



*Foundation for Biomedical Research and Innovation at Kobe*

# At the Heart of the Kobe Biomedical Innovation Cluster, A Creator of Japan's future

The Kobe Biomedical Innovation Cluster (KBIC) started as a project to reconstruct Kobe's economy devastated by the Great Hanshin-Awaji Earthquake, to protect Kobe citizen's lives and to contribute to the health and welfare of all mankind. The Foundation for Biomedical Research and Innovation was established in March 2000 as the core organization promoting the KBIC with Hiroo Imura as the first president, and, in 2018, under the second president, Tasuku Honjo, the foundation was developed and reorganized into the Foundation for Biomedical Research and Innovation at Kobe (FBRI). During these periods, the KBIC has developed remarkably and grown into the largest biomedical life-science cluster in Japan – it is now home to over 360 companies and organizations, including highly advanced medical institutions, and more than 12,000 people are working there. As the core organization, the FBRI vigorously promotes joint projects and facilitates various forms of collaboration among industrial, government, academic and medical institutions in the KBIC.

Japan has become an aging society with a declining birth rate ahead of other countries and faces a variety of medical challenges. We also have the devastation caused by COVID-19 still fresh in our memory. It is our vital mission to offer the solutions to these medical problems and extend people's healthy life expectancy. Medicine has evolved to the point where basic science and clinical practice fuse together to elucidate the biological structure of human diseases. In the KBIC, the foundations for such endeavors such as basic and clinical sciences and translational research as well as computational science, are already being developed, and a group of companies in related fields also accumulate.

The FBRI will work harder than ever to link and integrate these activities in the KBIC, and promote synergies among them to create new industries and bring the fruits back into real-world medical care. With these efforts we will fulfill the trust by the city of Kobe and its citizens, and disseminate the message from Kobe to the world for realizing a strong, resilient society where people can enjoy good health and longevity.

We greatly appreciate your continued warm support and cooperation.



Foundation for  
Biomedical Research and  
Innovation at Kobe

President

**Shuh Narumiya**

## [ Profile ]

Graduated from the Faculty of Medicine, Kyoto University in 1973. Professor in Pharmacology at the Faculty of Medicine, Kyoto University in 1992. The Dean of the Graduate School of Medicine and Faculty of Medicine, Kyoto University from 2004 to 2007. The Director of the Medical Innovation Center, the Graduate School of Medicine, Kyoto University from 2010 to date. Professor Emeritus at Kyoto University and Specially Appointed Professor at the Graduate School of Medicine, Kyoto University in 2013. The Imperial Prize and Japan Academy Prize in 2006 and a Person of Cultural Merit in 2017.

Served as the President of the FBRI since 2024. Specialties, pharmacology and biochemistry.

## Overview

Corporate name	Foundation for Biomedical Research and Innovation at Kobe
Address	Creative Lab for Innovation in Kobe 5F 6-3-7, Minatojima-Minamimachi, Chuo-ku, Kobe city, Hyogo 650-0047, Japan
Established	March 17, 2000
President	Shuh Narumiya
Principal endowment	¥1.2 billion (March 31, 2024)



## Logo

The logo of the Foundation for Biomedical Research and Innovation at Kobe (FBRI) is composed of the Foundation's initials. The letter "F" is shaped to resemble a human figure, expressing that people are at the heart of the Kobe Biomedical Innovation Cluster (KBIC): the primary and ultimate objectives of the KBIC project are to enhance human health and vitalize the healthcare industry; and to develop and promote KBIC, it is essential to form collaborative ties among people in the industrial, academic, governmental and healthcare sectors, and in the general public. The color scheme of the logo is inspired by Kobe's natural beauty: the blue of the ocean, the light blue of the sky, and the green of the mountains.

\* This Logo is the registered trademark of FBRI.

