treatment response. Our portfolio of OPDIVO and other clinical trials is constantly growing, leading to a corresponding rise in drug approvals. In 2020, ONO achieved a record-breaking 11 new drug approvals within Japan, propelling us to the No. 1 pharmaceutical company for national approvals. With this in mind, we are undertaking efforts to digitize our clinical trial data to realize an accurate and efficient clinical trial system essential for handling a large volume of trials and regulatory approval submissions.

ONO will continue to actively promote clinical development in Japan and around the world for the benefit of patients awaiting new therapeutic drugs.

Expanding Our Pipeline Through Licensing Activities

In addition to expanding our pipeline through our in-house research, we are also actively pursuing licensing activities with the aim of in-licensing new candidate under development by pharmaceutical or bio-tech companies around the world. Our in-licensing efforts focus on compounds deemed to be strategic and efficient from a business perspective, and compounds deemed to be viable from the perspective of diseases with high medical needs. In FY2020, we successfully in-licensed 3 new compounds as candidates for anti-epileptic and anti-cancer drugs. In-licensing of one of these compounds involved the acquisition of development and marketing rights not only in Asia, but also globally, as the company has an eye to global expansion. Specifically, we are leveraging the strengths of OPDIVO in acquiring new candidates for anti-cancer agents with various modalities including molecular targeted drugs and antibodies.

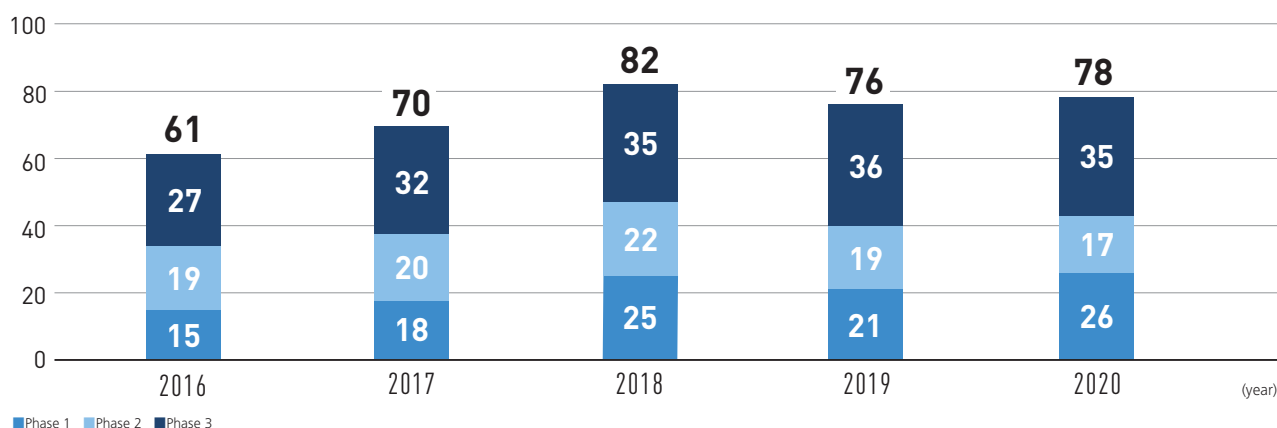
Details of main partners are available on our website.

