



The Past, Present, and Future of R&D at the Kirin Group

Joy brings us together

Self-Introduction

Daisuke Fujiwara

Background

Hometown: Yamaguchi Prefecture

- 1995 Completed the Graduate School of Agricultural and Life Sciences, University of Tokyo
- 1995 Joined Kirin Brewery Co., Ltd. Central Laboratories for Key Technology
- 2005 Visiting Researcher, RIKEN institute of Allergy and Immunology
- 2005 Post Doctoral Fellow, David Geffen School of Medicine at UCLA
- 2014 Visiting Lecturer, Graduate School of Tokyo University
- 2021 General Manager, Health Science Department, Kirin Holdings
- 2023 Executive officer, Director, KIRIN's Institute of Health Science

Present: Senior Executive Officer, President of R&D Division, Kirin Holdings Co., Ltd.
Also serves as: Director of the Board, Kyowa Kirin Co., Ltd.



- 1999 The Society for Biotechnology, Japan Biotechnology Paper Award
- 2000 The Society for Biotechnology, Japan Biotechnology Encouragement Award
- 2004 Fuji Sankei Group Advanced Technology Grand Prize, Special Award
- 2016 JSBBA ※ Award for Achievement in Technological Research
- 2020 JAFI (Japanese Association for Food Immunology) Industry Award
- 2021 1st STOP Infectious Disease Gold Award, Japan Resilience Award
- 2021 Public Benefits Association Kanto Regional Invention Award for inventions
- 2021 The Japan Food Journal 2021 New Technology and Food Development Award
- 2021 26th Ando Momofuku Excellent Award, Ando Foundation
- 2022 JSBBA※ Award for Achievement in Technological Research
- 2023 11th The Technology Management and Innovation Award, Minister of Education award
- 2023 Imperial Invention Award
- 2024 Commendation for Science and Technology by the Minister of Education

Assigned to: Central Laboratories for Key Technology



- Established to explore new business
- Pillars with a view to business diversification

