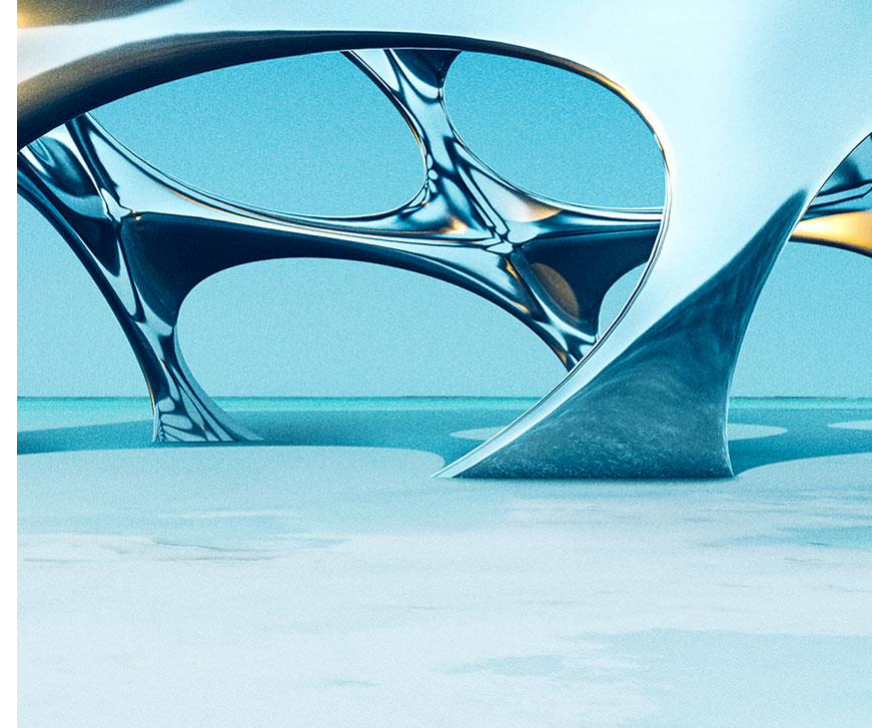




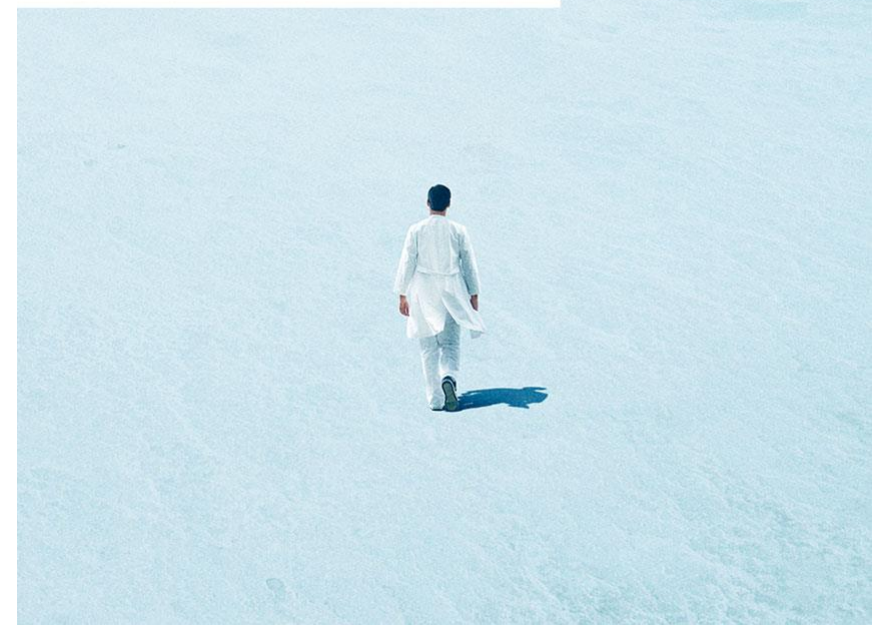
# Sustainability Meeting

27 November 2025

CHUGAI PHARMACEUTICAL CO., LTD.



INNOVATION BEYOND IMAGINATION



# Important Reminder

This presentation may include forward-looking statements pertaining to the business and prospects of Chugai Pharmaceutical Co., Ltd. (the “Company”). These statements reflect the Company’s current analysis of existing information and trends. Actual results may differ from expectations based on risks and uncertainties that may affect the Company’s businesses.

Information regarding pharmaceuticals (including products under development) is included in this presentation, but is not intended as advertising or medical advice.

# Agenda

**01**    –Connection with Society–  
**Chugai's Value Creation**

Director, Executive Vice President & CFO  
**Iwaaki Taniguchi**

**02**    –Connection Within and Beyond the Company–  
**Establishing a Pharmaceutical Technology Platform  
for Mid-Size Molecule Drugs**

Head of API Process Development Dept.,  
Pharmaceutical Technology Div.  
**Dr. Kenji Maeda**

**03**    –Connection with Capital Markets–  
**Governance Enhancement and Future Challenges**

Independent Outside Director  
**Hideo Teramoto**

–Connection with Society–  
**Chugai's Value Creation**

Director, Executive Vice President and CFO

**Iwaaki Taniguchi**

# Positioning of the 7th Sustainability Meeting

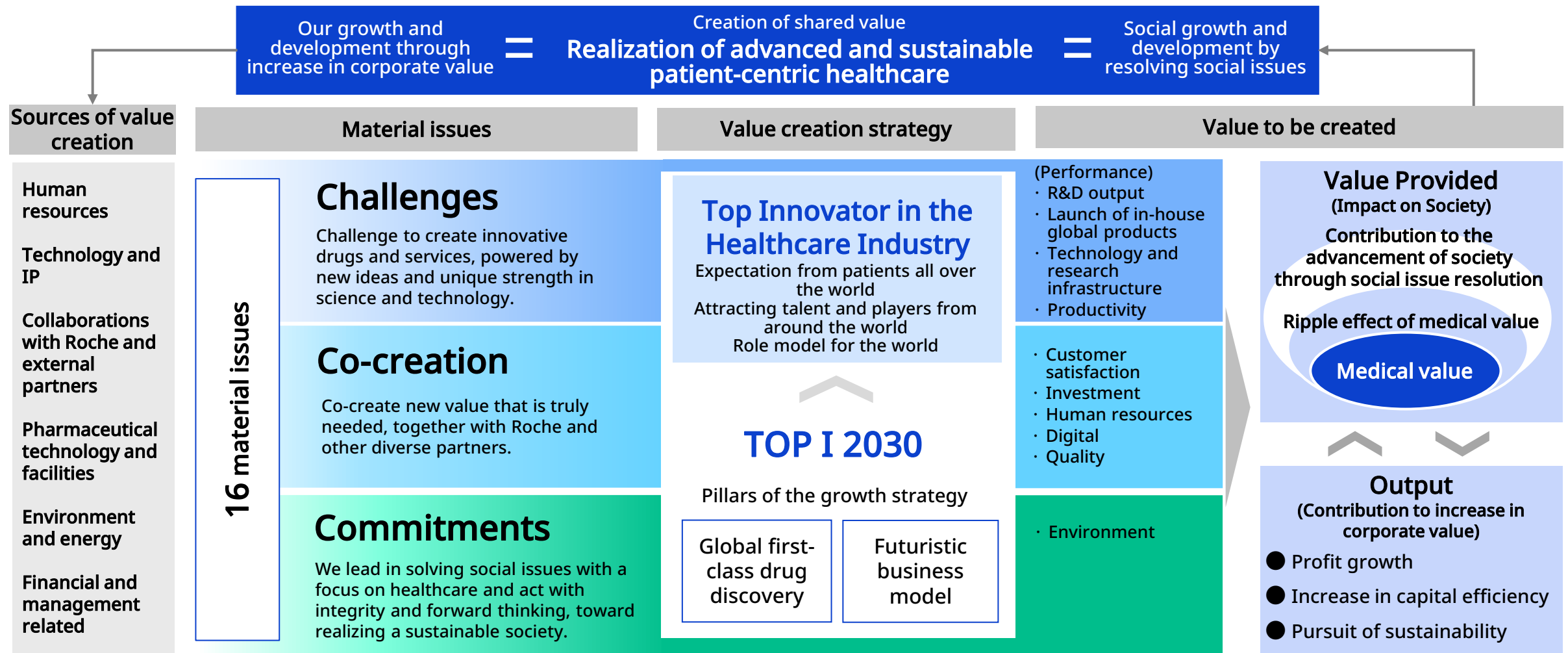
## ■ Planning themes for evolving sustainability each year

		Previous year ranking in DJSI* Ranking in the pharmaceutical sector	Sustainability issues	Setting of meeting themes
Start of IBI 21	2019 1st meeting	—	Clarifying companywide priorities	· Overview of ESG
	2020 2nd meeting	7th	Aiming to be a progressive ESG company	· Strategies and plans for ESG issues
Start of TOP I 2030	2021 3rd meeting	3rd	Advancing ESG as a management strategy	· ESG as management strategy
	2022 4th meeting	3rd	Seeking to be a role model	· Evolution of ESG and promotion of dialogue
	2023 5th meeting	1st	Restructure value creation model	· Growth strategy and sustainability issues
Refinement of TOP I 2030	2024 6th meeting	2nd	Materiality update	· Materiality revision and sharing issues
100th anniversary	2025 7th meeting	2nd	Sustainability initiatives based on new materiality	· Sharing initiatives focused on new materiality

\*S&P Global ESG Score (<https://www.spglobal.com/sustainable1/en/scores/results>) compiled by the Company

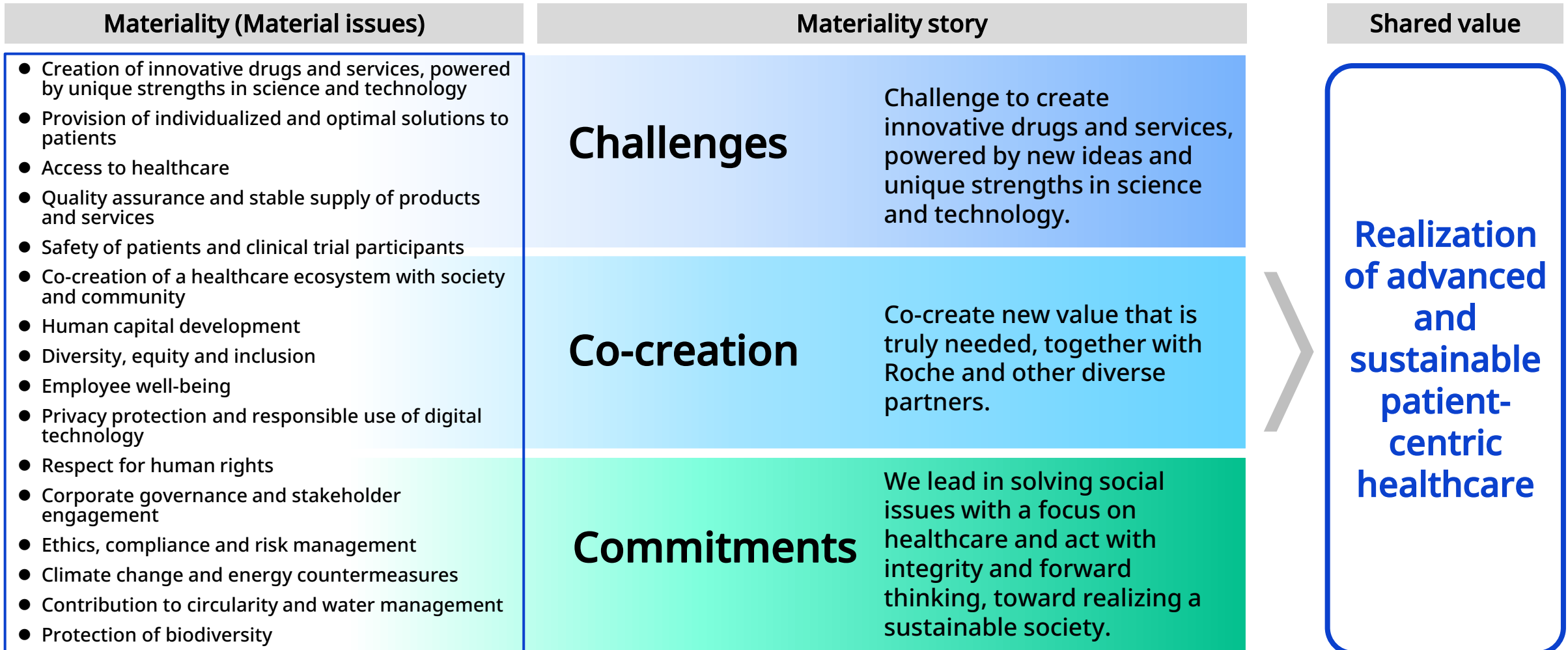
# Value Creation Model

- In 2024, we reorganized a process for creating shared value using materiality as axes



# Contribution to Sustainability Using Materiality as Axes

- For Chugai, value creation based on the axes of the three Cs means pursuing and contributing to sustainability





# Implementation of Materiality

- Developing business activities in line with our materiality story for value creation

## Target status

Manag  
ement

- Important management issues, including sustainability, organized as materiality, and utilized as the axes (key elements) for determining management strategies and policies

Divisions

- Management strategies based on materiality reflected by incorporating them into division activities
- Direction of division activities checked and organized based on the definition of materiality (material issues)

Outside

- Progress and results shared in line with our materiality story (three Cs)
- Feedback obtained through dialogue utilized in reviewing materiality, etc.