<https://www.ono.co.jp/company/rd/licensing.html>

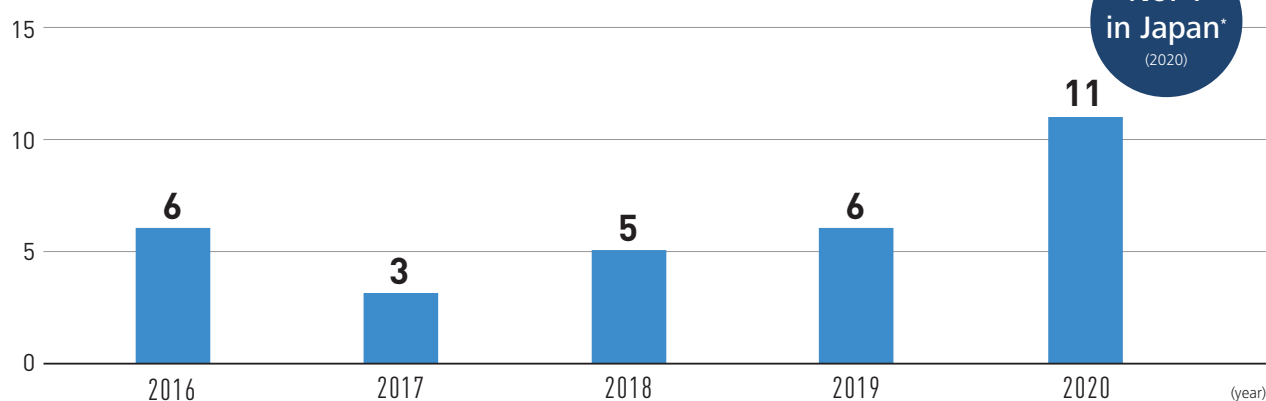
► Licensing Activities in FY2020

Agreement date	Licensee/Affiliate	Licensing details	Indication
Oct. 2020	SK Biopharmaceuticals Co., Ltd. (South Korea)	License agreement granting ONO exclusive development and commercialization rights in Japan for anti-epileptic drug Cenobamate	Epileptic seizures
Dec. 2020	Chordia Therapeutics Inc. (Japan)	License agreement granting ONO exclusive global rights to develop, manufacture and commercialize mucosa-associated lymphoid tissue lymphoma translocation 1 (MALT1) inhibitor drug CTX-177 and its associated compounds	Lymphoma
Feb. 2021	Ribon Therapeutics, Inc. (US)	License agreement granting ONO exclusive rights in Japan, South Korea, Taiwan, and ASEAN nations to develop and commercialize poly-ADP-ribose polymerase 7 (PARP7) inhibitor RBN-2397	Solid tumors

▶ Number of clinical trials conducted



▶ Number of approvals in Japan



*AnswersNews "2020 Ranking of number of domestic approvals — ONO tops the list with 11 approvals, while Novartis has the most approvals for new ingredients with 6" (Feb. 15, 2021)
(Last viewed on Sep. 1, 2021)

Message from the Officer in Charge

Pushing the envelope of ONO's lifeline "Open Innovation"

"Open Innovation" is the lifeline of our company that has enabled us to develop innovative new drugs ranging from prostaglandin derivatives to our flagship product OPDIVO. Through joint research with world-class academia and drug discovery alliances with bio-ventures exploiting cutting-edge technologies, we will explore the biology of human disease in response to our proprietary target molecules, and will leverage optimal technologies to link the ideas of all of our researchers to the creation of new drug candidate. Thus far, we have used Merus N.V.'s multivalent antibody technology to develop ONO-4685—a new drug candidate for autoimmune diseases that has already entered clinical trials. We are also using technologies from two US-based companies—namely, iPS-derived CAR-T technology from Fate Therapeutics, Inc. and computational chemistry from Schrödinger, Inc.—to expedite the discovery of new drug candidates. Going forward, we will continue to actively promote "open innovation" to develop appealing new drug candidates.



Toichi Takino

Member of the Board of Directors,
Senior Executive Officer
Executive Director, Discovery & Research

Globalizing Business



To supply patients throughout the world with our new drugs, we are first of all engaging in activities to implement our own overseas sales operations in niche areas where a large-scale marketing organization is not necessary. In South Korea and Taiwan, we have already set up wholly owned subsidiaries and have started selling products. We are also working to improve and strengthen our development and other systems, with a view to future marketing through our own sales organizations in the US and Europe.



Steps for Growing as a Global Company

ONO's global business expansion first started with the establishment of our own sales organization in South Korea and Taiwan. Currently, we are planning to expand sales in South Korea and Taiwan. We are establishing a clinical development capability from late-stage up to

applications for approval on our own in the US and Europe and we are establishing our own sales organization in the US. In the future, we aim to deliver our products to patients throughout the world through global development and the expansion of our own sales organizations.

Step 1

Globalizing own marketing organizations

As a foothold to expand revenue sources into overseas markets, we have been reinforcing overseas business expansion starting in Asia. We established wholly owned subsidiaries, ONO PHARMA KOREA CO., LTD. in South Korea in 2013 and ONO PHARMA TAIWAN CO., LTD. in Taiwan in 2014. Then, the subsidiaries established their own sales organization, and we started our own sales operations for OPDIVO in South Korea in 2015 and in Taiwan in 2016 respectively.