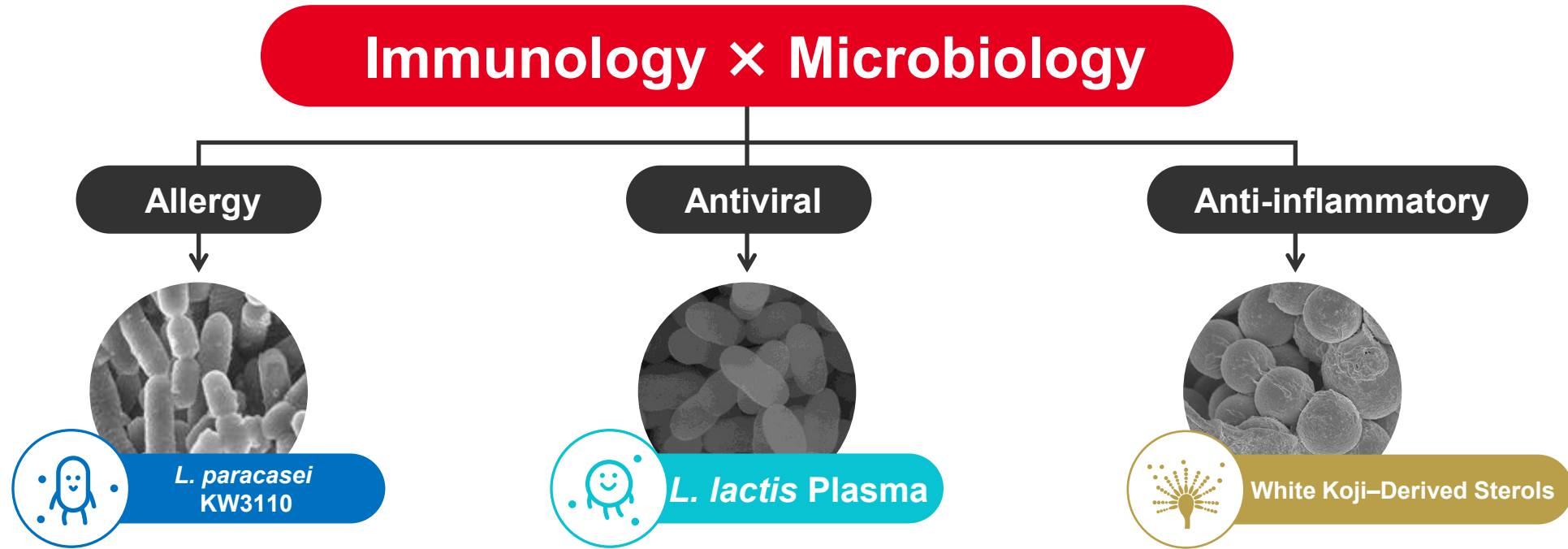


business Infrastructure Technology Research Institute Management Policy

- No theme
- No deadline
- Management: Minimal
- On par with top universities



Fukuura, Kanazawa Ward, Yokohama City



Koichiro Aramaki

1964: Graduated from the Faculty of Agriculture, University of Tokyo
1964: Joined Kirin Brewery Company, Limited
1990– Deputy General Manager, Pharmaceutical Businesses Division
1995– Head of Pharmaceutical Businesses Division
2001– President & CEO, Kirin Brewery Company, Limited
2006– Chairman and Representative Director, Kirin Brewery Company, Limited
2007– Chairman, Kirin Holdings Company, Limited, representative director

Overseas Study: University of California, Davies, Department of Food Science and Engineering

Date of Doctor of Science degree: March 22, 1993

Niigata University, Faculty of Science (1989-1993)

Honors: 2018 Order of the Rising Sun, Gold and Silver Rays (for contributions to the development of the bioindustry)



Something that seems to have emerged from the most fundamental principles in principle of science are things that seem to have emerged from the very foundations of science don't collapse so easily.

We must constantly consider how they are rooted in the fundamentals of life phenomena. is something we must constantly keep in mind.

The Role of Corporate R&D



Imagination

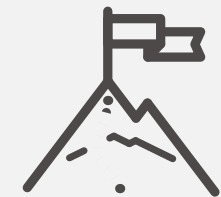
There are futures only visible through scientific foresight.

**From these, we grasp what improves people's lives
and materialize them as prototypes.**



Sense/Consumer
Mindset

We present value to the world.



See it through
to the end

Today's Purpose and Intent

**Reflecting on what we once were
Confirm our current position
and present possibilities for the future.**





The Future of R&D at the Kirin Group

As a Global Innovation Leader in Fermentation Technology and Biotechnology

Joy brings us together

Tackling Global Social Initiatives with Technological Capabilities

- Mobilizing the Group's full capabilities to tackle initiatives such as securing biological resources, Infectious disease risks, an aging society, and UMN