## Current initiatives

### [Business activities]

- Assessment of current initiatives against the definition of materiality (material issues)

### [Value creation indicators]

- Examine value creation indicators (performance indicators) that better express Chugai's value creation story (three Cs)



# Challenges: Major Recent Activities

- We continuously take on the challenge of creating value based on our proprietary technologies, science, and innovative ideas

★: Introduced in Topics on the following page

	Recognition of issues (medium to long term)	Main activities
Drug Discovery	<ul style="list-style-type: none"> <li>· Selection and concentration of management resource investment</li> <li>· Strengthening of research to maximize patient value</li> <li>· Enhancement of multi-modality strategy and IP strategy</li> </ul>	<ul style="list-style-type: none"> <li>· Continuous creation of Chugai originated projects and progress on demonstration of value</li> <li>· Review of Chugai originated projects, building of a system for flexibly and strategically allocating resources</li> <li>· Implementation of drug discovery and development based on Chugai's R&amp;D Principles</li> <li>· Establishing of a mid-size molecule drug discovery and pharmaceutical technology platform</li> <li>· *Introduced in this presentation</li> <li>· Progress on next-generation development projects: DONQ52 and NXT007, etc.</li> </ul>
Technology	<ul style="list-style-type: none"> <li>· Acceleration of drug discovery leveraging AI and digital technology</li> <li>· Development of drugs and related services (PSOL<sup>1</sup>, FM business<sup>2</sup>, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>· A project using the antibody drug discovery support technology MALEXA has advanced to clinical development stage (BRY10) ★</li> <li>· Development of software as a medical device (SaMD) for personalized healthcare (PHC) and its development as a PHC solution, promotion of the FM business</li> </ul>
Healthcare	<ul style="list-style-type: none"> <li>· Creation of evidence for optimal treatment selection</li> <li>· Establishment of new customer engagement model</li> <li>· Global health</li> </ul>	<ul style="list-style-type: none"> <li>· Initiatives to create post-marketing evidence to contribute to personalized healthcare mainly through the Medical Affairs Div. ★</li> <li>· Promotion of equitable access to healthcare throughout Japan and support for team-based medical care by the Marketing &amp; Sales Div.</li> <li>· Team-based medical care workshops for medical professionals in Cambodia</li> </ul>

1. PSOL: PHC solutions

2. FM business: Foundation Medicine business

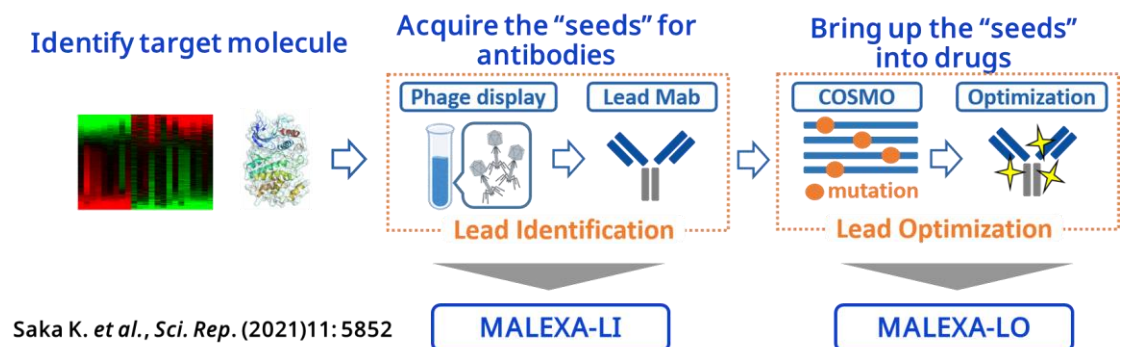
# Challenges: Topics

- We will further refine our proprietary technological capabilities through the use of digital technology, etc., while promoting initiatives to cultivate deeper understanding of frontline healthcare needs with the aim of providing optimal therapy to individual patients

## A project using the antibody drug discovery support technology MALEXA has advanced to clinical development stage

The antibody drug BRY10, which was created using MALEXA, Chugai's proprietary antibody drug discovery support technology based on AI, has now started clinical Phase I trials for chronic disease

### MALEXA : Machine Learning x Antibody



Illustrative diagram

## Initiatives to create post-marketing evidence to contribute to personalized healthcare

- The Medical Affairs Division conducts research in collaboration with academia and other partners, analyzing treatment burdens and factors considered in treatment selection through patient interviews. Based on these analytical findings as hypotheses, we are currently undertaking initiatives to further validate them quantitatively.



✓ Research on NMOSD<sup>1</sup>

✓ Research on PNH<sup>2</sup>

- Contributing to fostering an environment for SDM (Shared Decision Making)



Source: Shimizu Y, et al. 2025; Clinical and Experimental Neuroimmunology. 10.1111/cen3.70026.  
Ueda Y, et al. Ann Hematol. 2025 Jul;104(7):3575-3584. doi: 10.1007/s00277-025-06486-9.  
Epub 2025 Jul 18. (Both reports' authors include employees of Chugai Pharmaceutical)

1. Neuromyelitis optica spectrum disorder 2. Paroxysmal nocturnal hemoglobinuria

# Co-Creation: Major Recent Activities

- Promoting co-creation with professionals in Japan and overseas is essential to Chugai's value creation

★: Introduced in Topics on the following page

	Recognition of issues (medium to long term)	Main activities
Co-creation with society and communities	<ul style="list-style-type: none"> <li>• Promotion of collaboration with academia and companies in Japan and also overseas</li> <li>• Enhancement of information provision for patients and caregivers</li> <li>• Strengthening collaboration with industry organizations and governments</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of joint research with academia and research organizations, etc.<sup>1</sup> at the drug discovery stage ★</li> <li>• Promotion of investment in Chugai Venture Fund, LLC</li> <li>• Sharing results of PHARMONY initiatives to incorporate patients' opinions in business activities and holding PHARMONY DAY events to discuss patient participation in healthcare with patient groups and medical professionals</li> <li>• Cooperation and discussion with industry groups, etc., toward enhancement of clinical trial information provision to patients</li> <li>• Construction of a disease database for blood coagulation disorders in cooperation with patient associations and academia ★</li> <li>• Promotion of policies through coordination between government, domestic and overseas industry groups, and other industries, toward the promotion of science and technology in Japan and the creation of a bioeconomy</li> </ul>
Digital	<ul style="list-style-type: none"> <li>• Coordination and co-creation with partners in Japan and overseas</li> <li>• Strengthening of digital security</li> <li>• Utilization of advanced AI</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of the ASPIRE<sup>2</sup> project</li> <li>• Coordination and collaboration with external partners such as SoftBank Corp. and SB Intuitions Corp.</li> <li>• Strengthening of countermeasures and security for risks associated with use of digital technology</li> <li>• Utilization of generative AI and AI agents</li> </ul>
Human resources	<ul style="list-style-type: none"> <li>• Acquisition and development of highly specialized human resources</li> <li>• Creation of an environment where each employee can participate actively</li> </ul>	<ul style="list-style-type: none"> <li>• Start of new human resource management system and job postings</li> <li>• Company-wide roll-out of job-oriented human resources system</li> <li>• Abolition of upper age limit on employment (implemented from 2026)</li> <li>• Strengthening of engagement of employees using the 100th anniversary</li> <li>• Promotion of the recruitment and participation of post-doctoral talent</li> </ul>

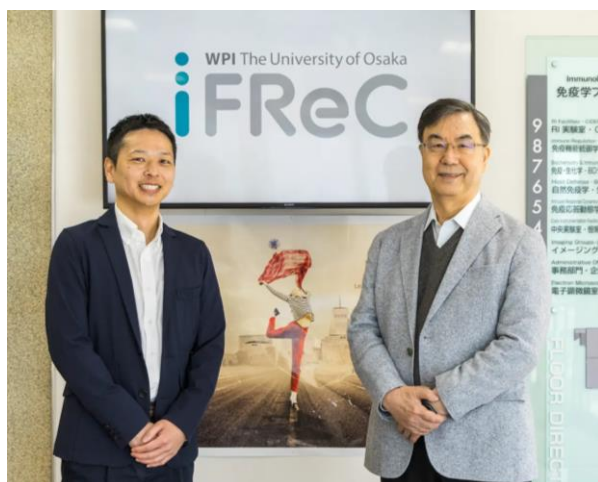
1. IFReC, the University of Tokyo, Araris, A\*STAR, Noile-Immune Biotech Inc., RIKEN, etc.

2. A business and digital transformation program to implement cutting-edge, global standardization processes and the next generation of enterprise resource planning across Chugai

# Co-Creation: Topics

- To mark our 100th anniversary, we will renew our commitment to patient-centric healthcare, which is Chugai's core value, and co-create value with patients and medical professionals

## Joint research with Professor Shimon Sakaguchi, the University of Osaka

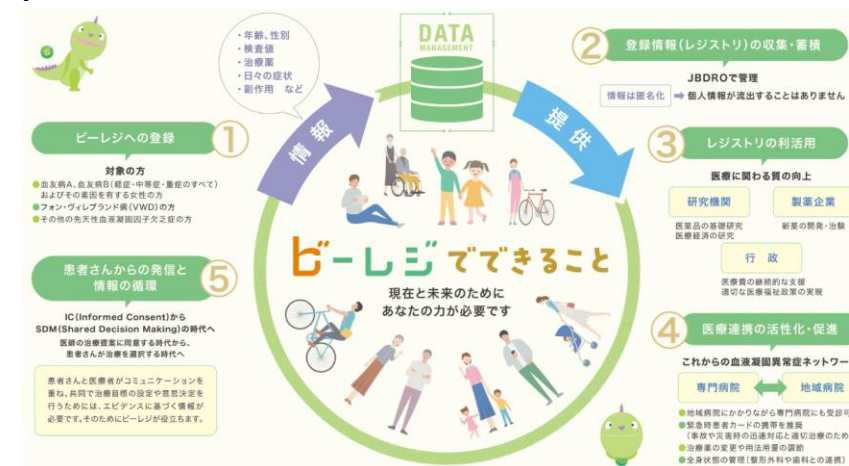


- Professor Shimon Sakaguchi of the University of Osaka Immunology Frontier Research Center (IFReC<sup>1</sup>) received a prestigious international award
- Phase I clinical trials is currently underway for an antibody developed using our proprietary drug discovery technology, following our joint research with Professor Sakaguchi

1. Under a comprehensive collaboration agreement with the University of Osaka, Chugai has been promoting various joint research projects related to advanced immunology research with IFReC.

## Construction of a disease database for blood coagulation disorders<sup>2</sup> in cooperation with patient associations and academia

- The construction of a database of blood coagulation disorders, which have small patient numbers and diverse symptoms, will enable the systematic collection of epidemiological information, clinical symptoms, complications, and QOL data



2. Source: Japan Bleeding Disorder Registry Organization (JBDRO), B-Regi (Bleeding Disorder Registry) <https://b-regi.net/bregi/>, accessed November 27, 2025. (Japanese only)

# Commitments: Major Recent Activities

- Chugai is contributing to the realization of a sustainable society through all of its activities, with a central focus on healthcare

★: Introduced in Topics on the following page

	Recognition of issues (medium to long term)	Main activities
Environment	<ul style="list-style-type: none"> <li>· Managing progress and evolving activities toward achieving Mid-Term Environmental Goals 2030</li> </ul>	<ul style="list-style-type: none"> <li>· Achievement of 100% renewable energy ratio in purchased electricity</li> <li>· Publication of disclosure reports based on TNFD recommendations ★</li> <li>· Chugai Life Science Park Yokohama designation as a “Nature-Symbiosis Site” by the Ministry of the Environment</li> </ul>
Compliance and risk management	<ul style="list-style-type: none"> <li>· Continuous response to quality and supply risks, and risk reduction</li> <li>· Continuous strengthening of governance system</li> <li>· Assessment of trends in laws, regulations, and international norms, and rapid response</li> </ul>	<ul style="list-style-type: none"> <li>· Strengthening of cyber-security system</li> <li>· IT digital risk assessment</li> <li>· Strengthening of initiatives for evaluating the effectiveness of the Board of Directors (Steady execution of PDCA cycle, strengthening of programs outside of the Board of Directors) ★Introduced in this presentation</li> <li>· Strengthening of initiatives to prevent harassment by customers (investigation, establishment of rules, training, etc.)</li> </ul>
Stakeholder engagement	<ul style="list-style-type: none"> <li>· Dialogue with multi-stakeholders including capital markets</li> <li>· Reflection of engagement results in management activities</li> </ul>	<ul style="list-style-type: none"> <li>· Strengthening of dialogue with capital markets (disclosure, presentations, individual interviews, etc.) ★</li> <li>· Introduction of a multilingual, multi-channel compliance notification system for all stakeholders</li> <li>· Promotion of social contribution activities (experimental classes for children at biology labs, supporting sports for people with disabilities, etc.)</li> </ul>



# Commitments: Topics

- While identifying important topics such as the global environment, governance, and risk management, Chugai will continue to promote medium- to long-term initiatives and dialogue with the capital markets

## Publication of disclosure reports based on TNFD recommendations

- Based on the approach recommended by the Taskforce on Nature-related Financial Disclosures (TNFD), assessment of nature-related issues that affect the Company's business activities and formulation and implementation of countermeasures to reduce risks with respect to material issues identified through impact analysis

### Water pollution/Water ecosystem

To evaluate the presence or absence of protected areas and reservoirs in the downstream of the target site using tools (such as IBAT\* and Global Dam Watch)

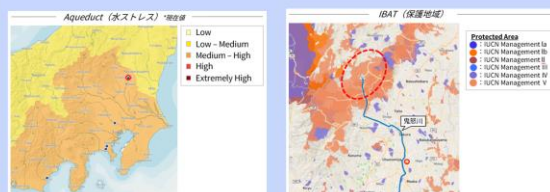
Ex.) Utsunomiya plant



### Water withdrawal

To confirm the level of water stress in the target locations and the presence or absence of protected areas in upstream water sources using tools (such as IBAT\* and Aqueduct)

Ex.) Utsunomiya plant



\*IBAT: Integrated Biodiversity Assessment Tool

## Strengthening of dialogue with capital markets (disclosure, briefings, individual interviews, etc.)

- Ranked No. 1 in the pharmaceutical sector for "Excellent Companies in Corporate Disclosure" by the Securities Analysts Association of Japan (SAAJ) in 2025 (for the second consecutive year)



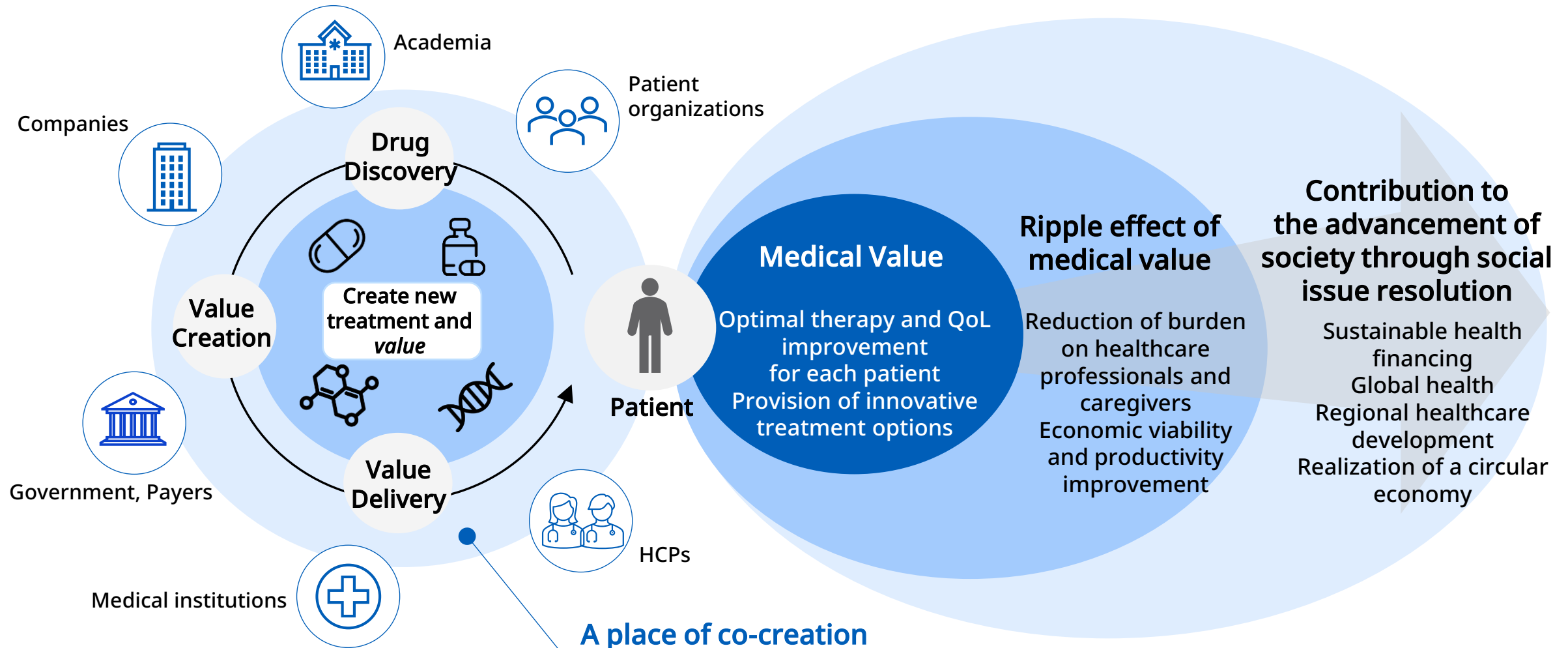
2025 Award for Excellence  
in Corporate Disclosure  
— Industries —