Step 2

Expanding own marketing operations into US and Europe

<Asia>

Concerning OPDIVO in South Korea and Taiwan, where we established our own sales organization, the drug has been approved for 9 types of cancer in South Korea and 11 types in Taiwan (as of August 2021). To significantly contribute to advancements in cancer therapy in South Korea and Taiwan, we also put efforts into providing safety information, such as rolling out scientific activities countrywide with Japanese and Western doctors appointed as lecturers to promote proper drug use. In addition, we conduct activities to disseminate academic information a small-scale, locally-focused level to bring fresh awareness. Despite restrictions on activities such as visiting physicians after February 2020 due to COVID-19 in both countries, the aforementioned activities are being continued by effectively using online meetings and symposiums. In the future, we will continue releasing our own products, such as VELEXBRU, and licensed products, BRAFTOVI, and we will also contribute to treatments for patients with cancer as well as in Japan by expanding the range of health insurance reimbursement payment for our products including OPDIVO.

<The US and Europe>

To establish our own sales organization in the US, which has the world largest market, and in Europe after we transferred the functions of the Global Clinical Development Division from Japan to the US in April 2019, our locally incorporated subsidiary, ONO PHARMA USA, INC. (OPUS), was relocated to Cambridge, Massachusetts in April 2021 and opened a new office in order to create a system in which we can conduct our own operations from late-stage clinical trials up to applications for approval in the US and Europe in addition to the existing implementation of clinical trials at an early stage and prepare our own sales organization in the US. In the future, we will accelerate development in the US and Europe and establish a system by setting a goal of expansion of our own sales operations.

Step 3

Becoming a true global company

To deliver our products discovered and developed by ONO to patients throughout the world, we aim to develop ourselves as a global company that can conduct global development and expand our own sales operations. In the US, which has the world's largest market, we aim to expand our business in priority therapeutic areas as well as in Europe. In South Korea and Taiwan, we will enhance the presence in the oncology domain through OPDIVO and other products sales and we will expand our business in other priority therapeutic areas. In addition, we will expand our business in the Asian market including China and the ASEAN region.

Building a Foundation for Global Development

<Enhancing Pipelines>

New drug candidates discovered in-house that we are developing globally include VELEXBRU Tablets (BTK inhibitor) that are already sold in Japan, as well as ONO-7475 (Axl / Mer inhibitor), ONO-4685 (PD-1×CD3 bispecific antibody), ONO-2808 (S1P5 receptor agonist action), and other products. In addition, licensed products (CTX-177; MALT1 inhibitor: licensed from Chordia Therapeutics Inc.) for which we acquired the global rights to develop and sell, will be also developed as a global pipeline. These pipelines are developed for diseases with high medical needs, such as hematological cancer, autoimmune diseases, etc., and they are expected to be new drugs that define our presence. In the future, we will promote our own drug discovery as well as licensing activities based on the assumption of acquiring global rights and engage in further enhancement of pipelines.

<Development of Organization Towards Our Own Sales Operations in the US>

Based on our experience of building and enhancing our own sales organizations in South Korea and Taiwan, we will build systems for our own development and sales in the US. To resolve one by one various issues arising in association with the development of our business in the US, we will strengthen cooperation between mainly OPUS and Corporate Development & Strategy, and other departments, including Clinical Development, Pharmacovigilance and Quality Assurance Division, Corporate Strategy & Planning, Sales and Marketing, CMC-Production Division, Medical Affairs Division.

In addition, at OPUS, with the establishment of a new office in April 2021, clinical development organization will be expanded and a global organization is being established towards expansion of our own sales operations in marketing and sales organizations, pharmacovigilance department, medical department, business management department, and other organizations.

► Major candidate global pipelines

Product (Development code)	Mechanism of action	Target disease	Development Stage (Japan)	Development Stage (Overseas)	In-house/in-license
VELEXBRU Tablets (ONO-4059)	BTK inhibitor	Primary central nervous system lymphoma	Launched	US: Phase 2	In-house
		Primary macroglobulinemia and lymphoplasmacytic lymphoma	Launched	— —	
ONO-7475	Axl / Mer inhibitor	Acute leukemia	—	US: Phase 1/2	In-house
		Non-small cell lung cancer	Phase 1	—	
		Solid tumors	Phase 1	—	
ONO-4685	PD-1×CD3 Bispecific antibody	Autoimmune disease	Phase 1	—	In-house
ONO-2808	S1P5 receptor agonist	Neurodegenerative disease	Phase 1	EU: Phase 1	In-house
ONO-7018 (CTX-177)	Mucosa-associated lymphoid tissue lymphoma translocation 1 (MALT1) inhibitor	Lymphocytic hematologic tumor	Non-clinical		Licensed global rights from Chordia Therapeutics Inc.