## List of Executives

Post	Name	Title
President	Shuh Narumiya	Director, Medical Innovation Center, Kyoto University Graduate School of Medicine
	Tatsuya Hasegawa	Executive Director, FBRI
Executive Directors	Mamoru Kubota	Executive Director, FBRI Former Senior Advisor, Sysmex Corporation
	Kozo Mori	Executive Director, FBRI Director General, Biomedical Industry Affairs, Kobe City Government
Managing Director	Kouji Kodera	Secretary General, FBRI
Directors	Ryoichiro Kageyama	Director, RIKEN Center for Biosystems Dynamics Research
	Atsuhiko Kawamoto	Director, Translational Research Center for Medical Innovation, FBRI
	Toshio Kitamura	Director, Institute of Biomedical Research and Innovation, FBRI
	Yasuki Kihara	Director, Kobe City Medical Center General Hospital
	Satoshi Matsuoka	Director, RIKEN Center for Computational Science
	Takamichi Murakami	Dean of the Graduate School of Medicine and School of Medicine, Kobe University
	Teruo Yamashita	Chief Executive Officer of the Public Health Department, Hyogo Prefecture
	Masanobu Yamate	Director, Center for Cluster Development and Coordination, FBRI
Auditors	Takashi Sakai	General Manager, Public & Financial Institutions, Banking Dept., Sumitomo Mitsui Banking Corporation
	Yasuji Matsuyama	Certified Public Accountant

Post	Name	Title
Chairman	Hisashi Ietsugu	Chairperson and Group CEO, Sysmex Corporation
Honorary Presidents	Hiroo Imura	Professor Emeritus, Kyoto University
	Tasuku Honjo	Deputy Director-General and Distinguished Professor, Kyoto University Institute for Advanced Study
Advisors	Motohiko Saito	Governor, Hyogo Prefectural Government
	Kizo Hisamoto	Mayor, Kobe City Government

Post	Name	Title
Councilors	Kaoru Asano	President, Sysmex Corporation Vice Chairman, Kobe Chamber of Commerce and Industry
	Shin Ashida	Representative Director, Chairman, President and CEO, JCR Pharmaceuticals Co., Ltd.
	Masao Imanishi	Vice Mayor, Kobe City Government
	Kinya Otsu	President, National Cerebral and Cardiovascular Center
	Yasufumi Kaneda	Specially Appointed Professor, Center for Infectious Disease Education and Research, Osaka University
	Hideki Nishio	Director General, Planning and Coordination Bureau, Kobe City Government
	Eisuke Nishida	Executive Director of Science, RIKEN
	Nobuo Hashimoto	President, Kobe City Hospital Organization
	Yohei Hattori	Vice Governor, Hyogo Prefectural Government
	Masato Fujisawa	President, Kobe University
	Hitoshi Horimoto	Chairman, Kobe Medical Association
	Nagahiro Minato	President, Kyoto University

## Organization chart





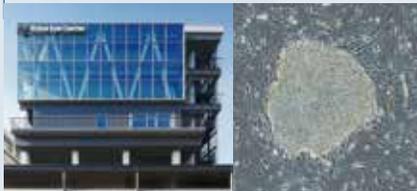
# KOBE Biomedical Innovation Cluster KBIC

Since 1998, KBIC, the Kobe Biomedical Innovation Cluster, has established as a municipal reconstruction project from the Great Hanshin-Awaji Earthquake and has successfully grown into one of the largest biomedical life-science clusters in Japan, with a concentration of world-leading research institutes, companies and organizations in the medical industry field.

## Missions

- Creation of employment and Revitalization of Kobe's economy
- Promotion of public health and welfare by providing advanced medicine
- Contribution to the improvement of medical standard in Asia

Through the well-driven collaboration and cooperation between cluster members such as research institutes, universities, medical institutions, and medical-related companies etc., KBIC is now the flourishing place of creation, and several outstanding medical innovations are originated in Kobe. Our innovative achievements include the world's first iPS cell-based transplantation surgery and the hinotori™ Surgical robot system, besides Japan's first developed and launched surgical manufacture.



Kobe Eye Center, a centre for the implementation of iPS cell-based regenerative medicine.



hinotori™ Surgical robot system developed by Medcaroid Corporation, a cluster member company of KBIC.



JAPAN

## PORT ISLAND



RIKEN Center for Biosystems Dynamics Research



KOBE City Medical Center General Hospital



Kobe Eye Center



Hyogo Prefectural Kobe Children's Hospital



Honjo Kobe Research Center for Biomedical Innovation



Supercomputer Fugaku RIKEN Center for Computational Science

Airport

Minami Koen Sta.

