

# Accelerating intellectual property activities that leverage technological capabilities for the business

## Creating a myriad of value through the use of intellectual property

The Kirin Group promotes intellectual property (IP) activities in the domains of Food & Beverages, Health Science and Pharmaceuticals.

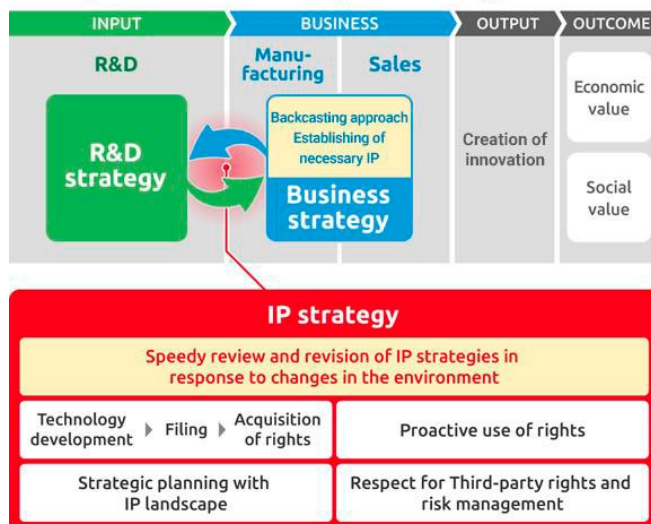
We position IP created in each domain as one of our management assets, and we will create value for our customers by utilizing this IP. At the same time, we will achieve sustainable growth by respecting the rights of third parties and securing business flexibility.

## Strengthening our IP strategy by integrating business, R&D, and IP

Kirin Holdings Company, Limited ("Kirin Holdings") is promoting IP strategies to realize the Kirin Group's 2022 Medium-Term Business Plan and Long-Term Management Vision, KV2027. We aim to achieve sustainable growth by realizing a "value creation model linking business and R&D," in which business, R&D, and IP work in unison to transform the technologies we have cultivated into products and services that deliver value to our customers. We will continue to create value by seamlessly linking our R&D and business strategies.

### Value creation model linking business and R&D

Maximize value creation by integrating the organization through the linkage of business and R&D strategies with IP strategy.



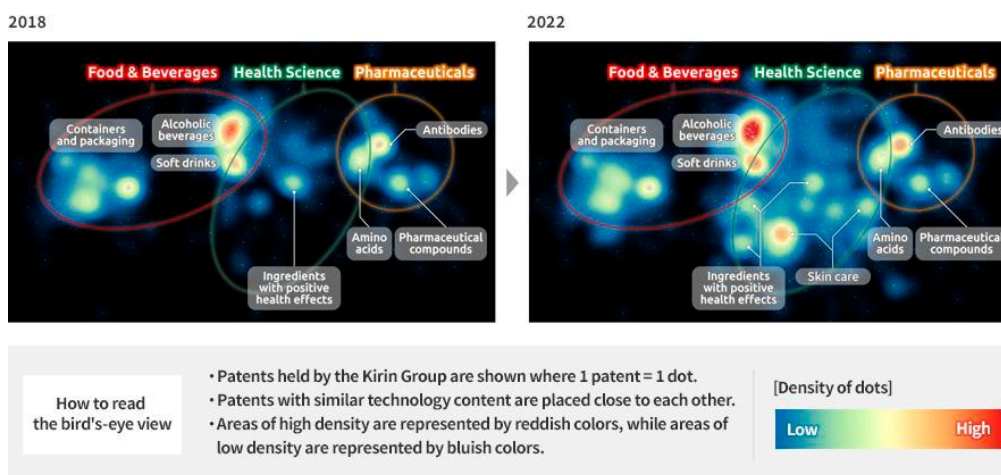
Based on a multifaceted analysis, we have identified the IP needed to achieve the financial targets for 2027, the final year of KV2027, and are also focusing on activities that will lead to the allocation of R&D resources needed for future business development and rights acquisition. In addition, we are aggressively investing to enhance product design originality, an important asset, and have acquired rights to well-designed containers, packaging materials, beverage servers, and other products.