Message from the director in charge

Delivering innovative new drugs for patients around the world by enhancing development bases in the US and Europe

“Delivering innovative drugs to patients around the world.” For this purpose, we are expanding clinical trial area from Japan, South Korea, and Taiwan to the US and Europe. This April, we opened a new US office in Cambridge, Massachusetts, the location of the world’s largest life-science biocluster. We have started multiple clinical trials, including ONO-4059, ONO-7475, ONO-2808, etc., at the new base in the US and at European subsidiary in the U.K.

Clinical Development is developing the in-house compounds created by Discovery & Research, as well as the in-license products acquired by Corporate Development & Strategy sequentially in the US and Europe, and delivering innovative new drugs to patients around the world.



Kiyooki Idemitsu

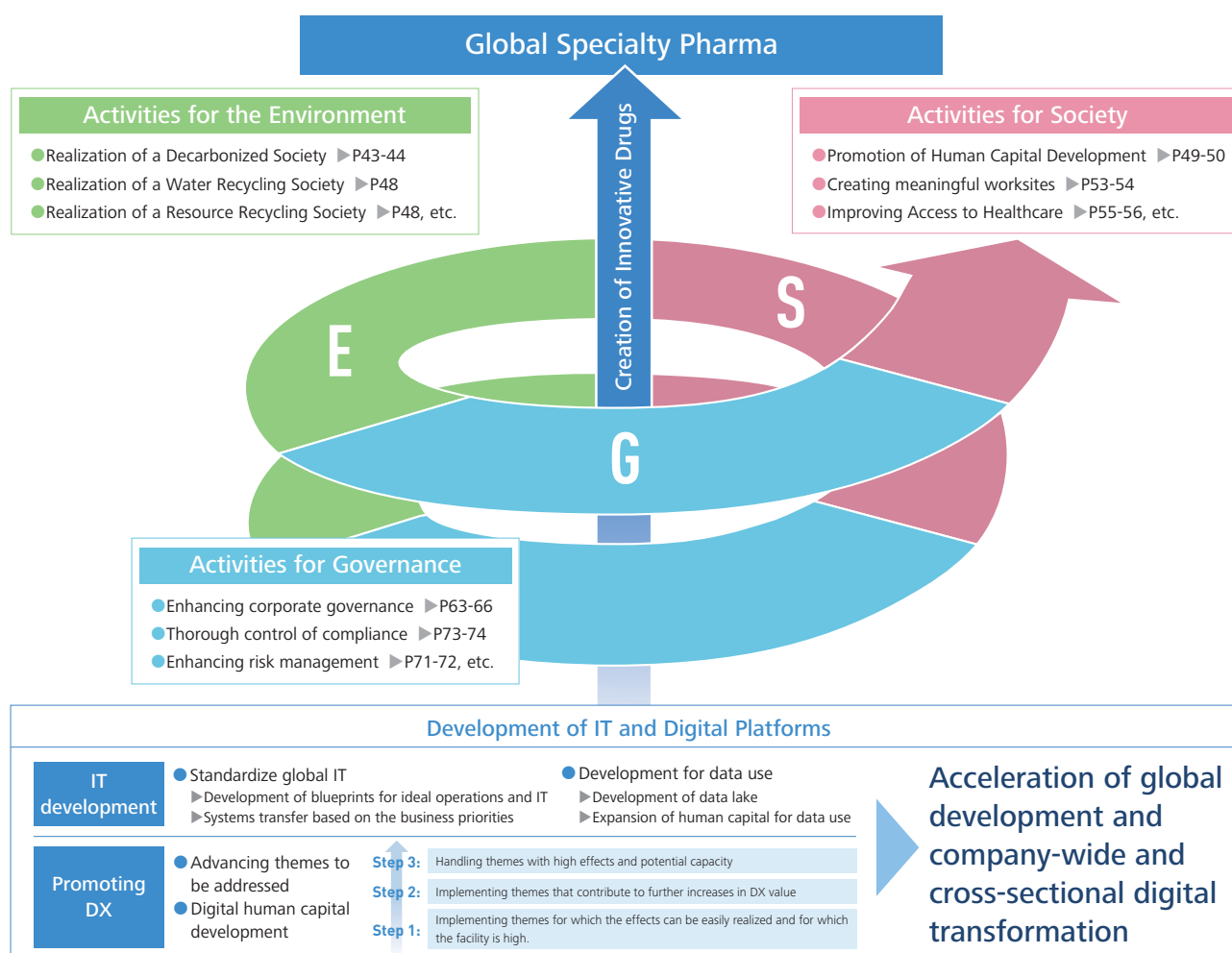
Member of the Board of Directors,
Corporate Executive Officer
Executive Director, Clinical Development