SAAJ The Securities Analysts  
Association of Japan

Evaluation item	Main evaluation point
Management's IR attitude	Management's attitude of engaging sincerely with the stock market, with management and IR functions constantly pursuing improvement
Briefings, etc.	Providing sufficient and appropriate information for long-term performance forecasts and corporate value calculation, and improving information disclosure on out-licensed products
ESG-related	Sustainability briefings, ESG data disclosure, opportunities for dialogue with outside directors
Voluntary information disclosure	Various briefings including R&D, plant observation tours, and timely explanations of products and development projects of high interest to investors

# Toward the Next 100 Years

- We will engage with important issues through co-creation with internal and external partners as we advance toward realizing high quality, sustainable healthcare





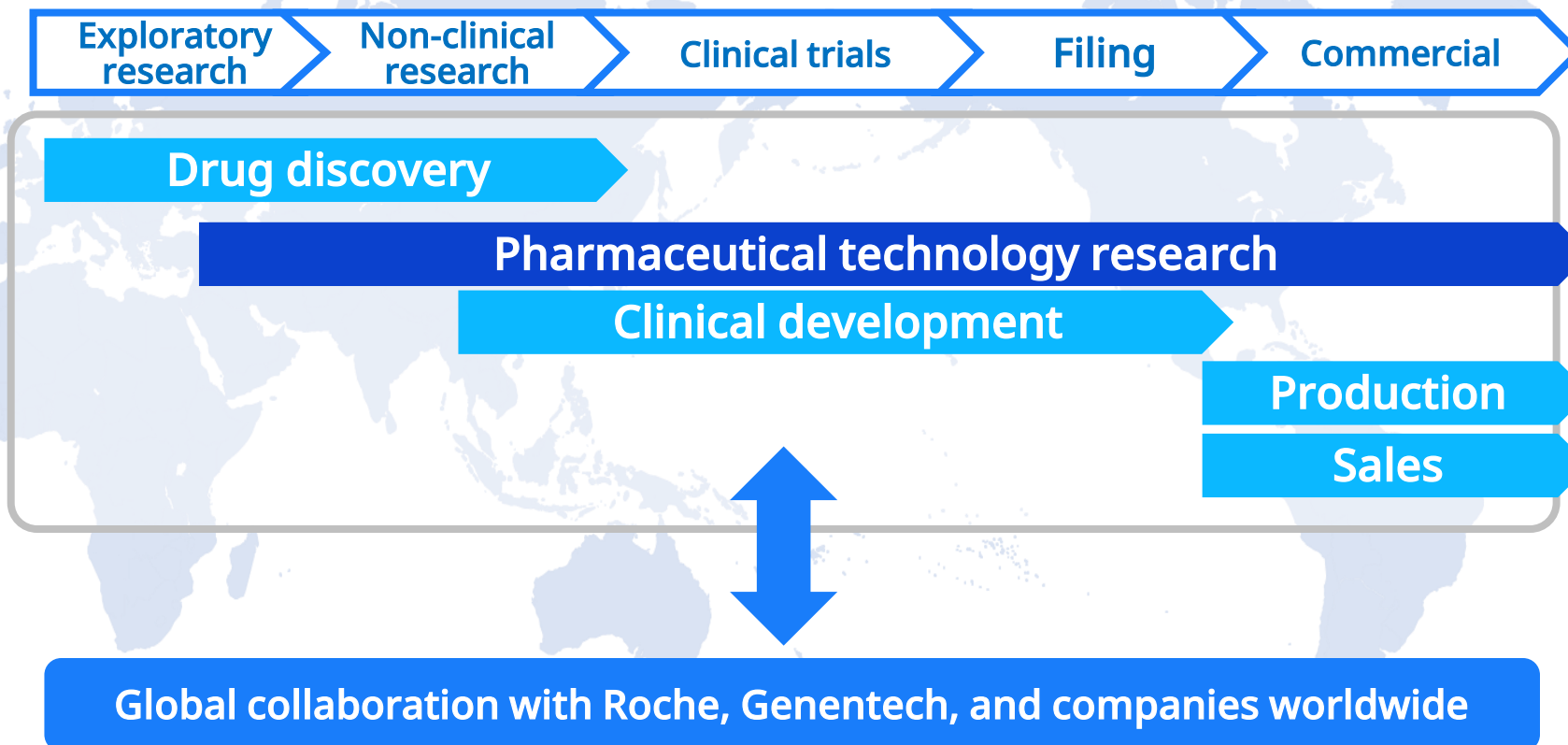
**–Connection Within and Beyond the Company–**  
**Establishing a Pharmaceutical Technology**  
**Platform for Mid-Size Molecule Drugs**

Head of API Process Development Dept., Pharmaceutical Technology Div.

**Dr. Kenji Maeda**

# Pharmaceutical Value Chain and Pharmaceutical Technology Research

- Pharmaceutical technology research bridges a broad range of functions between drug discovery and production
- Our mission is to develop production processes that realize stable supply of high-quality drugs at low-cost for the benefit of patients worldwide

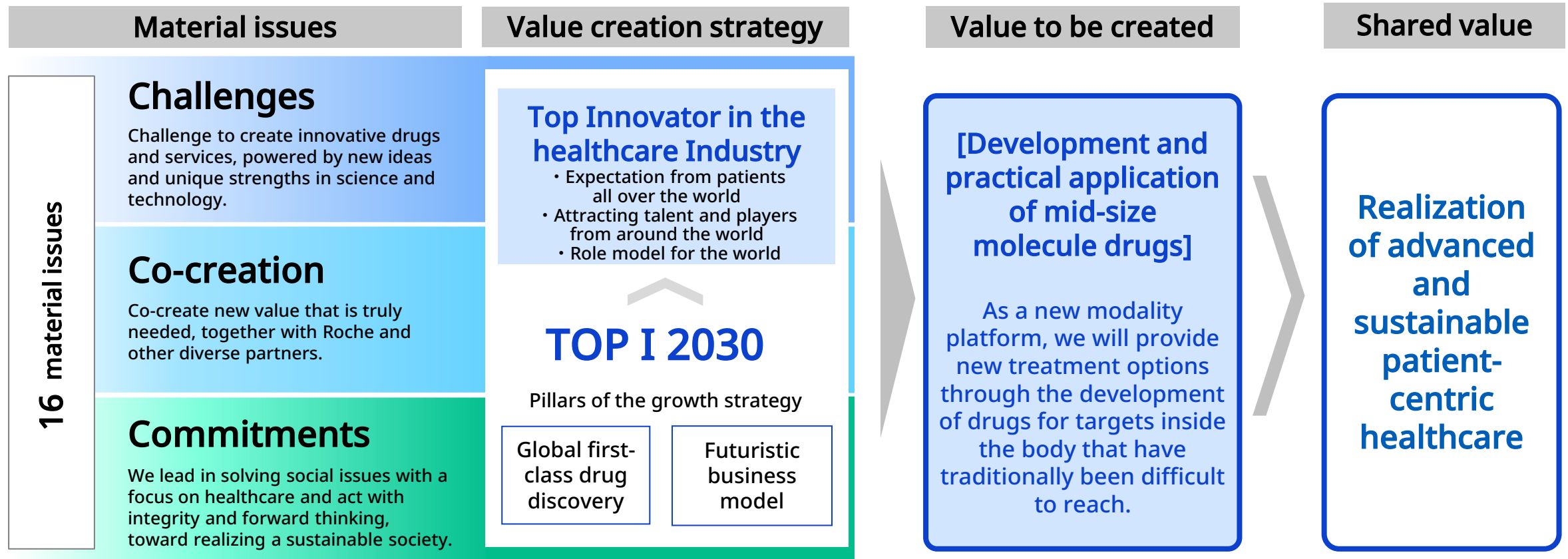


Provision of  
innovative drugs



# Establishment and Practical Application of Mid-Size Molecule Drug Platform

- The establishment and advancement of mid-size molecule (macrocyclic peptide) pharmaceutical technology and production systems embodies the Company's value creation story (three Cs), and is one of the material issues for achieving the targets of TOP I 2030

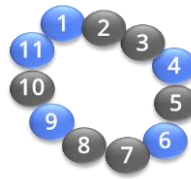


# Challenges in Commercialization and Production of Mid-Size Molecules

- Mid-size molecules (Chugai-type cyclic peptides) have different structural and physical properties not only to small molecules, but also to conventional peptide drugs. We are directly tackling new issues to enable drug production

## Characteristics of Chugai-type cyclic peptides

- Approximately 3 times larger than small molecules
- Cyclic peptide (9–11 residues)
- Most are non-natural amino acids
- Highly potent substance
- Orally administrable



⇒ Created through precise molecular design

We needed to resolve the following three issues simultaneously



Cost

How can we improve the efficiency of producing molecules composed of non-standard amino acids?



Development speed

How quickly can discovered molecules be made ready for production without reworking?



Safety

How safely can highly pharmacologically active substances be mass produced?

# Direction for Solutions to Challenges

- To achieve production that satisfies the requirements for cost, development speed, and safety, we focused on synthesis methods and equipment. We aimed to resolve issues through coordination and collaboration with internal and external professionals

## Overcoming Challenges through Internal and External Collaboration

### 1 Development of new synthesis technology

Development of a new synthesis technology able to efficiently synthesize non-standard mid-size molecules that include non-natural amino acids

### 2 Investment of new synthesis equipment

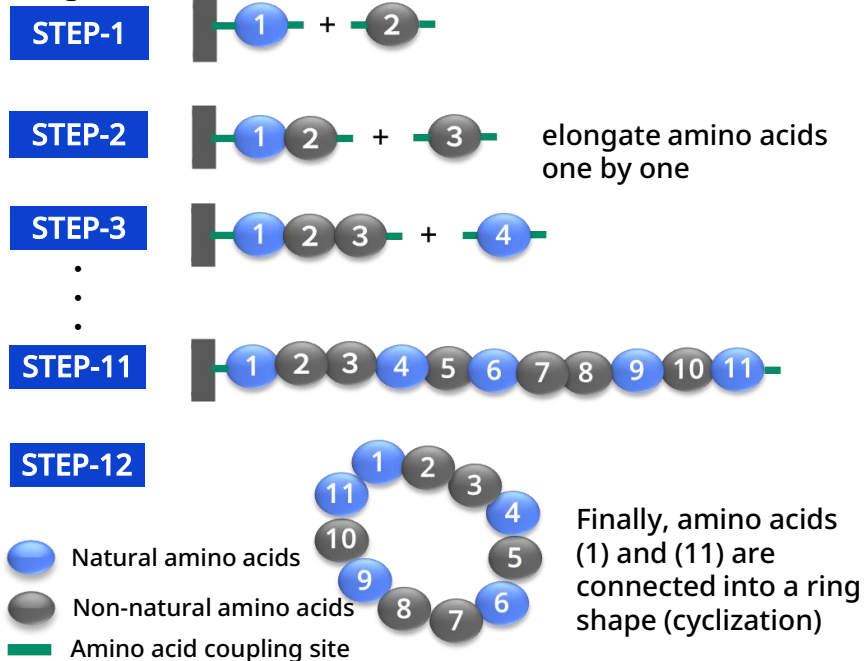
Design and implementation of synthesis equipment for safe, large-scale production of highly potent mid-size molecules

## Development of New Synthesis Technology: (1) Background

- Initially we adopted solid phase synthesis method commonly used for peptide drug synthesis. However, we explored new synthesis methods suited to Chugai-type cyclic peptides

### Initially adopted solid phase synthesis method \*

(Image)



Method of fixing one side of the amino acid coupling site in resin to enable the other side to be coupled to the next amino acid. This method is widely used as an amino acid peptide synthesis method

\* Hou, Z.; Komiya, S.; Iwasaki, K. et al. *Org. Process Res. Dev.* **2025**, 29, 2764.



### Cost

- ✗ High manufacturing cost
  - ✓ Requires large quantity of amino acids and reagents
- ✗ Large scale production is difficult



### Development speed

- ✓ Simple synthesis reaction
- ✓ Relatively easy process development
- ✓ Ability to synthesize diverse peptides



### Safety

- ✗ Cannot use facilities or know-how for highly potent small-molecule drugs (liquid-phase synthesis)

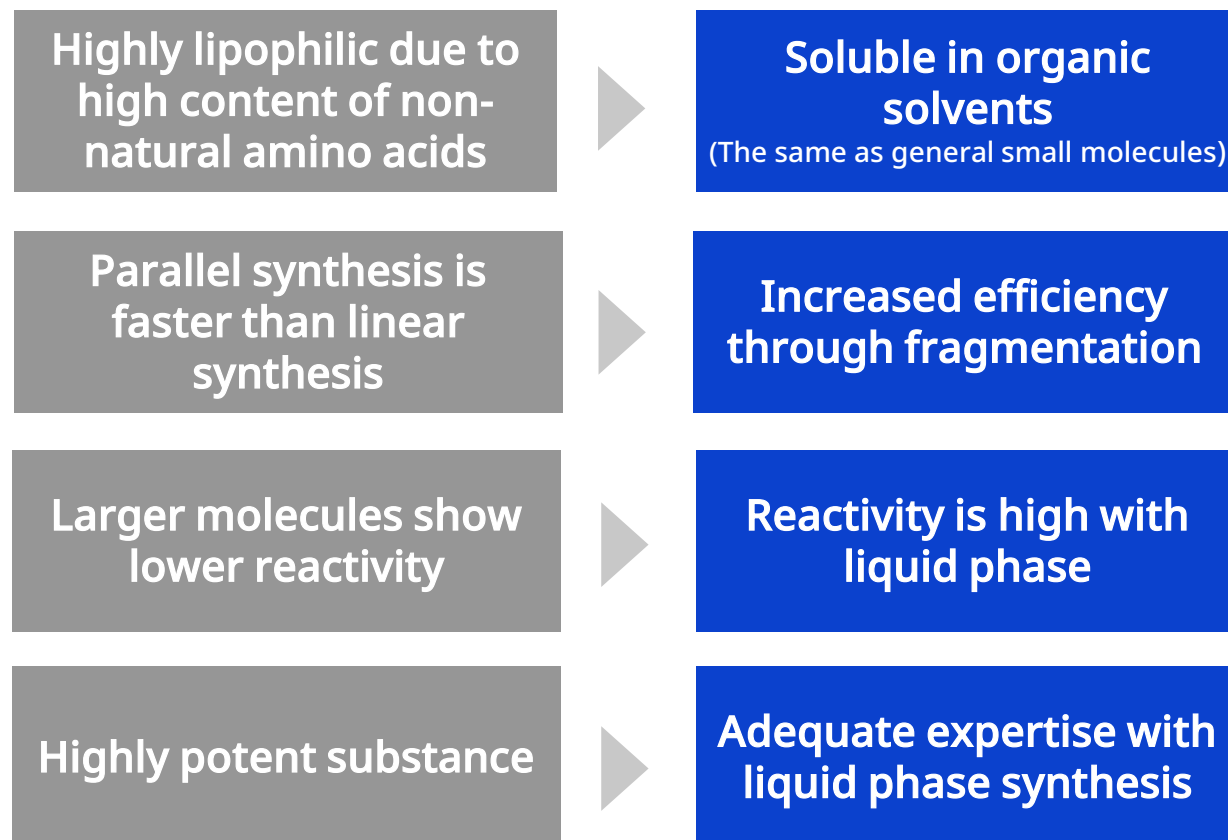
Need for a breakthrough to simultaneously address all three issues