Iryo Center Sta.

Keisan Kagaku Center Sta.



KBIC Portal Website

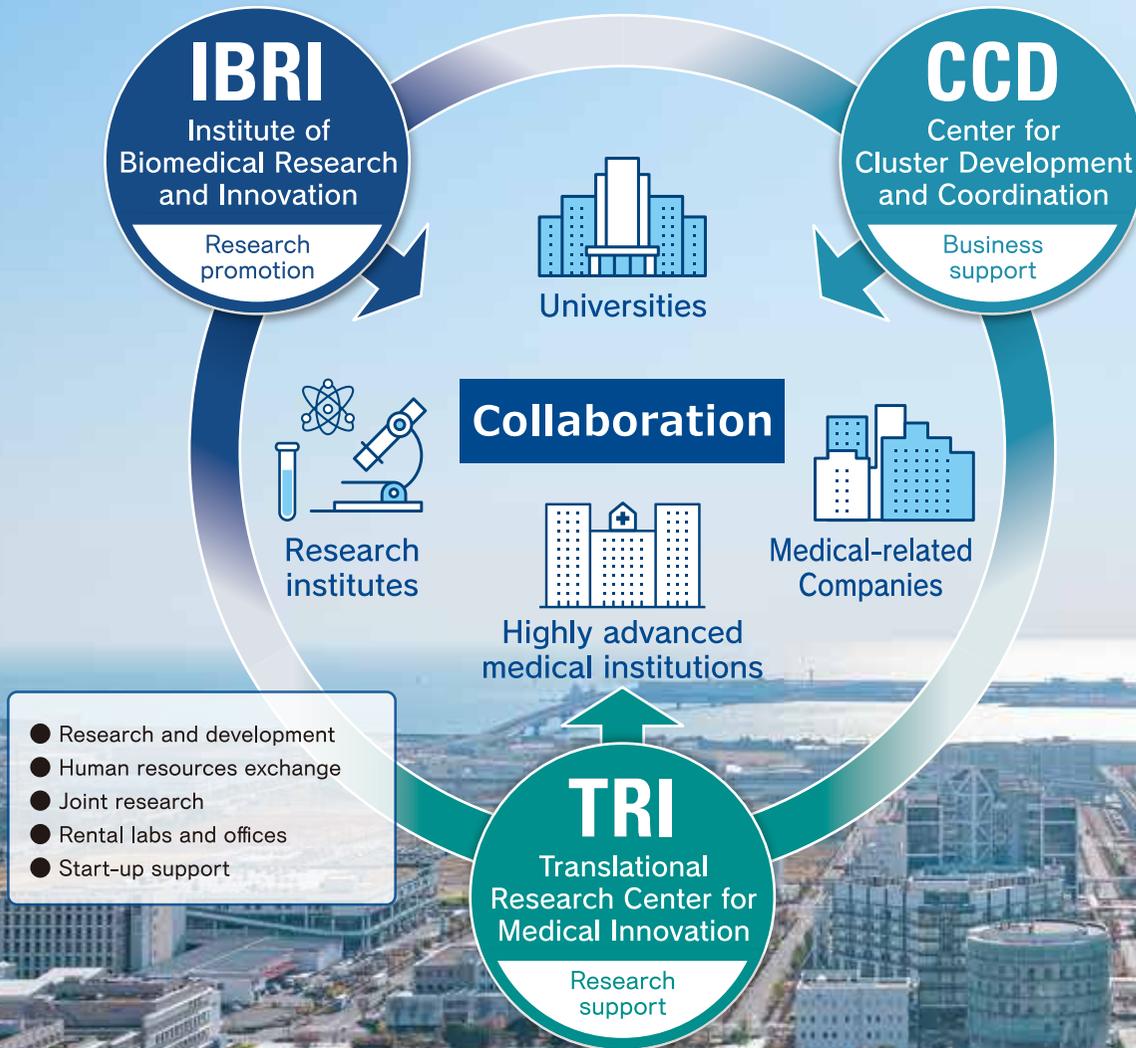
<https://www.fbri-kobe.org/kbic/english/>





The core organization supports and promotes KBIC  
**Foundation for Biomedical Research and Innovation at Kobe**

# FBRI



**From Kobe to the rest of the world  
 Heralding a new era of healthcare  
 through trans-sector alliances**

Pharmaceuticals

Medical devices

Regenerative medicine

Healthcare

The Foundation for Biomedical Research and Innovation at Kobe (FBRI) works with the City of Kobe to support the KBIC's activities and help build a future for new medicine for the world. FBRI has three centers to provide supports ranging from R&D seeds to business creation. Through the proactive works of these three centers, FBRI gives access to diverse organizations to translate basic research into commercial products in pharmaceuticals, medical devices, regenerative medicine, health promotion and many other fields.