Four Growth Strategies

Strengthening Corporate Infrastructure



ONO continues to strengthen its corporate infrastructure to increase corporate value and realize sustained growth. We are also training personnel who can respond to various environmental changes while leading globalization and increasing diversity, and we are strengthening activities for the Environment, Society and Governance to fulfill our social responsibilities to all stakeholders.



Strengthening ESG Initiatives

One of major triggers that led ONO to focus on ESG was the release of anticancer drug OPDIVO in 2014. While the concept of ESG has spread around the world, ONO produced an innovative new drug, OPDIVO, that we could deliver to patients globally, and it became increasingly important for us to evolve as a company that could be admired by global standards. Consequently, we established our mission statement, developed a system whereby diverse employees and organizations can engage in business while being aware of the mission statement, created an environment where diverse personnel can enjoy working, and strengthened the training of personnel.

In addition, we consider that it is important to listen to the voices of diverse stakeholders and contribute to resolving social issues and achieving a sustainable society, and we are continuously strengthening activities towards ESG. In FY2018, based on external environmental changes and societal demands, ONO identified priority issues (materiality) for engaging in CSR management and specified SDGs to which ONO should particularly contribute to achieving. In addition, in FY2021, we revised materiality based on social environmental changes and stakeholders' requests. We believe we can achieve sustainable growth for ONO and society by steadily performing the PDCA cycle of materiality and responding to the expectations of stakeholders.

Use of External Evaluation

Increasing external evaluation is one of our policies for engaging in activities for ESG. From various evaluations, we have narrowed down 8 targets and engaged in activities by establishing goals for each target. As a result, steady progress has been seen as shown in the following table.

In FY2020, we have been selected for the first time as an index component of the DJSI World Index and DJSI Asia Pacific Index by a world representative ESG investment index, Dow Jones Sustainability Indices (DJSI).

▶ External ESG Assessment

	FY2018	FY2019	FY2020
CDP	Climate change: A Water: B	Climate change: A Water: A-	Climate change: A Water: A-
FTSE	Selected Score: 3.2/5	Selected Score: 3.4/5	Selected Score: 4.1/5
MSCI	Not selected Score: BBB	Selected Score: A	Selected Score: A
DJSI	Unanswered: Score: 19/100	Answered: Score: 60/100	World Index (Industry Mover)
Toyo Keizai CSR Ranking	180/1501 companies	121/1593 companies	126/1614 companies
Nikkei Smart Work survey	3.5 stars ★★★★☆	4.0 stars ★★★★☆	4.0 stars ★★★★☆
Nikkei SDGs	—	4.5 stars ★★★★★	4.0 stars ★★★★☆
Survey on Health & Productivity Management	White 500	Health & Productivity Stock Selection Program White 500	White 500

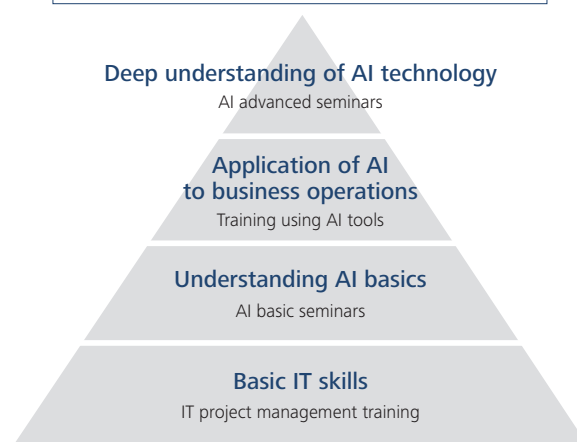
Accelerating Digital Transformation

Utilizing digital technology is essential for implementing ONO's four growth strategies. We have already organized the ONO internal Digital Community with approximately 200 members across all business departments. Each idea from members utilizing digital technologies like AI to streamline business process and improve productivity is reviewed and prioritized in this community from both a business benefit perspective and technical perspective. We're now accelerating digital transformation with a wider view and new technologies toward the upcoming medium term target.