## Development of New Synthesis Technology :

# (2) Exploring Synthesis Methods

- In this system, where many synthetic chemists' first choice is solid phase synthesis, we explored an original approach, deliberately adopting a liquid phase synthesis method. We pursued new possibilities beyond traditional boundaries

### Concept for synthesis method development



### New liquid phase synthesis method

**We identified a chance to solve cost, speed, and safety by developing our proprietary new liquid-phase synthesis method**



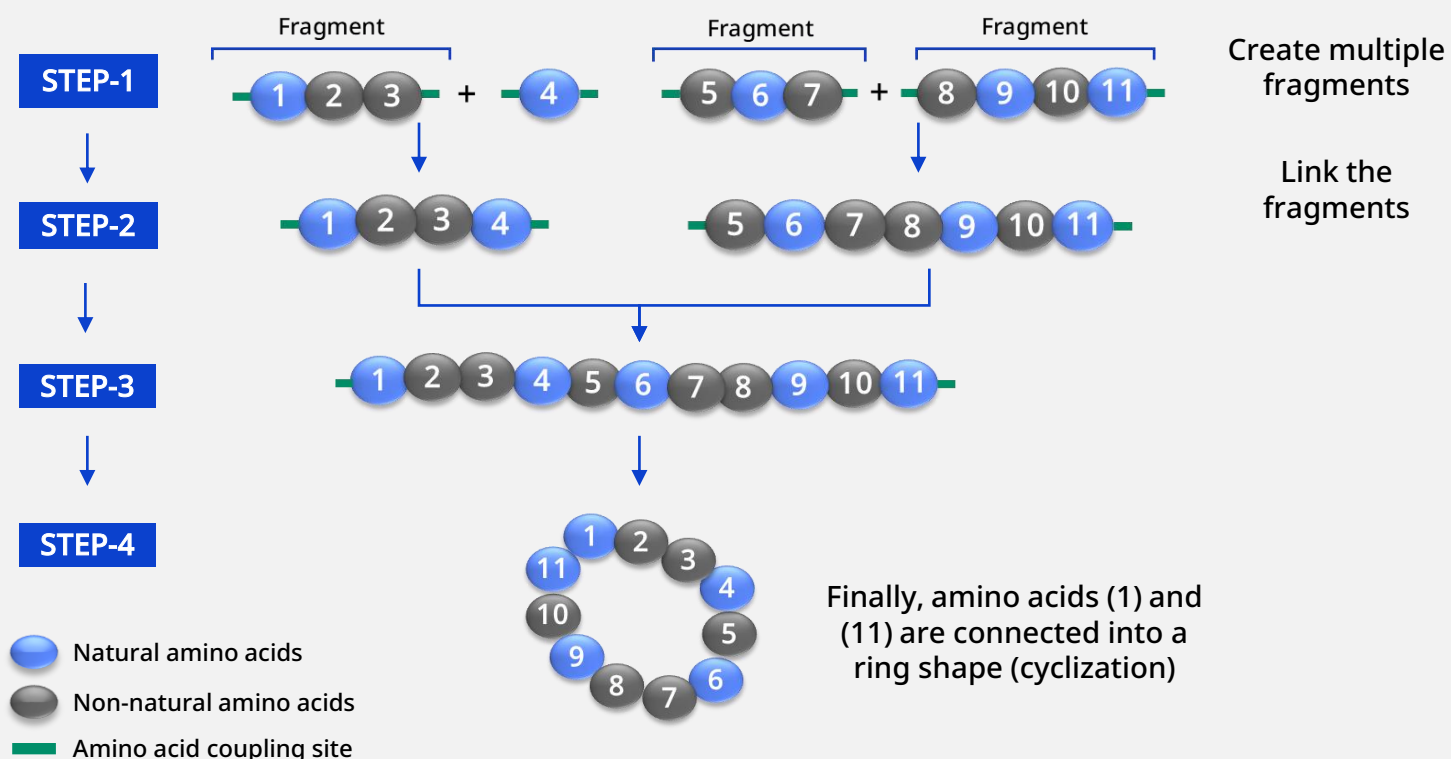
## Development of New Synthesis Technology :

### (3) Multi-Fragmentation Synthetic Approach

- A synthetic approach that prepares multiple amino acid fragments in advance and combines. Started development as a pharmaceutical technology platform for Chugai-type cyclic peptides that is expected to significantly improve productivity

#### Image of multi-fragmentation synthetic approach

(Image)

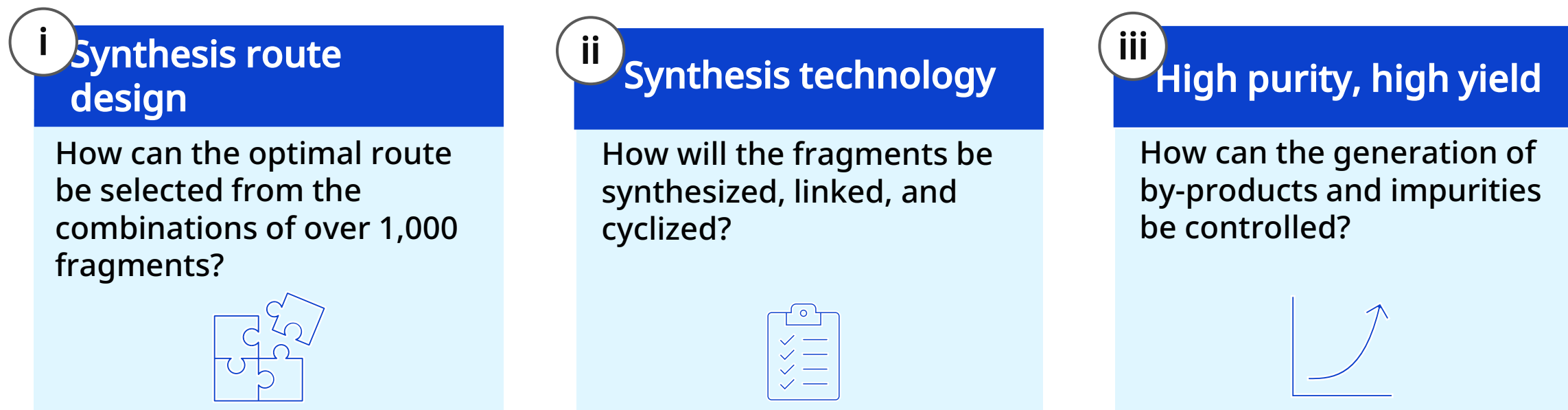


- Overall manufacturing process can be shortened
- Reactions take place quickly due to liquid phase (can reduce the amount of required reagents and substrates)
- Fragment combination enables design of synthesis routes (high degree of design flexibility)

## Development of New Synthesis Technology:

# (4) Challenge to Realize a High-Efficiency Synthesis Method

- The following three technological factors are essential for the practical application of the multi-fragment liquid phase synthesis method, with its numerous advantages, and maximization of its potential. Promotion of links with internal and external experts in a wide range of fields



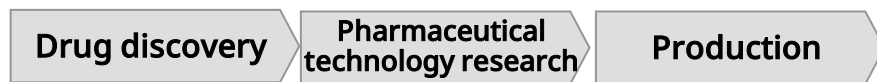
Innovation through internal and external cooperation

## Development of New Synthesis Technology : (5) Co-Creation Inside the Company

- Integrated development of molecule design, synthesis technology, and manufacturing processes, and realized through close cooperation between divisions

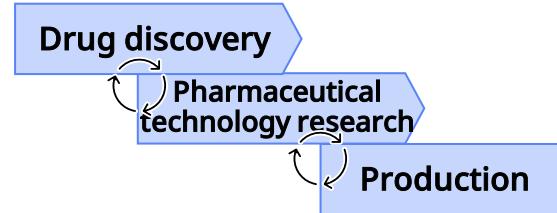
### Relay-type approach

- ✓ Development is promoted within each division's expertise and clear scope of responsibility
- ✓ Used in cases where the technology is mature
- ✓ Risk of reworking, etc. if issues occur



### Agile approach (mutual cooperation)

- ✓ Each division contributes its expertise and cooperates on development
- ✓ Used for developments that have a high level of difficulty or for rapid development
- ✓ High communication cost



- High level design
- Speed
- Flexibility

#### Essential requirements

- ✓ Trust between divisions (RED, Pharmaceutical Technology - Production) built up over many years
- ✓ High-level expertise and technologies cultivated in small molecule medicine
- ✓ Strong commitment from management team to discover innovative drugs and supply them as quickly as possible

Looking ahead to the “multiple simultaneous development phase,” where multiple development products discovered from the mid-size molecule drug discovery platform, we will accelerate development speed

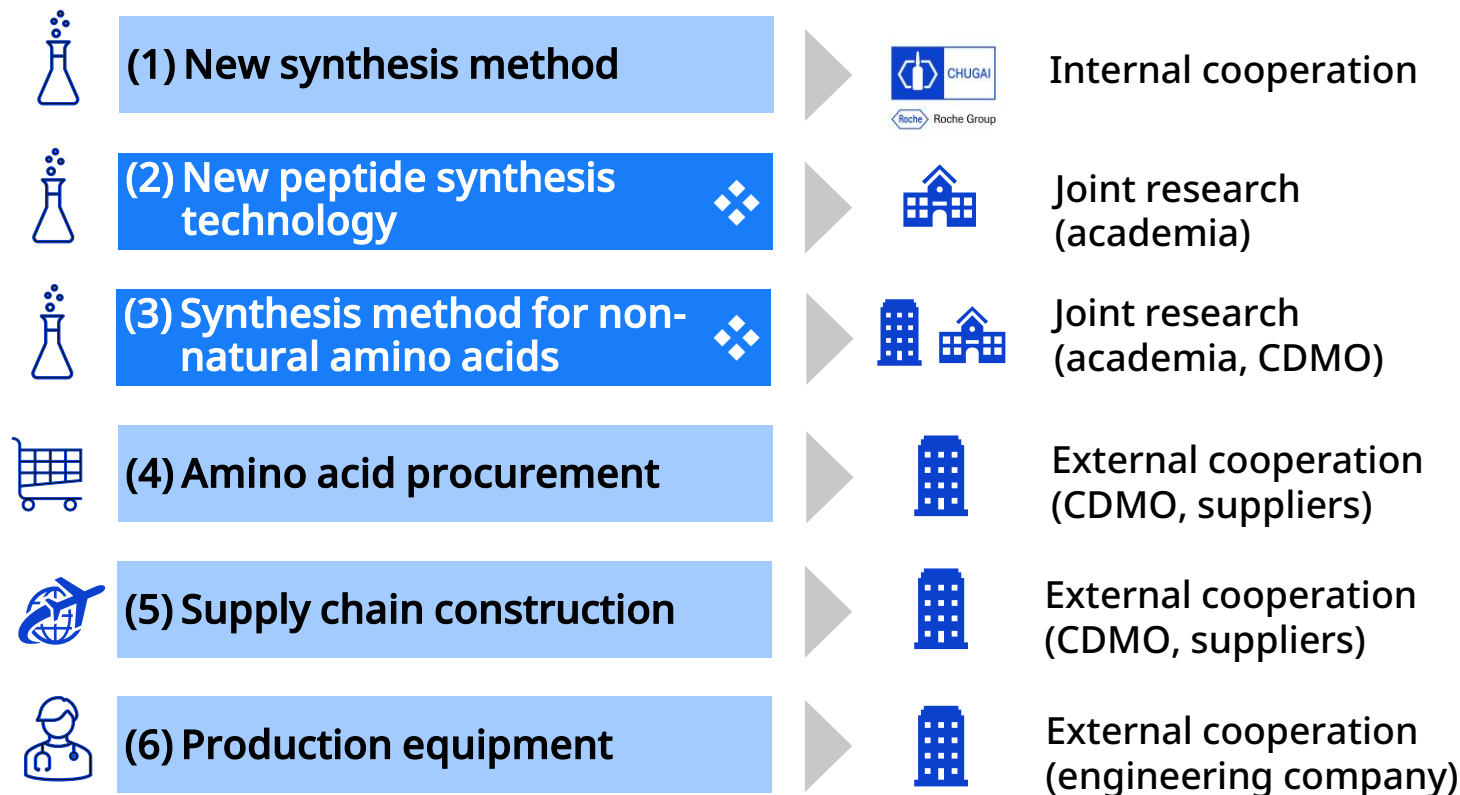
## Development of New Synthesis Technology :

# (6) Co-Creation with External Organizations

- We will accelerate innovation through collaboration with external organizations that have specialized technologies. Looking ahead, we will focus on initiatives aimed at further manufacturing cost optimization

### Essential elements ( future focus points)

### Cooperation framework



### Examples of results

- ✓ Working with CDMOs, achieved 50 kg scale supply of API for LUNA18
- ✓ Through joint research, reduced the cost of certain non-natural amino acids to less than one third
- ✓ Succeeded in reducing manufacturing process steps by half for the latest Chugai-type cyclic peptide
- ✓ 23 pharmaceutical technology patents related to mid-size molecules\*
- ✓ Currently working with more than 10 CDMOs in Japan and overseas

## Investment of New Synthesis Equipment:

# (1) Production Facility for Ultra-High Potency APIs

- Through external collaboration, we built world-class containment facility for manufacturing of ultra-high potency APIs

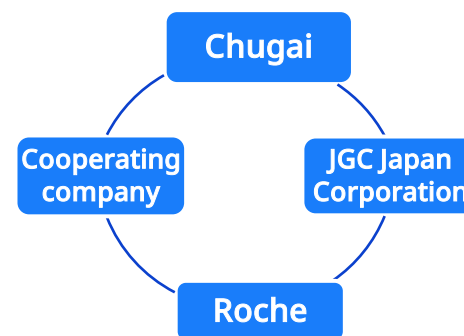
## Synthetic API manufacturing building FJ2



