Tokyo Research Park Research Institute Tour

The development history of Kyowa Kirin's drug discovery technology and the research philosophy behind it

September 10, 2026

Senior Executive Vice President, Chief Scientific Officer (CSciO) Takeyoshi Yamashita

Global Research Head, Takashi Shimada, Head of Research

Key Characteristics of Kyowa Kirin

As a unique J-GSP with strong expertise across both therapeutic areas and modalities, we are expanding our business globally

Group Structure

5,161
Employees

Track Record in Drug Discovery

Over 50 countries
Providing pharmaceuticals

Financials (FY2025)

¥496.8B
Revenues

74%
Ex-Japan business

22.1%
Core Operating profit

7.7%
ROE

Shareholder Return

4%+
DOE

Progressive dividends

Strong Expertise and Experience Across Therapeutic Areas and Modalities

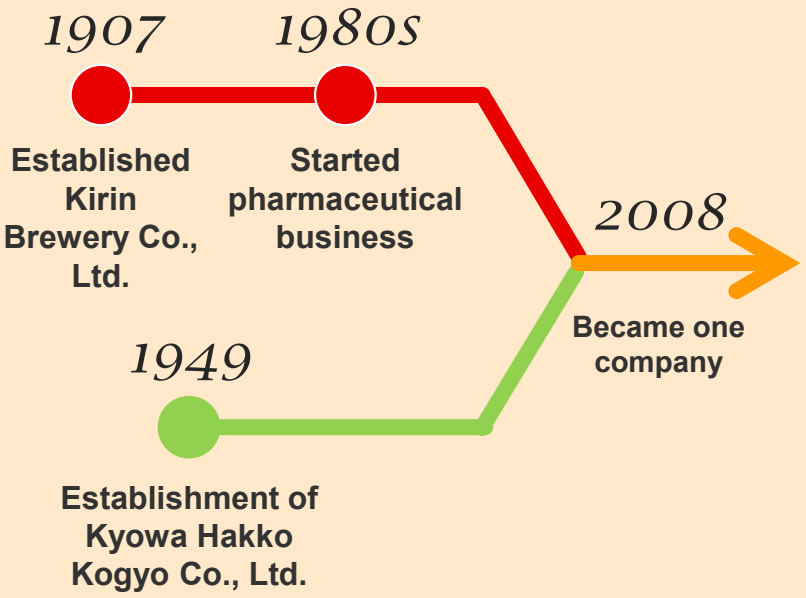
- Bone & Mineral
- Hematology/ Hemato-oncology
- Rare Diseases
- Strategic Partnerships Assets / Other

+

- Antibody therapeutics
  - Next-generation antibody technologies
  - ADC
- Gene and cell therapy
  - Engineered HSC-GT
  - Utilization of AI & Data Science

Origins of the company

Two companies with strengths in biotechnology centered on antibody drug technologies were integrated to enhance drug discovery capabilities.



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Our History : Advance of globalization

Creation of innovative drugs

We are striving to create innovative drugs and life-changing value that brings smiles to people living with medical conditions by leveraging advances in antibody technology and drug discovery capabilities from before Kyowa Kirin was established.

2012
Launch of Poteligeo in Japan
Poteligeo was launched as the world's first antibody drug utilizing POTELLIGENT technology.

2013
Launch of Nouriast in Japan
Research, development, and release of a non-dopaminergic treatment for Parkinson's disease.

2018
Launch of Fasenra in Europe, US, and Japan
Fasenra is an antibody drug discovered by Kyowa Hakko and licensed to AstraZeneca's for development and marketing.

2018
Launch of Crysvita in Europe and the US
X chromosome-linked hypophosphatemic rickets (XLH) is a rare disease that affects 1 in 20,000 people. Released as a treatment for XLH, for which there had been no adequate therapy.

2021
Concluded an agreement with Amgen for joint development and marketing of KHK4083/AMG 451.

2024
Completed acquisition of Orchard Therapeutics plc, a leading provider of hematopoietic stem cell gene therapy.

2024
Formed an agreement with Kura Oncology, Inc. regarding a global strategic collaboration to develop and commercialize ziftomenib for Acute Leukemia.

Maximize product value Access to medicine

We are acquiring distribution networks and moving into more markets to deliver our medicines to even more patients worldwide.