Breeding technology for heat-tolerant plants



Global Expansion of LC-Plasma-Challenging Pharmaceutical Applications-



Advancing Aging Research



**PET chemical recycling technology
Water Treatment Technology**

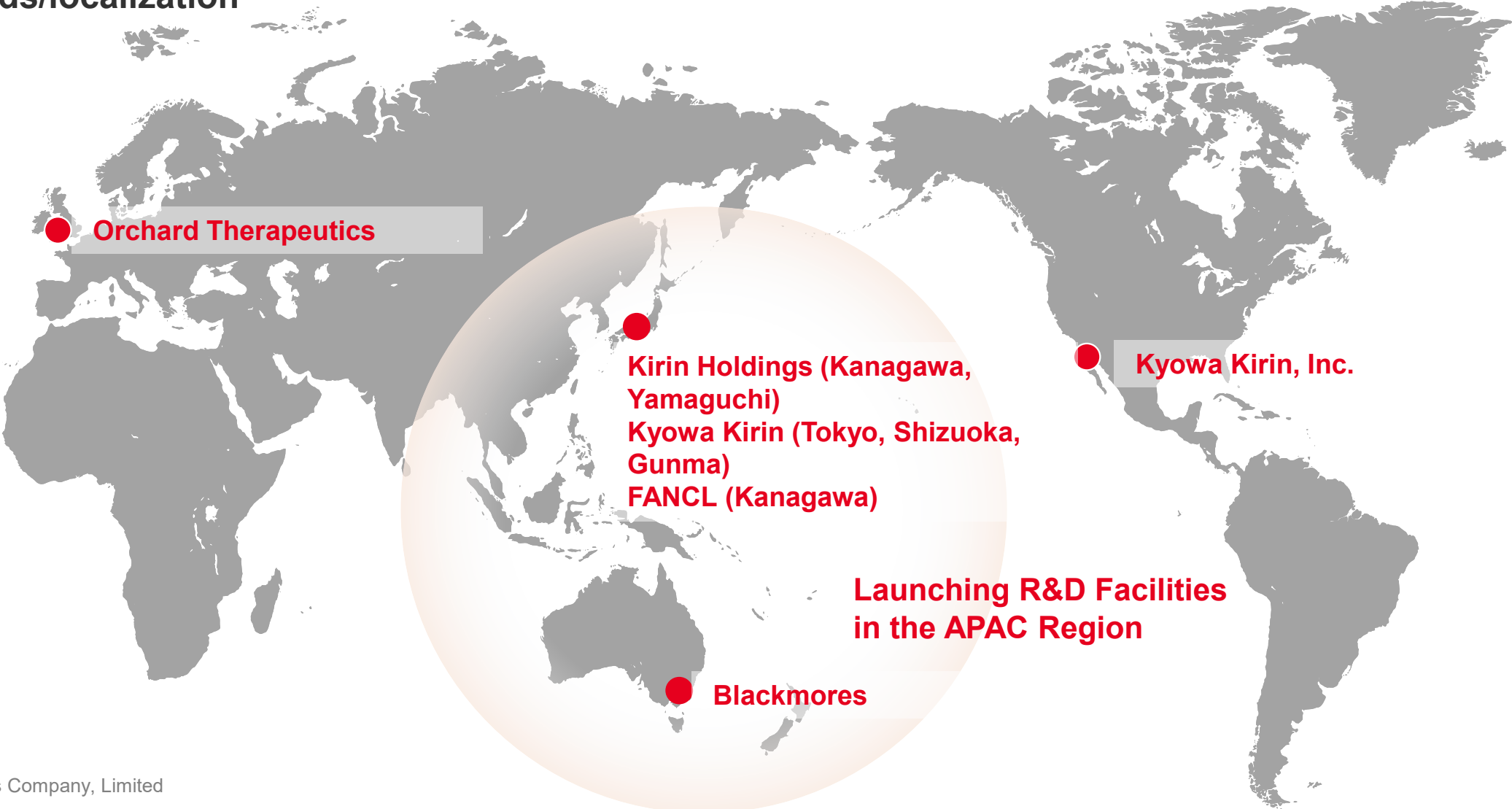


**Creating Life-Changing Value
-Unique UMN Drug Discovery
Development-**



**AI and Data Informatics
-Leading the Way in Preference
Research-
Predicting Clinical Trial Outcomes**

- Establish and utilize overseas bases to elevate research to a global level and address local needs/localization



Researchers Driving Global Innovation

➤ **Cultivating industry-leading human capital in the field of Fermentation Technology and Biotechnology, from Foundation Research to product and business development**



Recipient of the Imperial Invention Award
Leading Lc-PLASMA Research



World-Class Whiskey Blender
Leading the Whiskey Industry



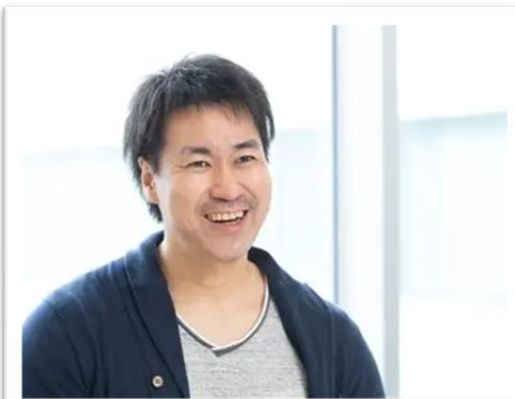
World's First Green Tea Decaf
Commercialization Creating New Value in
Non-alcoholic beverages



Discovery of Substances Removing Aging
Cells
Leading anti-aging research



Commercialization of Salt-Reduced Health
Tech Global Expansion Underway



Crystal Structure Analysis
Applications in Food, Health Science, and
Pharmaceuticals