- Achieved the world's highest airtight containment level, with a concentration in air of  $0.05 \mu\text{g}/\text{m}^3$  or less
- With the introduction of automation and the latest technologies, high levels of safety, productivity, operability, washability, and environmental load reduction have been achieved
- Received an award in the Innovation category at the ISPE\*12023 Facility of the Year Awards



\*1 International Society for Pharmaceutical Engineering



Collaboration with Roche



\*2 Next-generation containment technology using JGC Japan Corporation's patented technology



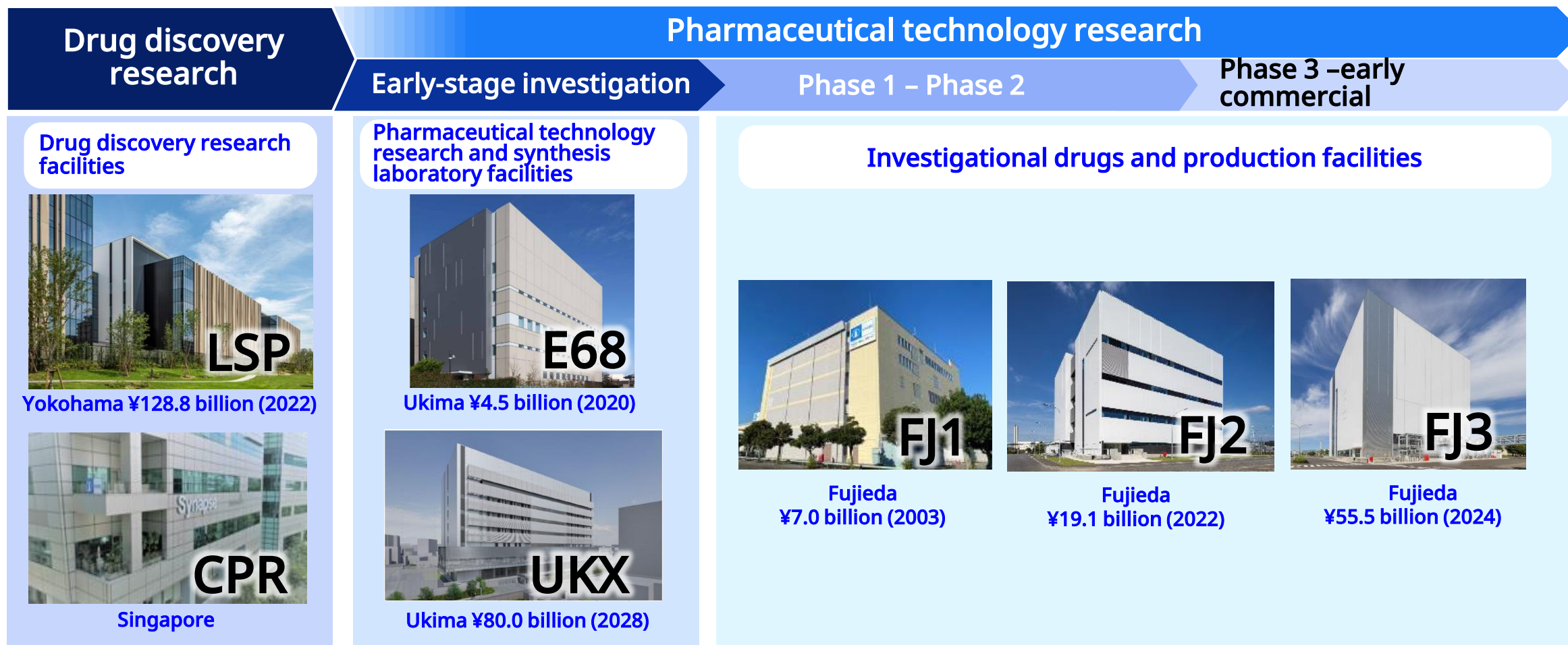
Collaboration with JGC Japan Corporation

We achieved a high level of containment with the participation of cooperating companies with various specialized technologies, such as JGC Japan Corporation.



## Investment of New Synthesis Equipment (2): (2) Preparing a Seamless Facility

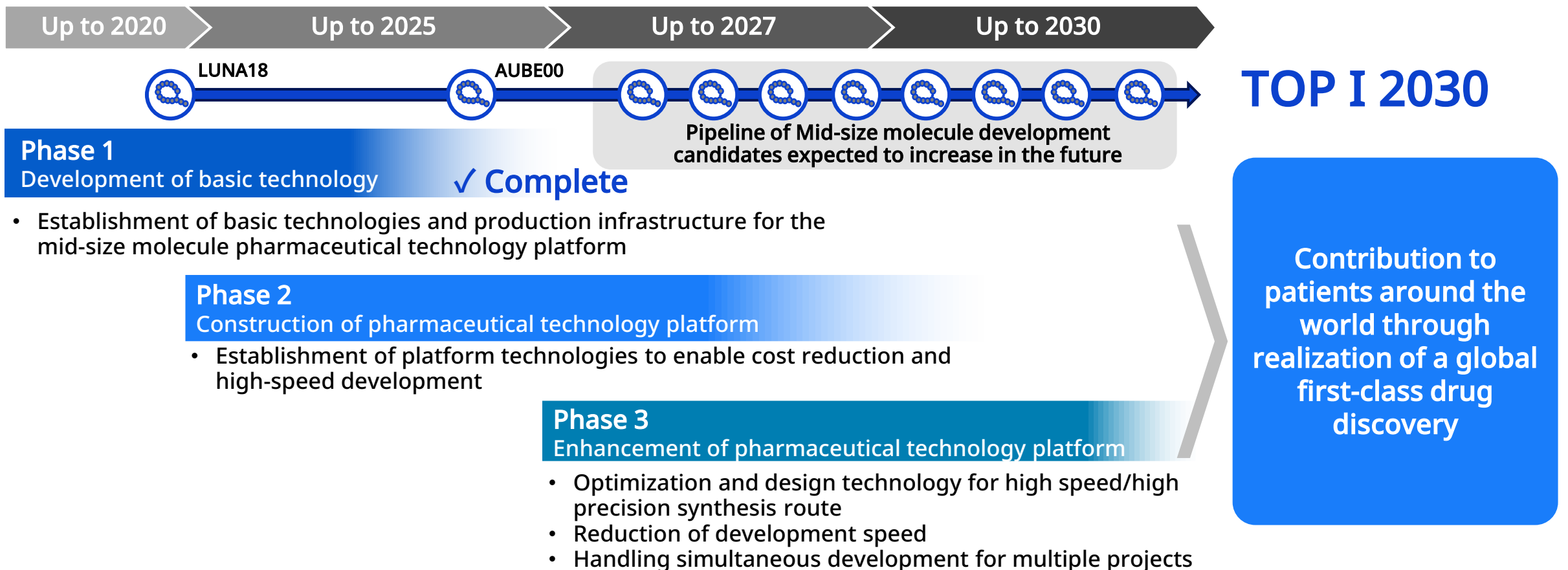
- Building facilities to enable seamless, end to end development from drug discovery to production. Further reinforcement with the recent decision to construct UKX
- Handling of a rich development pipeline and acceleration of development speed



\*Dates in parentheses are the years of construction completion

# Further Evolution for the Future

- Construction of basic production infrastructure and pharmaceutical technology platform is complete
- Upgrading our pharmaceutical technology platform to reduce cost and accelerate development in response to future pipeline growth

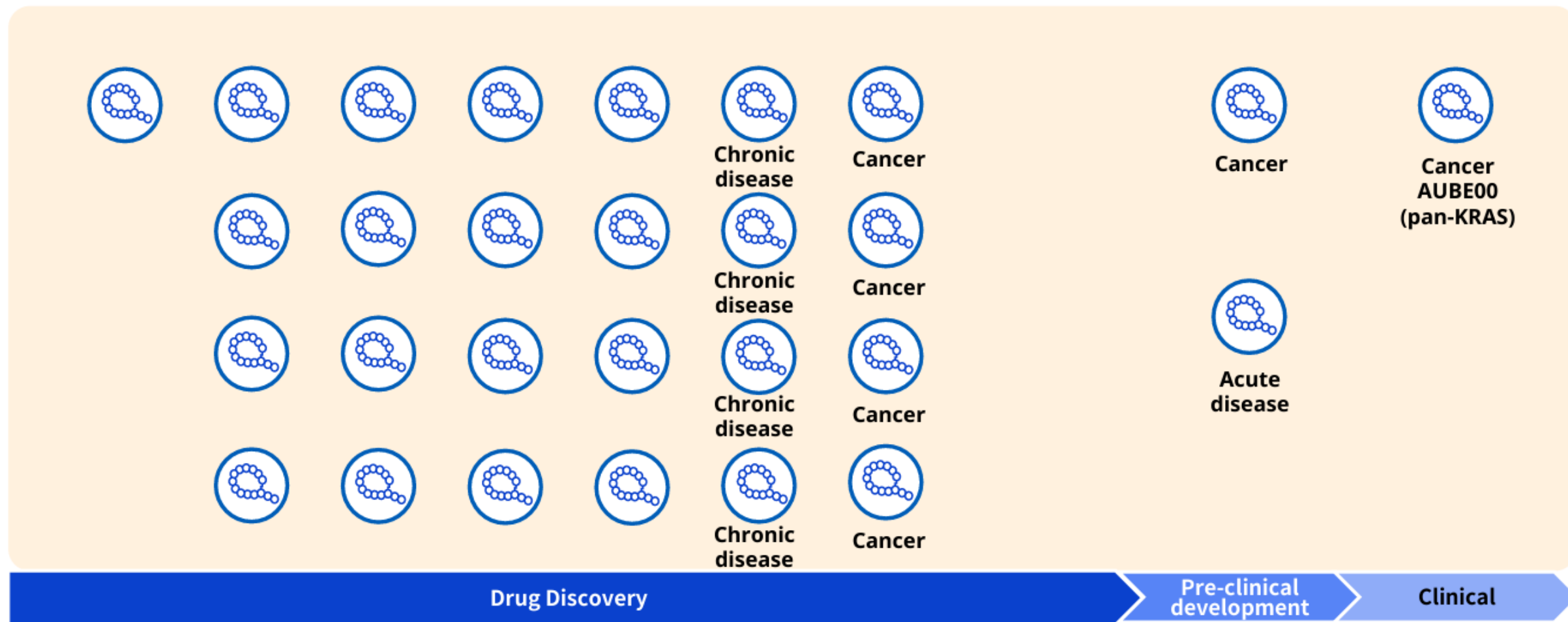




# Appendix

# Mid-Size Molecule Drug Discovery: Portfolio

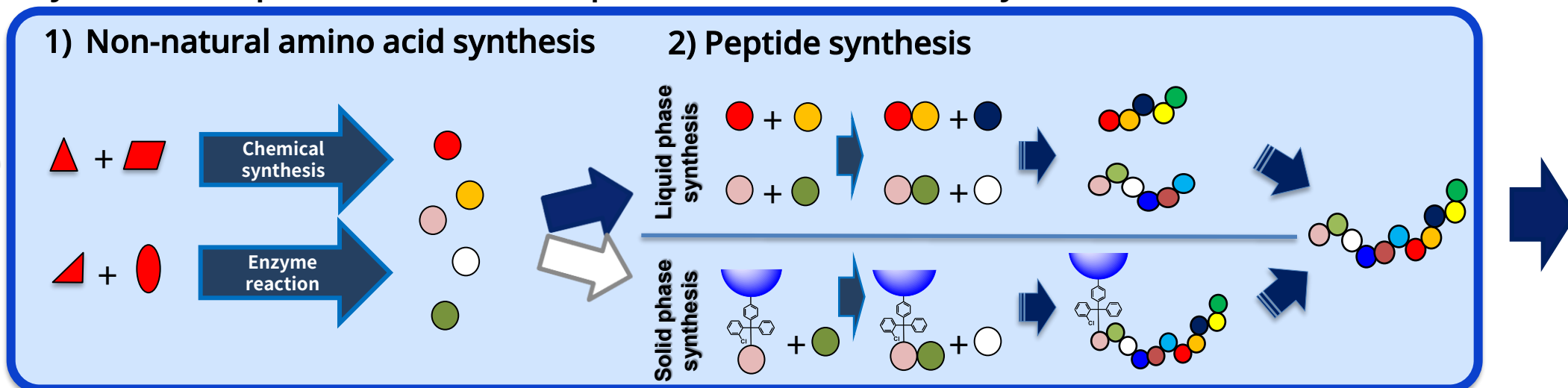
As of July 24, 2025



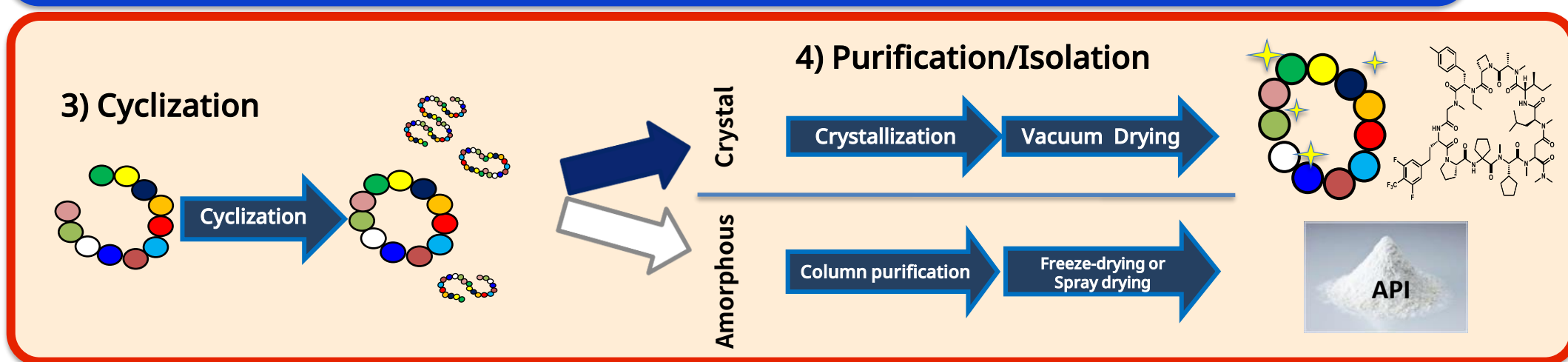
# Chugai-Type Cyclic Peptide Synthesis Method

- Chugai-type cyclic peptides are synthesized through four major steps
- The peptide synthesis and purification/isolation processes each have two synthesis methods