2011
Acquired UK company ProStrakan as a subsidiary

2014
Acquired UK company Archimedes as a subsidiary

2018
Launch of Poteligeo in the US

2019
Launch of Crysvita in Japan

2019
Launch of Nourianz in the US

2020
Launch of Poteligeo in Europe

2023
Started sales of Crysvita through proprietary channels in North America, taking over commercial activities from Ultragenyx Pharmaceutical Inc. after a five-year collaboration.

2023
Formed joint venture with Grünenthal in the established medicines business, allowing the Company to focus management resources on Crysvita and Poteligeo.

As of 2024
Crysvita (sold in 52 countries /regions worldwide)
Poteligeo (sold in 60 countries /regions worldwide)

2024
Received authorization for Lenmeldy™ (US).

2024
Restructured the Asia-Pacific business. Formed a licensing agreement with WinHealth Pharma Group Co. Limited and DKSH Holding Ltd. for the established medicines business and global products (Crysvita and Poteligeo) in certain regions.

Quality assurance and a stable supply of products

We are improving manufacturing technology and adding more production capacity to ensure the stable production and supply of high-quality pharmaceuticals.

2010
Completed construction of one of Japan's leading production facilities for drug substances for antibodies at the Bio Process Research and Development Laboratories.

2016
Completed construction of a new biopharmaceutical API manufacturing building at Takasaki Plant, increasing production capacity.

2018
Realignment of domestic production sites completed

2019
Formulated Global QA Road Map through 2025 and started strengthening related systems

2022
Completed rollout of global quality management system (eQMS)

2022
Completed new quality assurance center Q-TOWER at Takasaki Plant

2024
Began construction of a new biopharmaceuticals plant in North Carolina, US.

2025
Completed construction of HB7, a new biopharmaceutical API manufacturing facility at the Takasaki Plant.

Reinforcing the management infrastructure

As part of our efforts to become a Japan-based GSP, we are maximizing the value of the Group's tangible and intangible assets through portfolio reshuffling and improvements to our management structure.

2012
Establishment of Fujifilm Kyowa Kirin Biologics Co. Ltd., a joint venture with Fujifilm Corporation.

2019
Kyowa Hakko Bio Co., Ltd. is transferred to Kirin Holdings Company, Limited.

2019
Launch of the One Kyowa Kirin structure
In response to the growth of global strategic products, Kyowa Kirin launched a matrix management structure combining the regional organizations of Japan, EMEA, North America, and APAC with functional organizations that transcend regions. The close collaboration and checks and balances between the two types of organizations have made it possible to improve operational efficiency and strengthen governance.

2021
Evolution of the One Kyowa Kirin structure
To strengthen activities with a greater focus on patients, a product organization was added to the regional and functional organizations. We aim to further maximize the value of our global strategic products.

2025
Expanded the CxO System
In order to further enhance the management team at the global level, Kyowa Kirin established a new COO position to create a dual structure with a CEO and a COO. This move aims to lead the Company into a new stage and achieve further heights. Moreover, the Company established a CDXO position to take leadership of efforts to accelerate DX activities.