## Steadily strengthening patents in the Health Science domain

The Kirin Group's patents are widely distributed in the Food & Beverages domain, which includes containers and packaging, alcoholic beverages, and soft drinks; the Pharmaceuticals domain, comprising mainly antibodies and pharmaceutical compounds; and the Health Science domain. In particular, in the Health Science domain, we have been integrating R&D functions between Kirin Holdings and Kyowa Hakko Bio Co. Ltd. since 2020, and further strengthening R&D activities in the key areas of "immunity," "brain function," and "gut microbiome".

We are also engaged in R&D activities in collaboration with Kyowa Kirin Co. Ltd. (Pharmaceuticals domain), Kyowa Hakko Bio Co. Ltd., FANCL CORPORATION (Health Science domain), and others.

The Kirin Group's patent portfolio in the Health Science domain is steadily expanding in addition to the existing patents in the Food & Beverages and Pharmaceuticals domains. We will continue to create new value, solve social issues related to "health and well-being" and achieve sustainable growth.



▲Changes in the Kirin Group's patent holdings (bird's-eye view<sup>\*1</sup>)  
<sup>\*1</sup>:Created using VALUENEX Radar under the supervision of VALUENEX Japan Inc.

## Deepening the utilization of IP to solve health and well-being issues

The Kirin Group has been conducting research on immunity for about 35 years. In 2010, we discovered the world's first<sup>\*1</sup> lactic acid bacteria that act on plasmacytoid dendritic cells (pDC), the command center of immunity, and have published many papers and academic conference presentations in collaboration with Kirin Holdings, Koiwai Dairy Products Company, Limited, Kyowa Hakko Bio Co. Ltd., and universities and research institutes in Japan and overseas<sup>\*2</sup>.

Based on the results of such research, in 2020, products using Lc-PLASMA were the first in Japan<sup>\*3</sup> to be registered and publicized as foods with function claims supporting immune system. We have also acquired basic patents, including use patents, and are working to capitalize our intellectual property.

## Value Creation Model / Input

Currently, we are promoting IP utilization both in-house and in collaboration with external partner companies. The use patents related to functionality (immunity) are widely licensed outside the company as well as for product development within the group, contributing to solving a wider range of consumer health and well-being issues (number of products in the LC-Plasma series currently on the market\*4: 29 products in Japan).

We will continue to contribute to the further expansion of the "immune care" market in Japan and abroad and to the achievement of our financial and non-financial targets by securing and properly maintaining the necessary IP rights.

- \*1:Lactobacillus acidophilus reported to act on pDC in humans for the first time in the world (based on information published in PubMed and *Ichushi-Web*).
- \*2:30 academic papers including 15 human clinical trial reports, etc. (as of March 2022)
- \*3:The first brand in Japan to be registered and publicized as foods with function claims supporting immune system.
- \*4:As of March 2022 Number of foods with function claims labelled food items.



## Promoting the use of IP in the Food & Beverages domain to deliver the freshly made deliciousness

*KIRIN Home Tap* is Kirin Beer's subscription service that allows customers to enjoy the delicious taste of freshly brewed beer at home with a dedicated beer server and is positioned as one of Kirin Beer's growth engines. Freshly brewed draft beer, such as *KIRIN ICHIBAN Premium*, the top brand of *KIRIN ICHIBAN*, and topical craft beers are filled into special PET bottles and delivered to consumers' homes with their delicious taste preserved.

The dedicated beer server used for this service is designed to fit in with the interior of the consumer's home. And the dedicated PET bottles are replete with multiple elemental technologies, including thin-film technology, to maintain a high level of quality stability. These are protected by design registrations and patents, leading to the provision of Kirin's unique services.

We will continue to promote technological development and the utilization of intellectual property to build Kirin's unique services and contribute to providing value to our customers.

### Use of IP related to *Home Tap*