Intermediate  
process



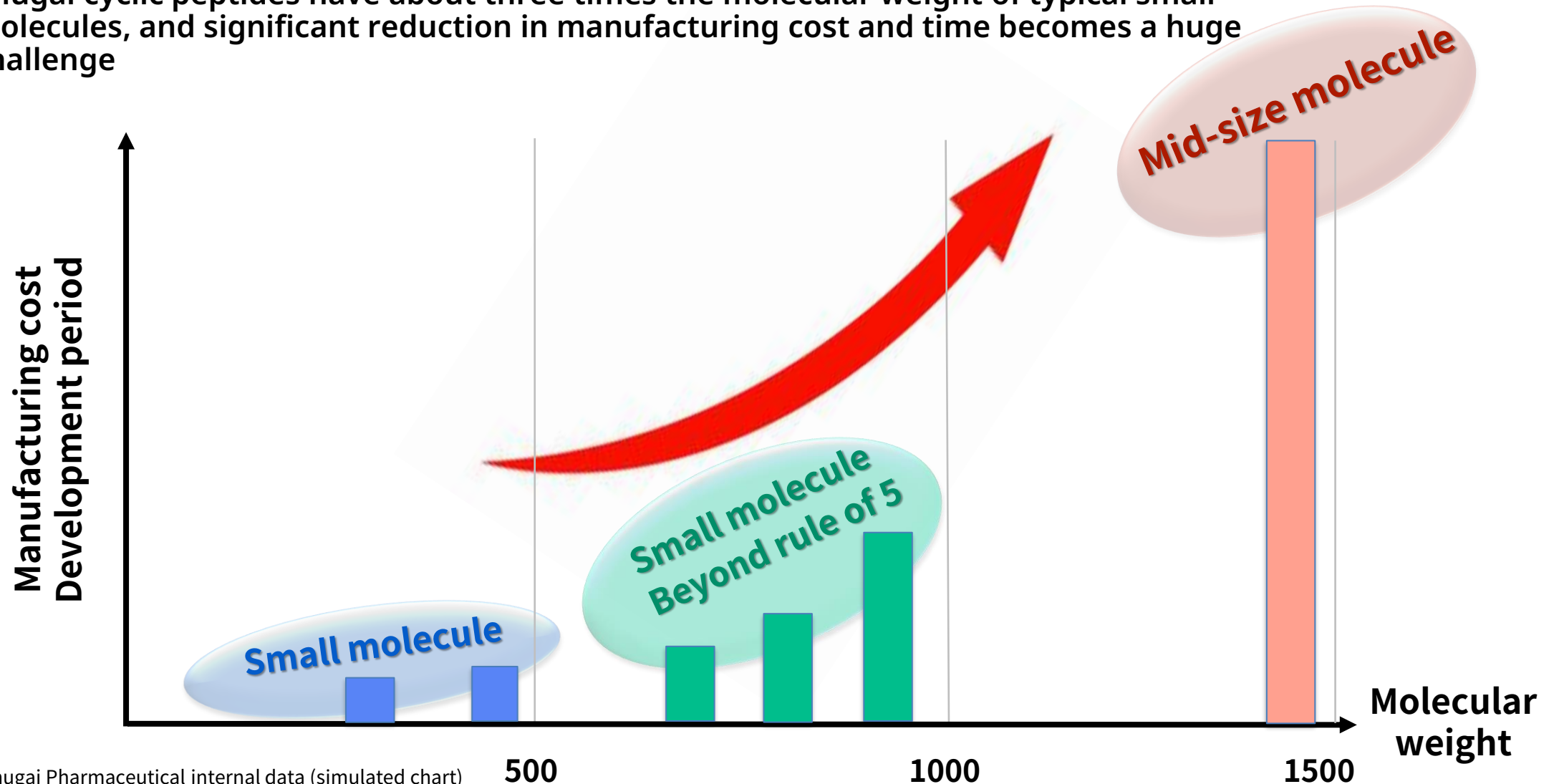
API  
process



## Chugai-type Cyclic Peptide:

# Manufacturing Cost and Development period

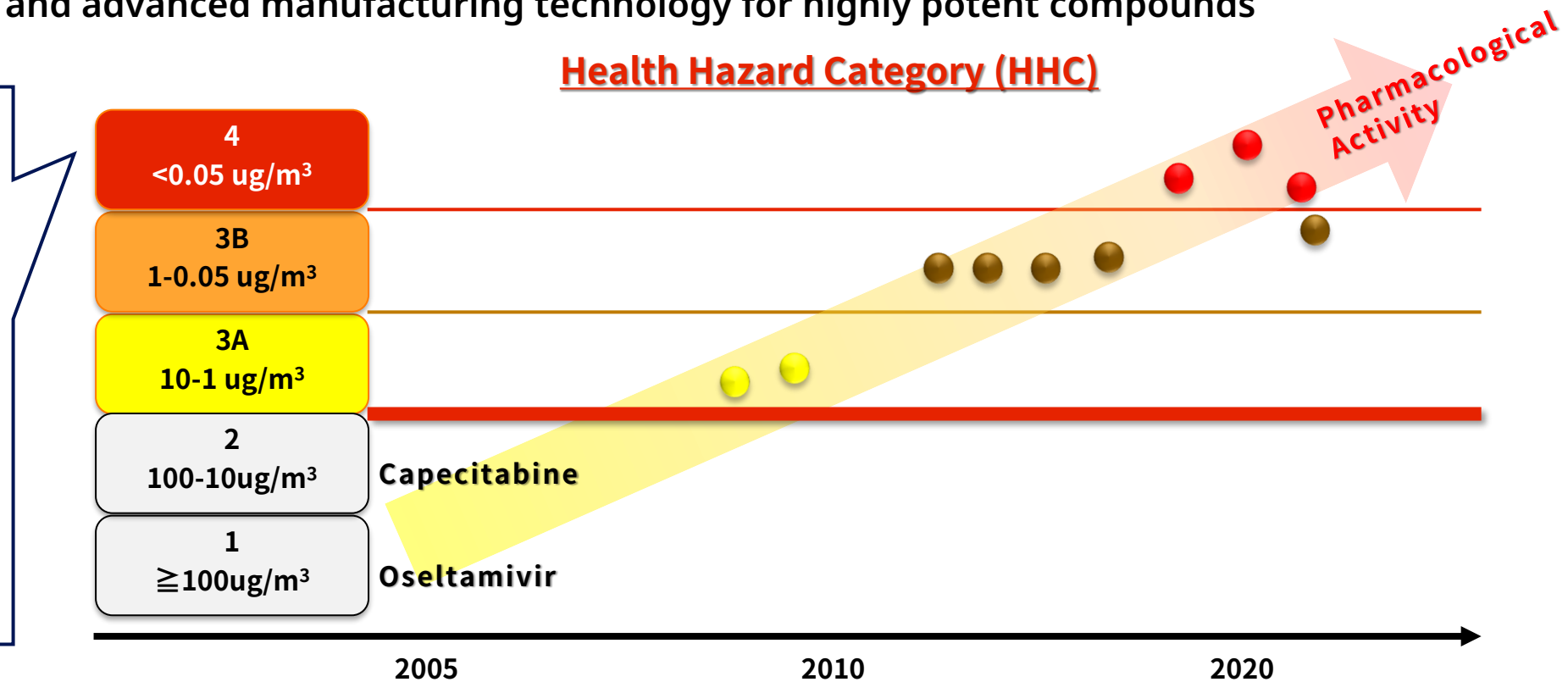
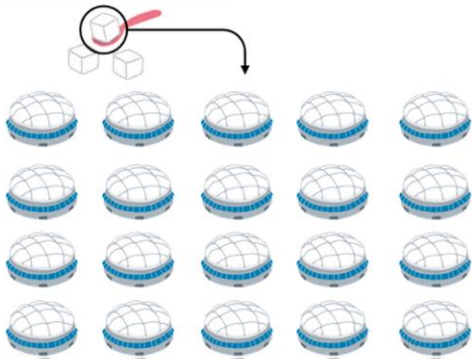
- Molecular weight (size of molecule) and manufacturing cost/period have a correlation
- Chugai cyclic peptides have about three times the molecular weight of typical small molecules, and significant reduction in manufacturing cost and time becomes a huge challenge



## Chugai-type Cyclic Peptide : Ultra-high Potency Activity

- Due to advances in drug discovery technology, all synthetic APIs, including mid-size molecules developed in-house in recent years, are classified as ultra-highly potency APIs
- To produce large quantities safely, it is essential to have manufacturing facilities with extremely high containment capabilities and advanced manufacturing technology for highly potent compounds

The pharmacologically active level that must be controlled to a concentration lower than that of dispersing a single sugar cube in a volume equivalent to more than 20 Tokyo Domes.



### Occupational Exposure Limit (OEL)

- ✓ The concentration at which most workers are considered not to suffer health damage, even if they breathe air containing a substance for 8 hours every day, 40 hours a week.
- ✓ Appropriate containment measures (protective equipment, isolator, etc.) are required during development and manufacturing, depending on the OEL

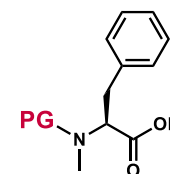
# Examples of Newly Developed Peptide Liquid Phase Synthesis Technology

As the pharmaceutical platform technology, we have newly developed various peptide liquid-phase synthesis techniques that can be broadly applied to Chugai-type cyclic peptides.

Number of patent applications related to Chugai-type cyclic peptide (published): 66  
Among them, pharmaceutical technology: 23

As of May 28, 2025

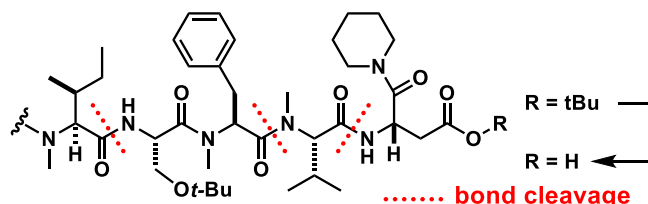
## Application of Cbz Groups and Techniques for Applying Fmoc Groups to Liquid-Phase Synthesis



Protecting Groups (PG)  
Cbz group, Fmoc group : ○  
Boc group : ×

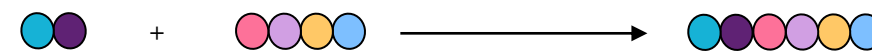


## Technology to suppress peptide degradation



Conversion rate 100%, degradation 0%  
(Existing method: Conversion rate 50%, degradation 28%)

## Technology for coupling peptides\*



Technology A

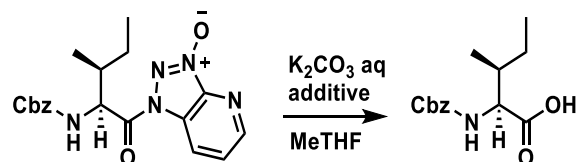
Conversion rate 100%, dr\* 99.8/0.2  
(Existing method: Conversion rate 92%, dr 34/66)

Technology B

Conversion rate 100%, dr 99.8/0.2  
(Existing method: Conversion rate 100%, dr 80/20)

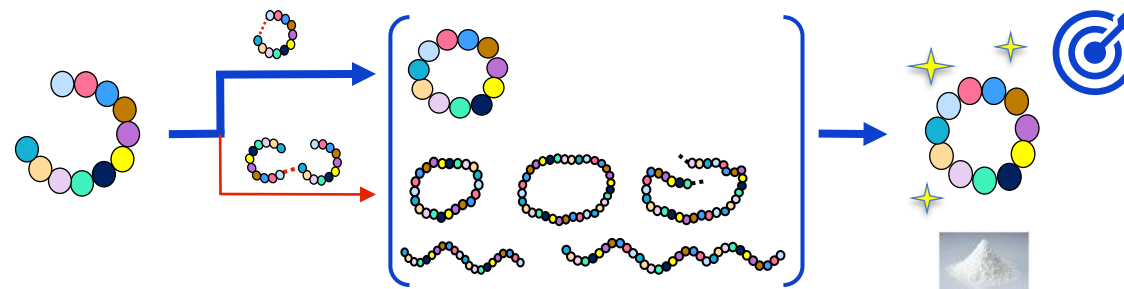
\*dr: target compound / impurity

## Technology for degrading unnecessary activated amino acids

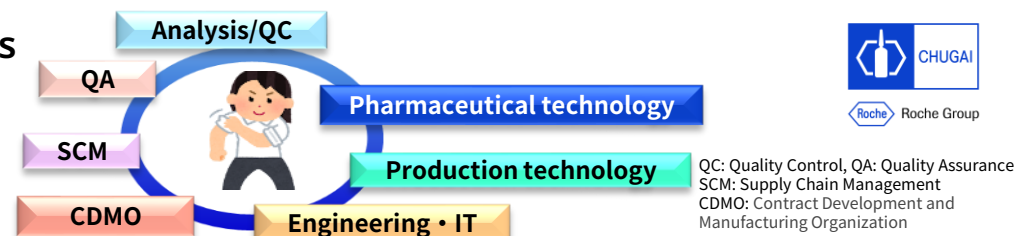


Residual rate <0.5%  
(Existing method: Residual rate 84%)

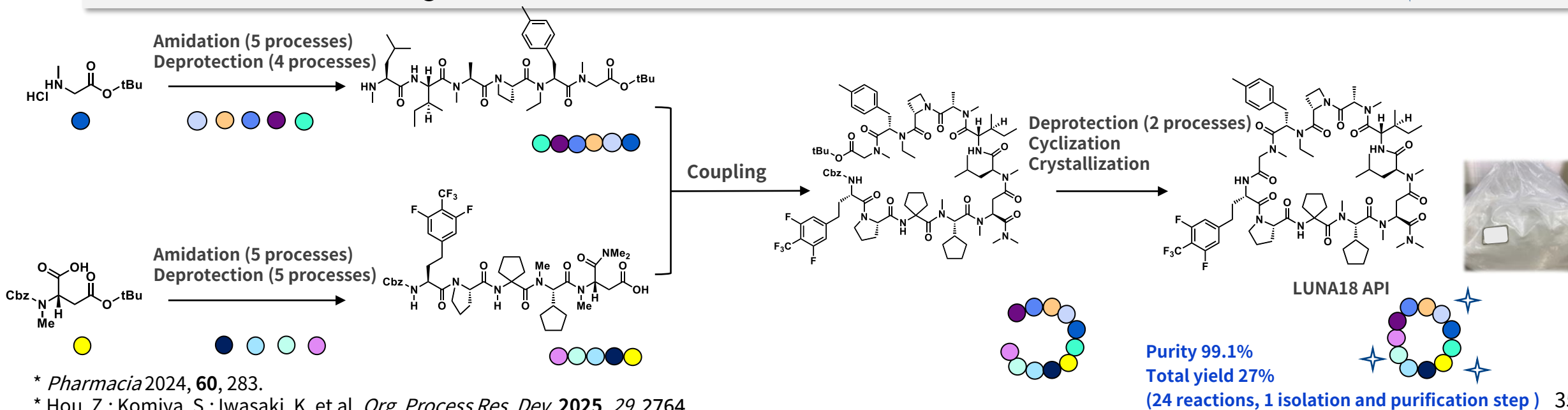
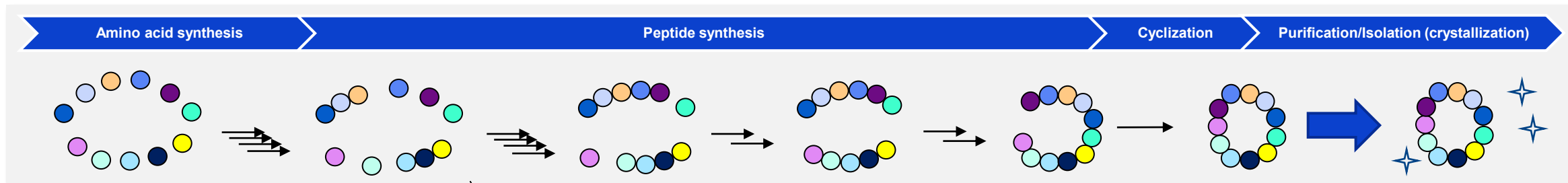
## Peptide cyclization technology and isolation/purification technology