<Talent development focused on digital capabilities>

As one of the key initiatives of the acceleration of digital transformation, we have implemented 'ONO Digital Training Program' for all employees who are expected to utilize digital technologies. The program includes multiple levels aligned with required technical levels and has been conducted with approximately 200 employees.

Train more digital human capital and promote DX in the future.



Approx. 200 employees in total received training

<Global IT Platform for Digital Transformation>

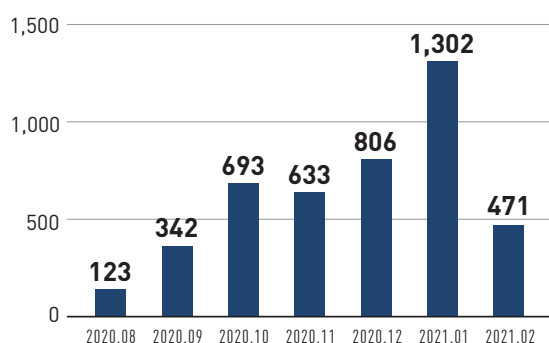
As one of the preparations for the upcoming medium term plan, we're developing 'ONO's Future Global IT Blueprint'. This blueprint covers all business functions globally from an enterprise perspective. What we'll implement with it is a simple IT landscape by leveraging cloud solutions. It enables us to transform our business flexibly and utilize 'data' across functions and regions with consistency, which is crucial for digital transformation. The infrastructure of data utilization is also included in this blueprint like a data lake which covers both internal and external data including real world data as well as boosting data science capability.

Major Activities for Digitalization

Company-wide Use of Real-World Data

The Data Strategy that was established in October 2019 takes the initiative and streamlines corporate activities while creating values through the company-wide use of real-world data (RWD). We have implemented the Japan and US RWD in the ONO DataBase, and introduced analytic tools, thereby simple analysis can be performed by each Division without requiring a statistical analyst. As a result, the number of uses of the RWD analysis tool has increased company-wide (right figure). In addition, by moving the analysis platform to the cloud, the necessary time for analysis, which was 5 hours or more, was decreased to approximately 4 minutes. Today we are building an infrastructure called "Data Lake" to accelerate the use of RWD in the company (scheduled to be complete at the end of 2022). We are now planning to use AI (artificial intelligence) and ML (machine learning) for the analysis of the complicated big data that can be available from inside and outside of the company, which is allowed for secondary use.

▶ Number of uses of the RWD analysis tool company-wide



Streamlining of Operations and Increasing Productivity by DX

<Sales department> The Sales department is addressing the streamlining of MR activities and increasing activity quality using AI.

● Drug information system "MIRAI Answer"

A chatbot (automated answering system) provides MRs with drug safety information and up-to-date clinical trial or paper information. The MR asks questions in text or voice to the system, and it gives 10 different answers per question. If the MR asks, for example, "what is the evidence for advanced lung cancer?" the system shows the answers in descending order of relevance. It is easy to find an answer to the MR's question at a glance. The system also helps MRs learn by themselves.

● AI-based scoring learning support system "MIRAI Doctor"

MIRAI Doctor is a role-play learning support system for MRs for meetings with physicians, and it gives MRs "role-play training" on tablets that is designed to simulate interactions with physicians-training that used to happen with their supervisors. When MRs answer the displayed questions orally, their answers are automatically recorded and scored by AI. It provides MRs with the opportunity for effective self-learning and thereby contributes to increasing sales quality.

<Production department> The production department is promoting activities to reform operation processes using AI for foreign matter tests in vials, which is currently conducted manually. AI can learn bubble traces at 50μm and distinguish bubbles from foreign matter in vials.

Message from the Director in Charge

Promoting digital transformation to provide further value to society

Utilizing the latest digital and information technologies is crucial to increase the probability of success of drug discovery and new business domain development, which are core in the upcoming medium term plan. From this perspective, we're accelerating digital transformation especially through the talent development and corporate culture reform in addition to upgrading IT and Digital infrastructure. My focus points are to develop an 'innovation mindset' in each employee and foster a corporate culture that constantly challenges without fear of failure. Through these activities, I believe we can deliver new value to patients and society.



Toshihiro Tsujinaka

Member of the Board of Directors, Senior Executive Officer
Executive Director, Corporate Strategy & Planning