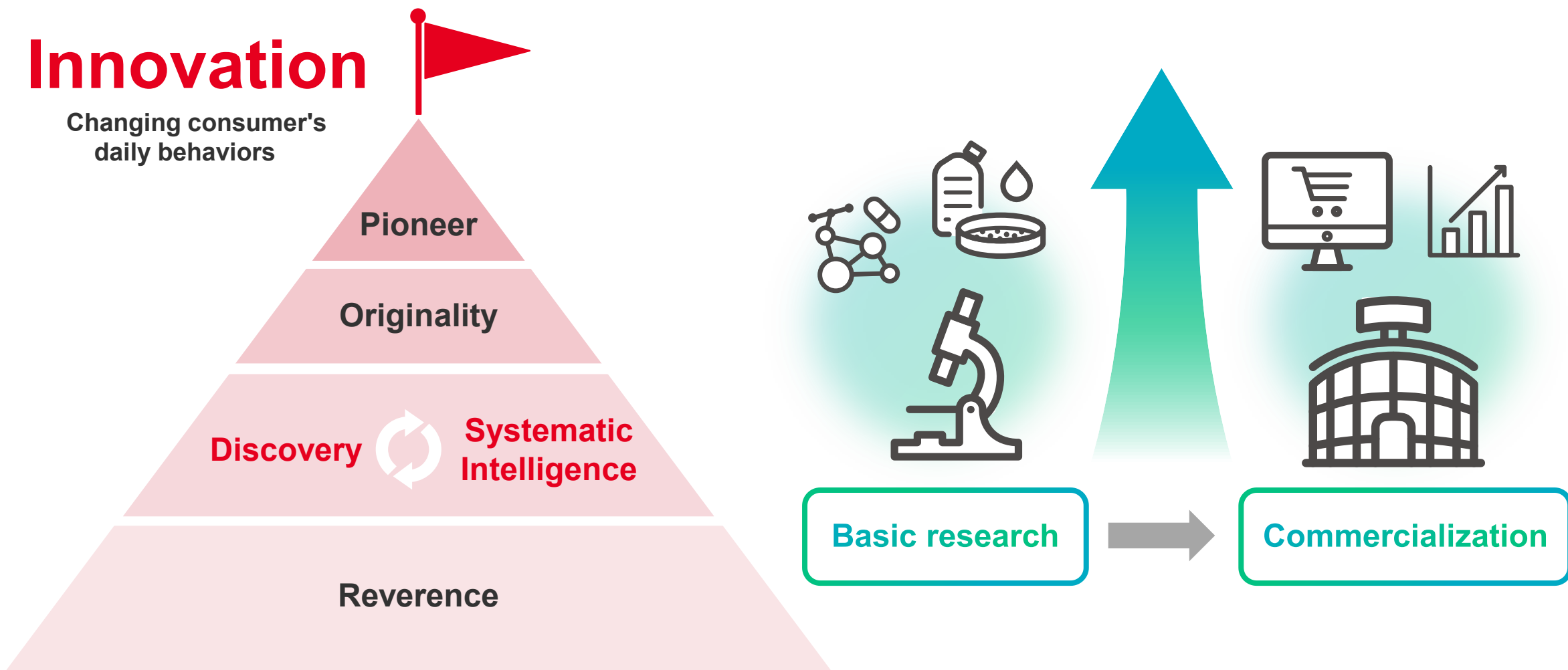


World's First DLC-PET Commercialization
Leading the Container and Packaging
Industry



Autologous Hematopoietic Stem Cell
Transplantation Type
Frontrunner in Gene Therapy

➤ Realizing innovations that “change consumer behavior” through robust Foundation Research