# Application of Technology to LUNA18 API, the First Chugai-type cyclic peptide



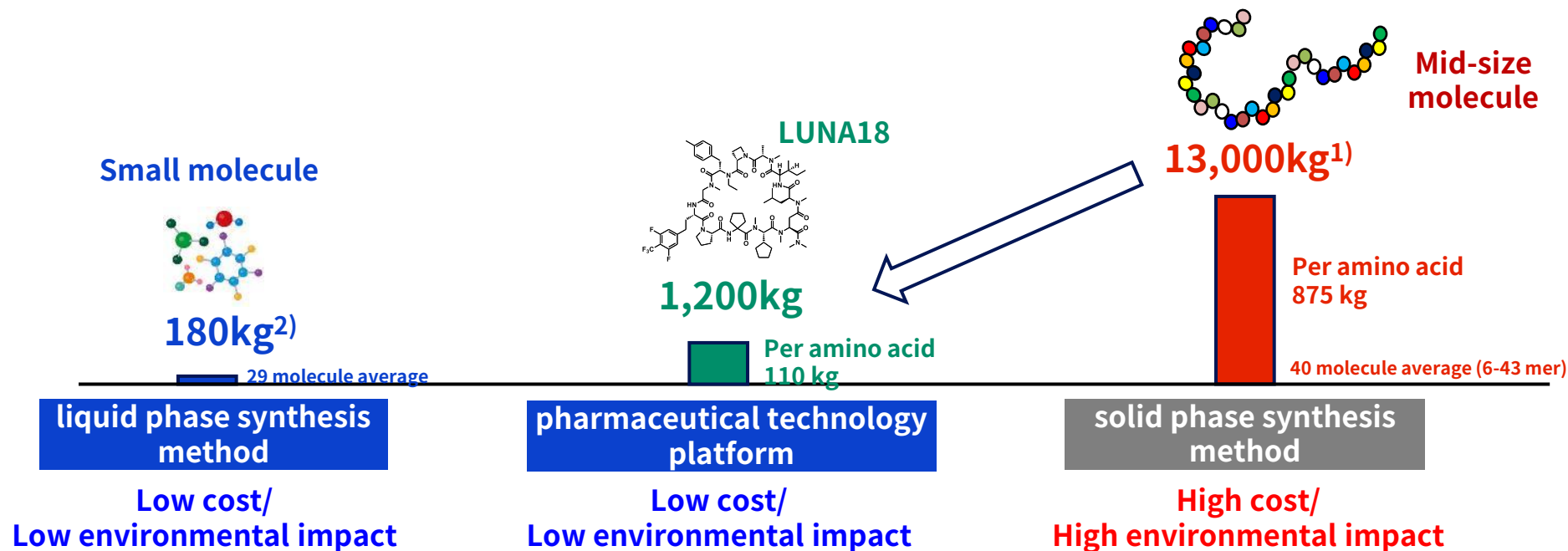
- Successful process development of active pharmaceutical substance preparation method for LUNA18 by convergent liquid phase synthesis method\*  
→ Currently, we have succeeded in scaling up to about 50 kg/lot
- The technology has been further advanced for development into a platform and application to subsequent projects





# Reduction Effect of Environmental Burden (PMI\*: Waste Volume per Kg of API)

- One of the major challenges in the production of Chugai-type cyclic peptides is the amount of waste generated during manufacturing
- By applying our proprietary mid-sized molecule pharmaceutical platform, LUNA18 has successfully reduced the amount of production waste (PMI) to less than one-tenth of that generated by conventional solid-phase synthesis methods



PMI: Process Mass Intensity : Total mass of materials used to manufacture a specified mass (1kg) of product

1) *J. Org. Chem.* **2024**, *89*, 4261–4282. 2) *Acs Sustain Chem. Eng.* **2022**, *10* (16), 5148–5162.

**–Connection with Capital Markets–**

# **Governance Enhancement and Future Challenges**

**Independent Outside Director**

**Hideo Teramoto**

# Key Discussion Points Regarding Chugai's Governance

- We emphasize dialogue with investors, and through discussions with them, we have identified the following three key discussion points

## Independent Outside Director's Perspective on Key Issues

**1 Role of the Board of Directors**  
(Board composition and relationship with Roche, etc.)

**2 Enhancing the Effectiveness of the Board of Directors** (PDCA for improving effectiveness, etc.)

**3 Sharing value with the capital markets**  
(Executive compensation and other initiatives, etc. that contribute to increasing shareholder value)

■ Relationship to the Five principles for Board of Directors to Enhance "Growth Power" (Ministry of Economy, Trade and Industry)

Themes established by focusing on items related to principles 3, 4, and 5

(Principles 1 and 2 are shared and discussed in the financial results briefings and Annual Reports, etc.)

Principle 1 Development of Value Creation Story

Principle 2 Promotion of Appropriate Risk-Taking by the Management Team

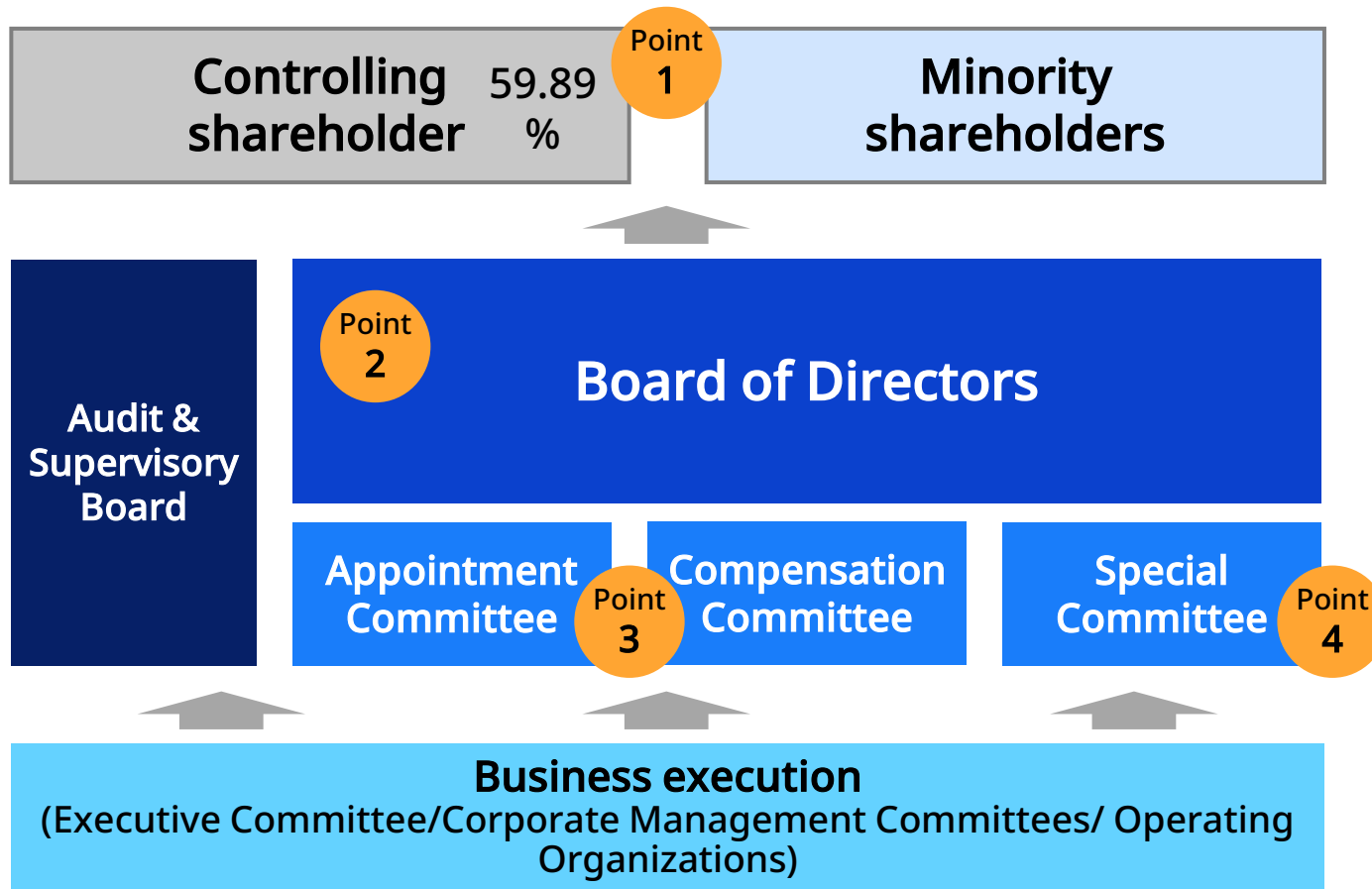
Principle 3 Promotion of Medium- to Long-term Oriented Management

Principle 4 Ensuring an Appropriate Decision-Making Process and Structure

Principle 5 Ensuring Effectiveness in Nomination and Compensation

## 1. Role of the Board of Directors: Characteristics Based on the Business Model

- Chugai has characteristics that differ from many Japanese companies to increase its corporate value under a unique business model based on its alliance with Roche



### ■ Key points

- Point 1** • Construction of a management structure that can meet diverse shareholders' expectations through sustainable growth and medium- to long-term increase in corporate value
- Point 2** • Enhancement of monitoring functions by retaining a majority of non-executive directors  
• Stimulation of discussion toward increasing corporate value from diverse perspectives
- Point 3** • Centered on non-executive directors  
• Incorporating objectivity, diversity, and global perspectives
- Point 4** • Examination and discussion of transactions with Roche from a conflict-of-interest perspective  
• Protection of minority shareholders' interests

## 1. Role of the Board of Directors:

# Overall Composition and Basic Approach

- The Board of Directors is composed of people who possess diverse knowledge, experience, and skills. As a whole, it has the necessary expertise and capabilities, and appropriate scale and diversity in aspects including gender, international experience, work experience, and age



## 1. Role of the Board of Directors: Skills and Roles of Non-Executive Directors

- One third of Board members are appointed from the parent Company, strengthening the Company's management from a global perspective

Expected roles:

- Global top level supervision and advice on management
- Consistency with Roche Group management strategy



**Dr. Thomas Schinecker**

Roche Group, CEO

- Management experience in various regions at Roche
- Appointed CEO of Roche Group in 2023



**Teresa A. Graham**

CEO of Roche Pharmaceuticals

- After joining Genentech, worked in marketing and sales, etc.
- Experience as a Lifecycle Leader for anti-IL-6 receptor antibody



**Boris L. Zaitra**

Head of Corporate Business Development at Roche

- Served as M&A specialist in financial institutions, etc.
- Appointed Head of Group Business Development at Roche in 2024

- Examples of contributions and questions at Board of Directors meetings, etc.

- Approach to prioritizing portfolio
- Approach to remuneration mix for the management team from a medium- to long-term perspective
- Roche's management policy in light of economic confrontation between the U.S. and China
- Analysis of impacts on Roche Group of the Trump administration's policies, etc.

- Sharing of Roche's best practices for personnel measures, etc.
- Roche Group's pharmaceutical business strategy
- Importance of communication between directors, etc.

- Roche Group's partnering strategy
- Important considerations and points to keep in mind in Go/No Go decision-making, etc.



## 1. Role of the Board of Directors:

# Skills and Roles of Independent Outside Directors

- Performing a monitoring function as minority shareholder representatives, and a management support function

Expected roles:

- Monitoring from a perspective of diverse values and experience
- Supervision and advice from perspectives of management, healthcare, and sustainability



**Dr. Mariko Y Momoi**

- Professor Emerita of Jichi Medical University, Invited Professor of School of Medicine, Shinshu University, regent of a medical organization, etc.
- Highly knowledgeable in pediatrics, neurology, the molecular pathology of neurological diseases, and molecular genetics



**Dr. Fumio Tateishi**

- Career history including global management and director positions, etc., at a medical and industrial equipment company
- Leader in sustainability management in Japan



**Hideo Teramoto**

- Experience in management planning, marketing, and director roles, etc. at a life insurance company
- Also responsible for IT, innovation, and wellness

- Examples of contributions and questions at Board of Directors meetings, etc.

### (1) Regarding the formulation of policy on capital allocation

- Evaluated organized composition, content, and appropriateness of message
- Evaluated the ease of understanding based on the corporate mission
- Regarding the method of calculating the risk premium adopted by the Company

### (2) Regarding the new human resource management system

- Expectations of adopting the job posting system
- Promoting employees' understanding of the system and support structure
- Importance of appropriate personnel evaluation under the new system

## 1. Role of the Board of Directors: Relationship with Roche

- Through the Chair of the Special Committee and the activities with Roche in relation to the 100th anniversary, we judged that there is an appropriate level of trust and tension aimed at achieving a win-win relationship

### Activities of the Special Committee over the past two years

(Held three times in FY2023 and six times in FY2024)

- Pre-board meeting deliberation on the transactions related to Roche that are subject to resolution by the Board of Directors
- Report on transactions related to Roche

### Other opportunities for communication with Roche

- Exchange of opinions with Roche directors at officer programs outside of the Board of Directors (Board Round Table, etc.)
- Messages and sessions by Roche management team at 100th anniversary event, etc.
- Other direct and frank exchanges of opinion with Roche management team at various opportunities, such as before and after the General Meeting of Shareholders and various committee meetings

### Evaluation of relationship with Roche

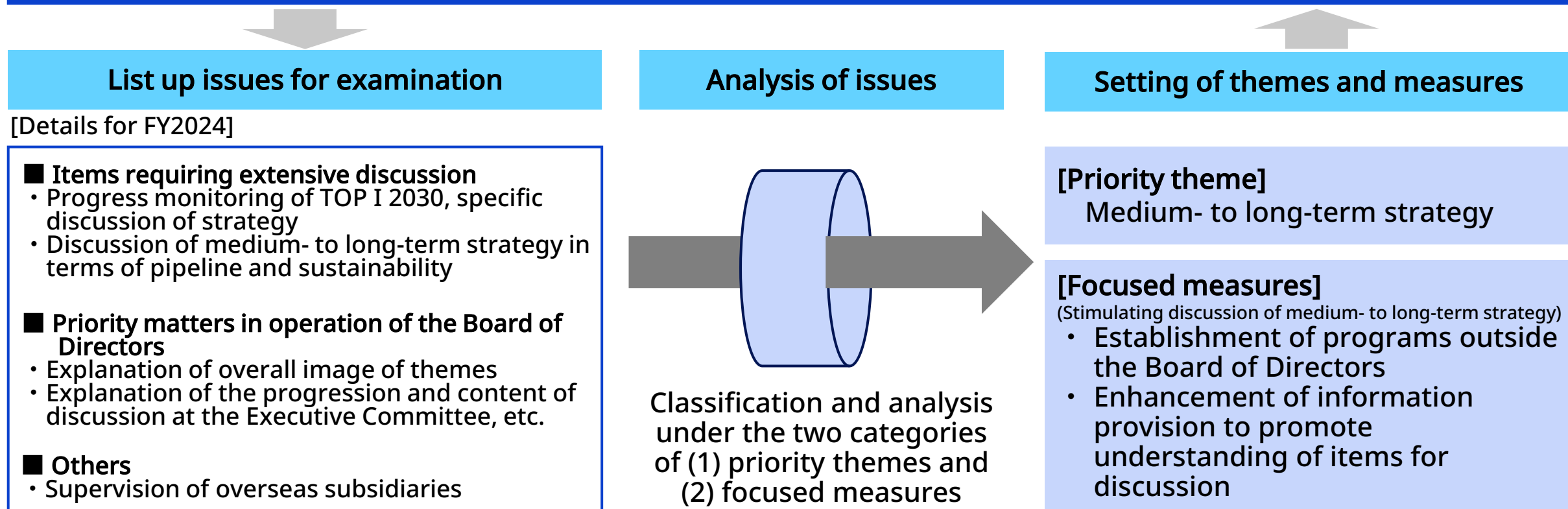
**Roche shares the Company's intended direction: "realization of advanced and sustainable patient-centric healthcare"**