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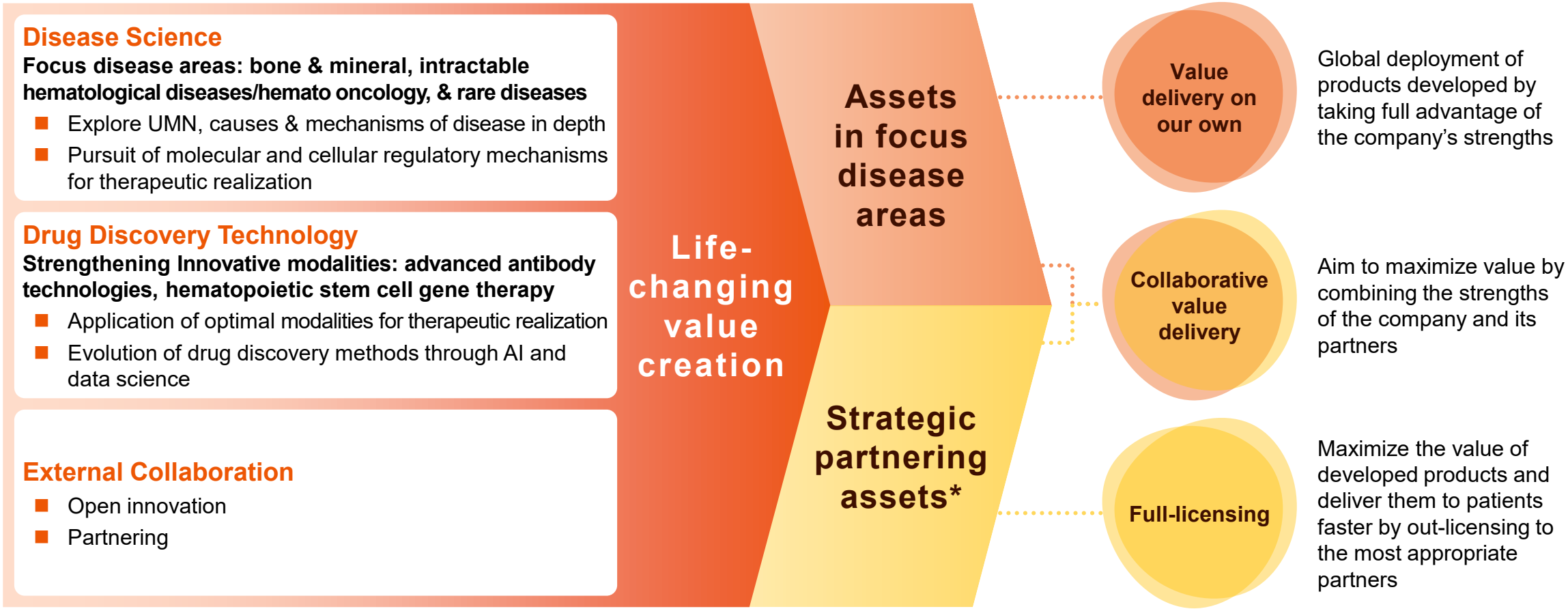
Our Strategy for Creating Life-changing Value - Story for Vision 2030

Amid significant environmental changes, Kyowa Kirin is formulating the Story for Vision 2030 to ensure the steady realization of its vision
By enhancing clarity around the vision and linking strategies and challenges more organically, we will advance CSV management that enables the creation and delivery of Life-changing value



*** Assets outside of the disease areas of focus are designated as strategic partnering assets, and value maximization is achieved through collaboration with partners.**

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R&D Organization for Kyowa Kirin's Unique Drug Discovery

- To pursue unique drug discovery and boost research flexibility, R&D was split into the Research Division and the Development Division in March 2026, each led by its own CxO.

Takemi Yamashita

Chief Scientific Officer (CSciO)

Research

Yoshifumi Torii

Chief Medical Officer (CMO)

Medical Affairs, Pharmacovigilance, and Development

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Research HQ Structure for Kyowa Kirin's Unique Drug Discovery

- Research HQ formed the Global Research Organization (GRO) to create Life-changing value by uniting research capabilities worldwide.

GRO | Global Research Organization

Launched as a global research organization

Since January 2025, GRO unites drug discovery engines in Japan, the US, and the UK

One of four pillars supporting Story for Vision 2030

A flat and agile system

Experts in each field

Flat organization with research teams led by Principal Investigators

Agile research by disease area

New Functions and Decision-Making

Therapeutic Area Heads (TAHs) appointed

Gene & Cell Therapy Group and Laboratory Management Group established

Seamless collaboration with GDO (Global Development Organization)

Working with GDO, which leads clinical development onward

Diversity, speed, and quality to accelerate the shift from research to development

In May 2026, a new research hub plan was announced to integrate TRP (Tokyo Research Park) and FRP (Fuji Research Park)
— Aiming for an R&D model that seamlessly links drug discovery, translational research, CMC, and development research

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Building a Globally Collaborative Research Organization

Global Research Organization since 2025

Collaboration

Orchard therapeutics

KYOWA KIRIN
KKNA (La Jolla)

Budget control
Collaboration

KYOWA KIRIN
HQ (Otemachi, Tokyo)
TRP (Machida City, Tokyo)
FRP (Nagaizumi-cho, Shizuoka)