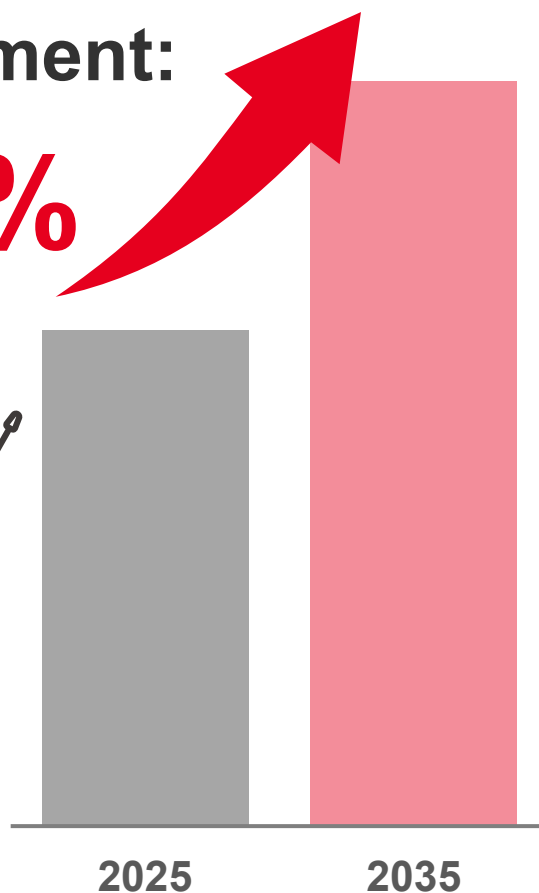
R&D Investment Aimed at Becoming a Global Innovation Leader

- Increase R&D Investment* to approximately 1.5 times the current level by 2035
- As the first phase, invest 3.5 billion yen in research facilities at the Institute for Technology of Microbial Science starting in 2026

*R&D expenses in the Food & Health Science business (excluding Kyowa Kirin's R&D expenses)

R&D Investment:

150%

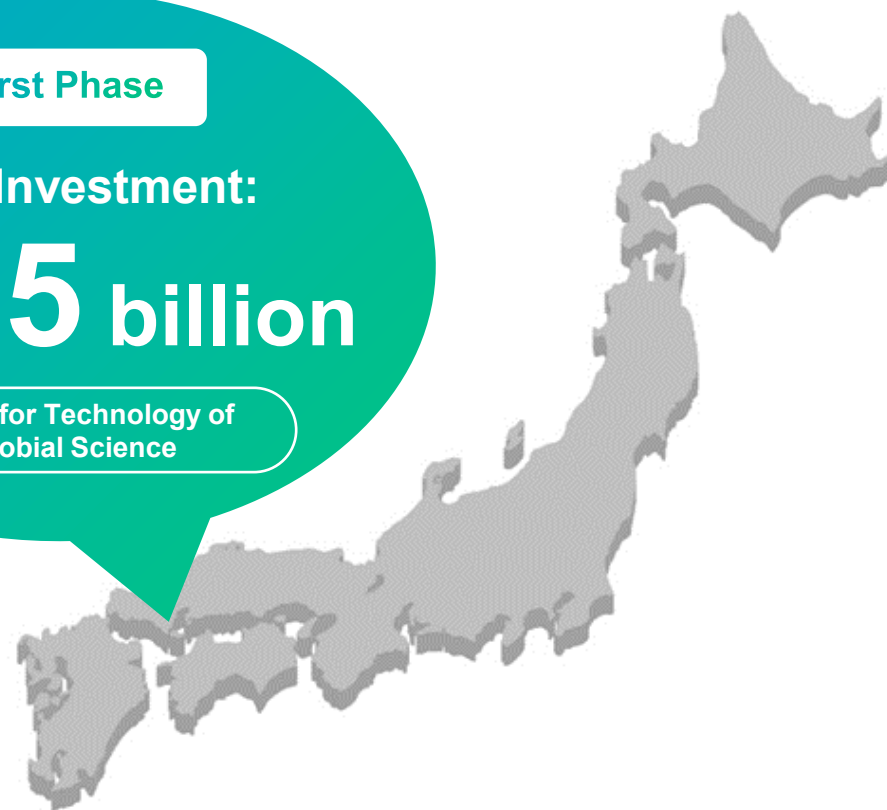


First Phase

R&D Investment:

JPY **3.5 billion**

Institute for Technology of
Microbial Science



1. 個人の技能と発想が最大限発揮できる、自由闊達でワクワクする場である。

We are in a distinguished and dynamic environment that fosters the full expression of individual talents and innovative ideas.

2. 社会を変える商品とサービスを生み出し、世界に届ける。

We create products and services that transform society and bring innovation to the world.

3. グローバルで競争力に貢献できる人財を育てる。

We cultivate human capital of enhancing the competitiveness globally.





Joy brings us together