- Roche's management team has strong expectations of Chugai's management and drug discovery capabilities, and respects its independent management
- Both companies confirm that they will continue with mutual ongoing dialogue and cooperation to maintain and further develop their strategic alliance, which is a unique business model in the industry

## 2. Enhancing the Effectiveness of the Board of Directors: PDCA for Evaluating Effectiveness

- From FY2024, we have used the results of the evaluation to set priority themes and focused measures to help increase the effectiveness of the Board of Directors

Refinement of evaluation results through self-assessment survey, analysis involving external experts, and individual interviews



## 2. Enhancing the Effectiveness of the Board of Directors: Policy for Initiatives in FY2025

- We will engage in important discussions regarding drug discovery and geopolitical risks toward the realization of TOP I 2030
- We will continue to strengthen initiatives outside the Board of Directors for acquiring knowledge, promoting understanding, and strengthening cooperation

### Priority themes

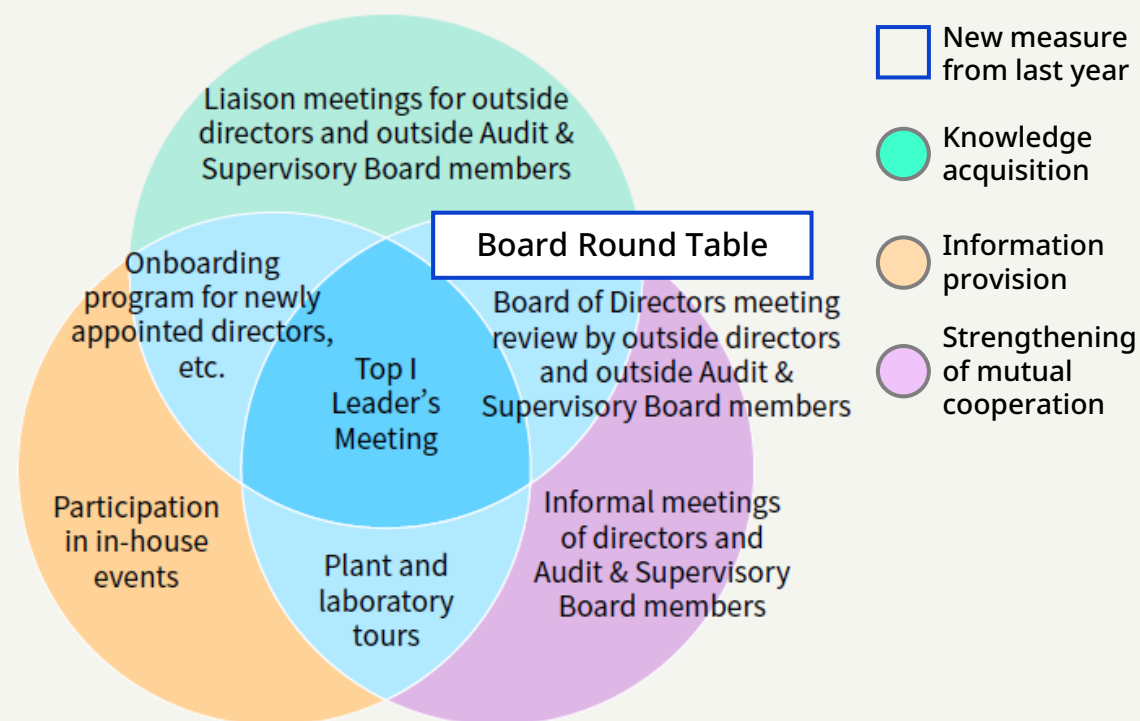
- Progress check on mid-term milestones for realization of TOP I 2030
- Selection of “drug discovery strategy and pipeline” and “policy and response to geopolitical risk, including supply chains” as priority agenda items for the fiscal year

### Focused measures

#### –Stimulating discussion in the Board of Directors–

- Enhancement of discussion topics and frequency of liaison meetings for outside directors and outside Audit & Supervisory Board members
- Continue to hold Board Round Table meetings including directors who reside overseas
- Continue to enhance explanation of agenda items

### Overview of Annual Programs Outside the Board of Directors Meetings

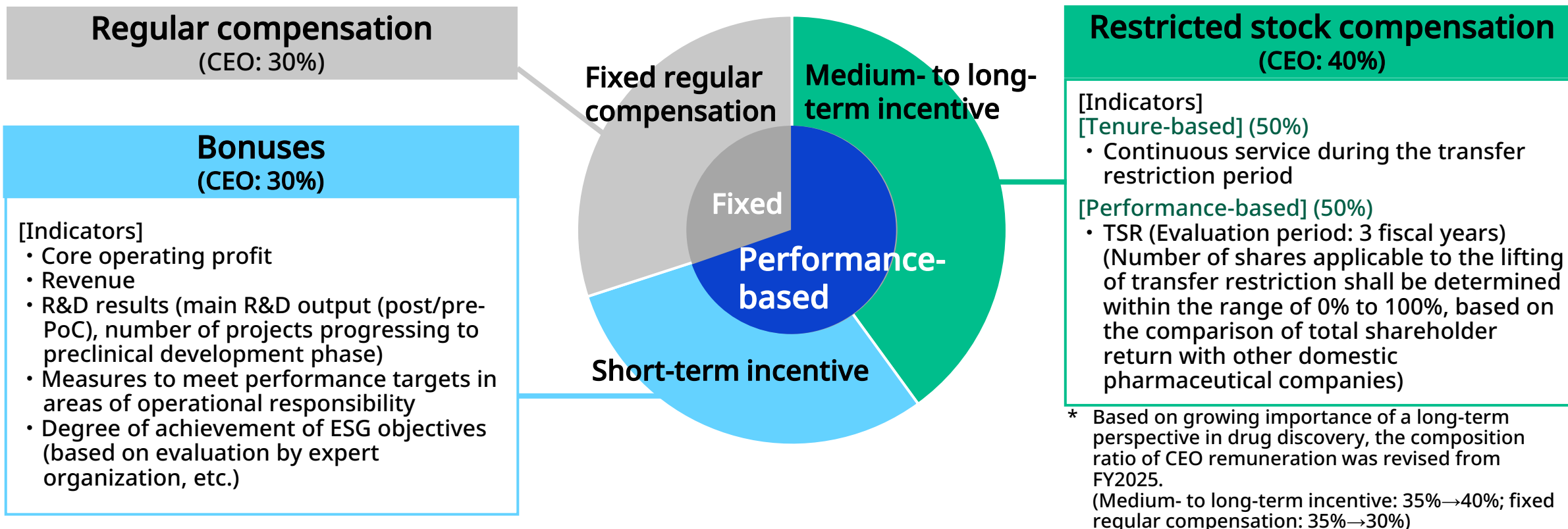


### 3. Sharing Value with the Capital Market:

## Design of Officer Remuneration System

- For executive director remuneration, in addition to short-term performance, we will further emphasize initiatives to increase medium- to long-term shareholder value

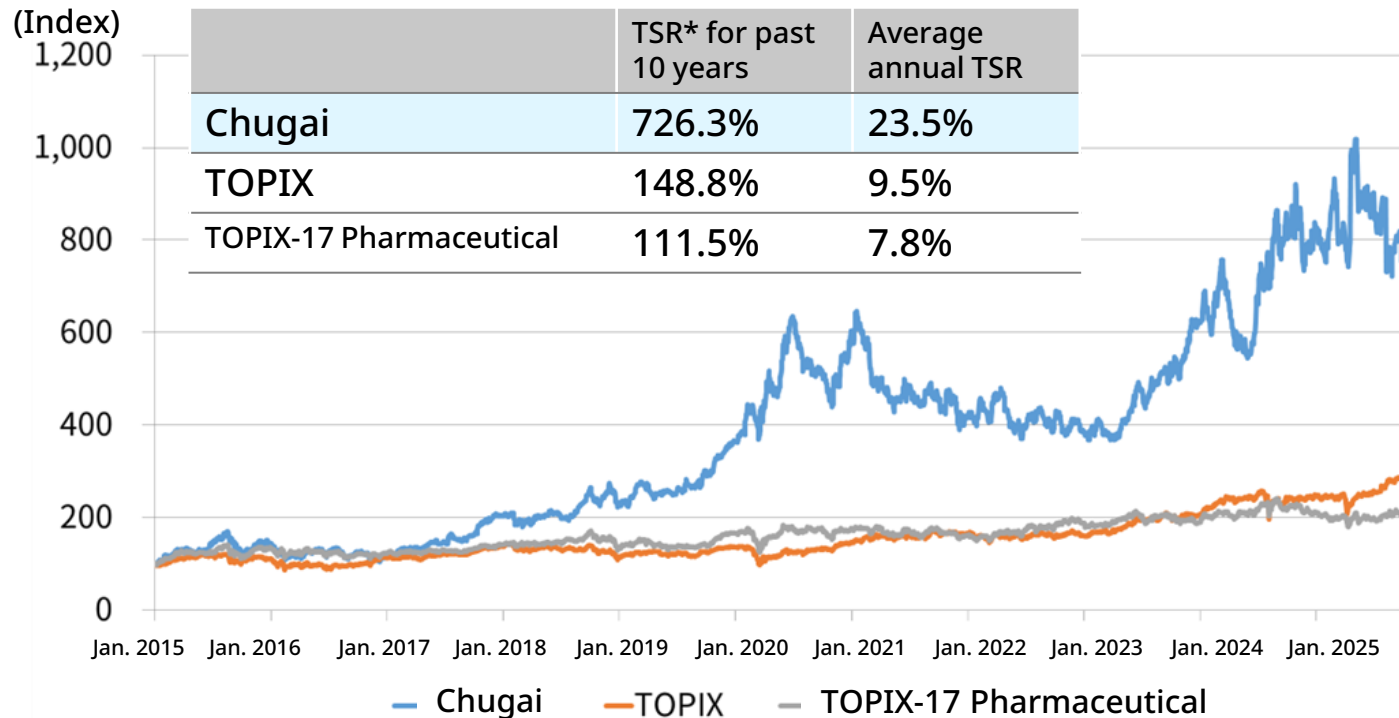
#### Reference Indicators for Performance-Based Remuneration of Executive Directors



### 3. Sharing Value with the Capital Market: Analysis of Shareholder Value

- We have demonstrated rapid growth today, but we aim to achieve stable, long-term share price increase with low volatility
- Aiming to enhance governance and dialogue, which supports share price formation

#### Share Price over the Past 10 Years



#### Points to emphasize as an independent outside director

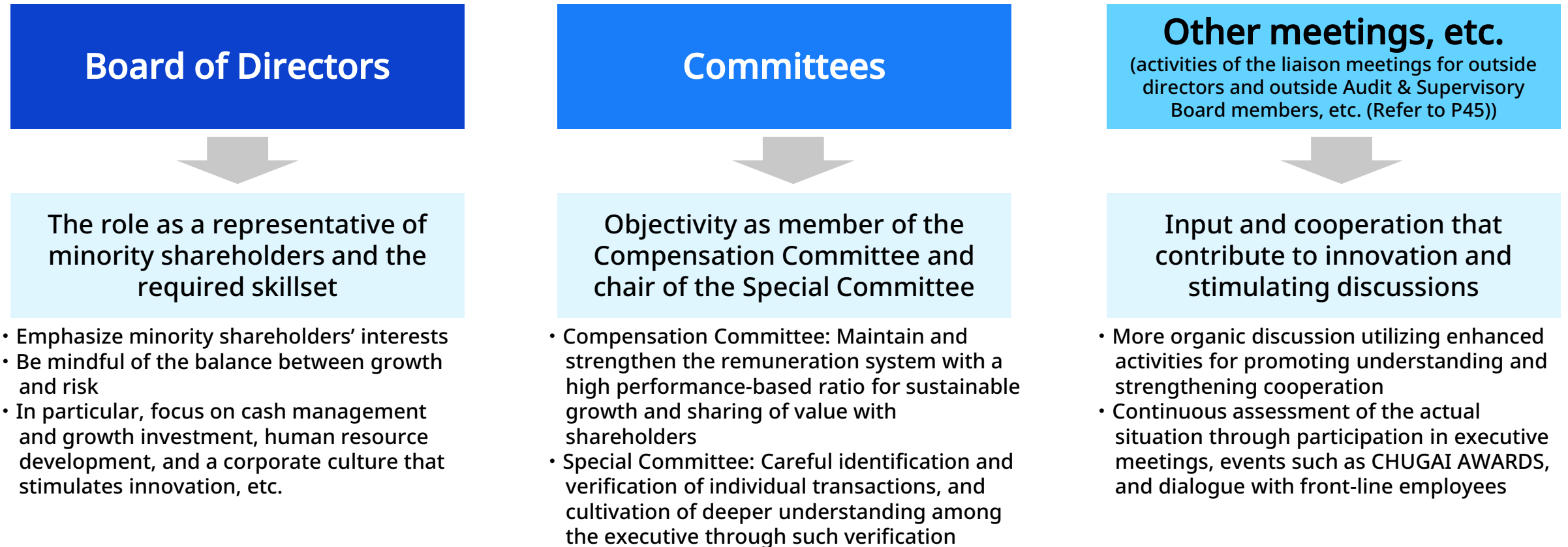
- Continuous strengthening of direct dialogue with capital markets
- Monitoring and advice from the minority shareholder perspective

\*TSR: Total Shareholder Return = (share price at the end of the period – share price at the beginning of the period + dividends) ÷ share price at the beginning of the period × 100%



## Summary: Key Areas of Focus as an Independent Outside Director

- Aiming to achieve sustainable growth and to protect minority shareholders' interests, I will make full use of my own experience and expertise. At the same time, I will promote activities for further increasing the effectiveness of governance



## Corporate Communications Dept.

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<b>Person in charge :</b>	<b>Hideki Sato, Naoki Kouzai, Atsuki Hirano, Ikue Miyazawa, Kaho Izumi</b>

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# INNOVATION BEYOND IMAGINATION



**CHUGAI PHARMACEUTICAL**



A member of the Roche group