Orchard Therapeutics plc
UK

Kyowa Kirin, Inc. Research
USA

Tokyo Research Park
JAPAN

Fuji Research Park
JAPAN

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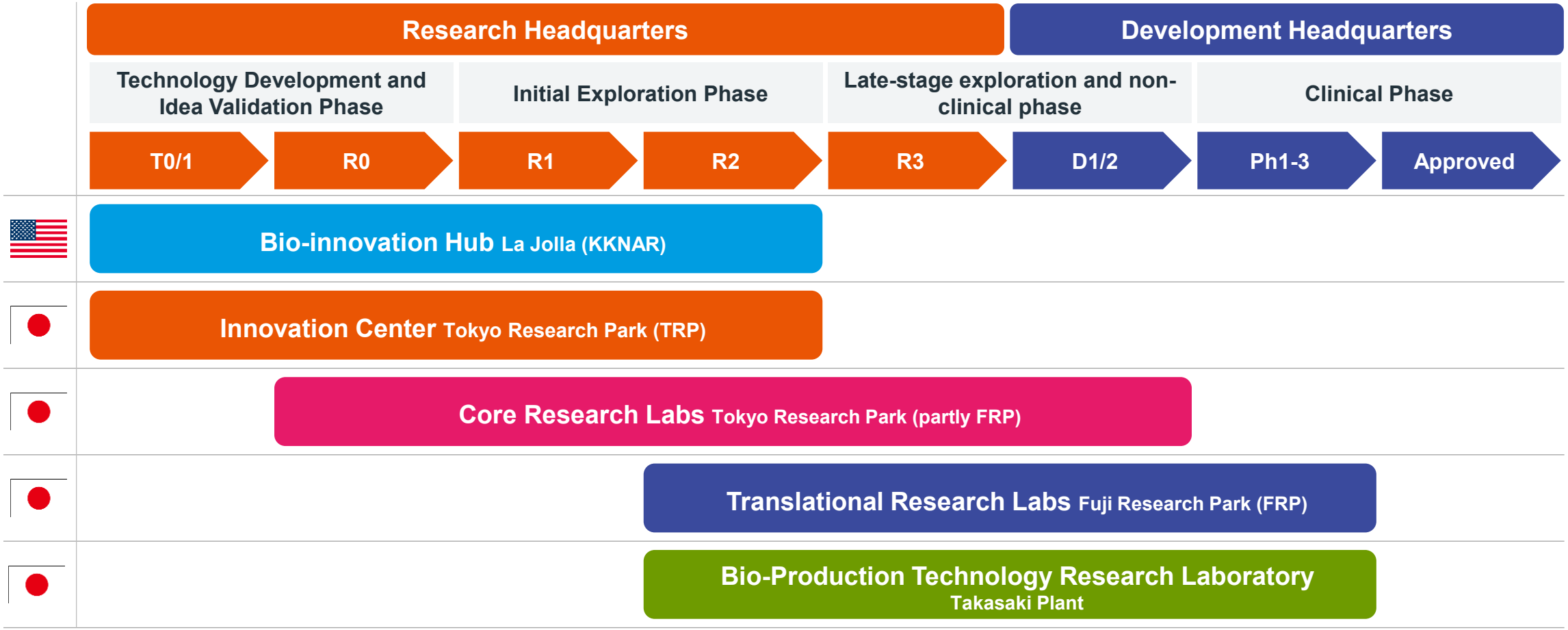
Creating Life-changing drug seeds and moving them efficiently to clinic

Overview of the exploratory research flow and the missions of various drug discovery research organizations



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Kyowa Kirin's unique science-driven drug discovery culture

Bottom-up × top-down Balanced Management

Top-down
Portfolio Strategy

Front-line proposals ×
Company-wide optimization

Bottom-up
Researcher proposals

Under the PI System Disease Science × New Modalities

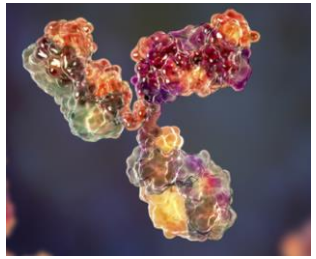
Focused disease area

Rare Diseases (Bone, Blood, etc.)

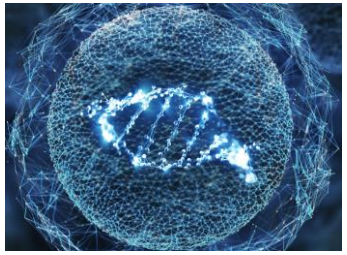
Beyond (future focus areas)

Modality

Combined modalities



Advanced-Antibody



Gene and Cell therapy

Venture Boldness × Mid-size Pharma Full Discovery Power

With venture-like boldness,
Agile Innovation Capability

×

As a mid-sized pharma company
Comprehensive Drug Discovery Process Capabilities

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Improving the efficiency of the drug discovery process through site integration

Realizing an integrated process from initial drug discovery to CMC development

Exploratory Research Team

TR* Team

CMC Team

Gathering at the YBP (Yokohama) Research Building
Physically integrating the three teams minimizes collaboration loss and handover time

Early Drug Discovery → Lead Optimization → TR / Nonclinical → CMC Development

Improving development speed and success rate through a single site

*Translational Research

Lab Design Optimized for Drug Discovery Strategies

An illustration of YBP New Lab Building I (the building next to Lab Building II, where we plan to move) was used at the briefing but has been removed from this document for rights-related reasons.

- An experimental and exchange space that encourages collaboration between teams
- Highly flexible design to support new modalities and research DX

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Research DX Specializing in the Evolution of Antibody Drugs

Connecting Dry × Wet × Data to continuously advance acquisition, optimization, and evaluation

01 DISCOVER
Improved antibody acquisition

- Complementary utilization of immunity, display, and de novo
- Creating candidates from structure, arrangement, and internal and external data
- Expanded options for high-difficulty targets and targeted epitopes

Faster and more diverse binders

02 OPTIMIZE
Enhanced antibody optimization

- Narrowing the exploration space with AI and computational science
- Optimizing compatibility, selectivity, function, and physical properties
- Continuous learning of the revised policy through dry/wet iteration

Reducing rework and finishing it as medicine

03 EVALUATE
Improved antibody evaluation

- Strengthening multi-sample preparation and high-throughput evaluation
- Early-stage evaluation of activity, physical properties, and productivity
- Accumulate high-quality data and feed it back to design and AI

Identify early to increase the chances of success

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Kyowa Kirin creates life-changing value through flexible thinking and persistence, rooted in unique disease science and drug discovery technology

Research philosophy inferred from our drug discovery research

Crysvita Examples

- **Kirin Beer deepened kidney science through erythropoietin (EPO) research**
- **Extended kidney disease science from EPO and REGPARA research to bone and mineral metabolism**
- **Searched for unknown phosphate regulators causing tumor-induced osteomalacia; identified FGF23**
- **Pivoted from treating hyperphosphatemia with FGF23 to creating anti-FGF23 antibody burosumab**

Building on **in-house science, they discovered unknown factors themselves** and combined them with **proprietary antibody technology to create new value**

Poteligeo Examples

- **Obtained anti-CCR4 antibodies for allergic diseases via joint research with the Univ. of Tokyo**
- **Found CCR4 in ~90% of refractory ATL (blood cancer) cases; refocused research on ATL therapy**
- **Launched first in Japan as the world's first antibody using proprietary POTELLIGENT technology**
- **Extended CCR4 targeting from ATL to CTCL; broadened global patient value via US/EU approvals**

Not bound by initial hypotheses, they **captured unexpected discoveries** from **disease science** and combined them with their **own technology platforms to deliver value in intractable diseases** with limited treatment options

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Today's Highlights

Through the development history of our proprietary antibody technology, we will introduce Kyowa Kirin's drug discovery research philosophy

POTELLIGENT

Proprietary technology to enhance antibody ADCC* activity

Kyowa Kirin's Drug Discovery Research Philosophy Revealed from the Development History of This Technology

Tokyo Research Park Director, Rinpei Niwa

REGULGENT

Our proprietary bispecific antibody creation technology

A unique bispecific antibody technology born from Kyowa Kirin's drug discovery philosophy, which still lives on among researchers

Drug Discovery Infrastructure Research Institute, Hikaru Miyagi

*Antibody-Dependent Cellular Cytotoxicity

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