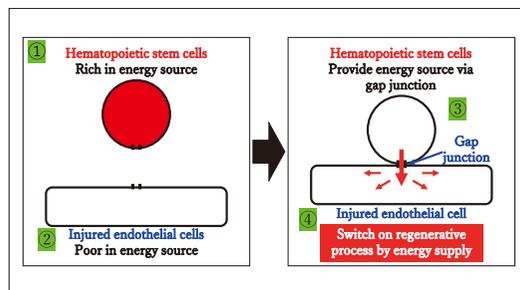
## Department of Regenerative Medicine Research

Professor Akihiko Taguchi

Establishment of regenerative medicine for stroke and Alzheimer's disease through activation of endogenous neurogenesis

There are no effective treatments to cure stroke and Alzheimer's disease. We have shown that (1) intra-venous injection of stem cells for stroke improves functional recovery through activation of neurogenesis at peri-infarct area, (2) injection of stem cells for dementia improves neuronal function through activation of neurogenesis at hippocampus, and (3) the fundamental mechanism of action of stem cell therapies, including hematopoietic and mesenchymal stem cell therapies, is direct cell-cell interaction via gap junctions (Fig. 1). Based on these findings, we are conducting research to establish optimized stem cell therapy for stroke and dementia.

■ Mechanism of action of stem cell therapy

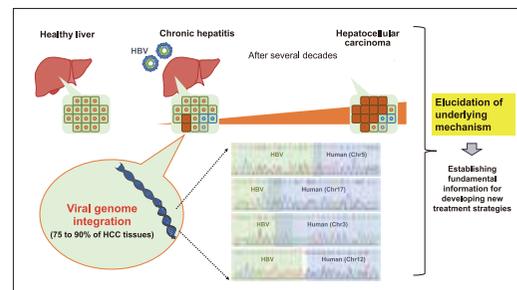


## Department of Infectious Disease Research

Professor Masamichi Muramatsu

We aim to study the pathogenesis of viral hepatitis to develop novel diagnostic and treatment methods.

According to the WHO, at least 300 million people are estimated to live with the hepatitis viruses all over the world. Chronic viral hepatitis can lead to serious liver diseases such as liver cirrhosis and liver cancer, killing more than 1 million people each year. Japan is no exception to this situation, where hepatitis virus infections have become a serious public health problem. Our department is investigating how hepatitis viruses persist in the liver and how they subsequently induce serious liver diseases. Through research of the mechanism by which the virus persists in the liver and the subsequent development of the disease, we will explore clues on how to eliminate the virus, prevent its progression to serious forms, and halt disease progression.



## Department of Animal Experimentation

The safety breeding system for experimental animals and the support system for advanced animal experiment technology.

The Department of Animal Experimentation, Foundation for Biomedical Research and Innovation at Kobe, is breeding facility for experimental animals. It is managed and operated in accordance with the "Guide for the Care and Use of Laboratory Animals on the Animal Experimentation, FBRI" based on the "Act on Welfare and Management of Animals." Our staff are specialist of laboratory animal management and reproduction technology, therefore the researchers at the IBRI can conduct cutting-edge animal breeding and experiments from the viewpoint of science, animal welfare, and environmental conservation for advance of life science in the Kobe Biomedical Innovation Cluster.



## Research Facility of IBRI

### Honjo Kobe Research Center for Biomedical Innovation



- 6F ←
- 5F
- 4F
- 3F
- 2F
- 1F

Department of Immunology  
 Department of Brain and Neurodegenerative Disease Research  
 Department of Infectious Disease Research

Shared-use Equipment



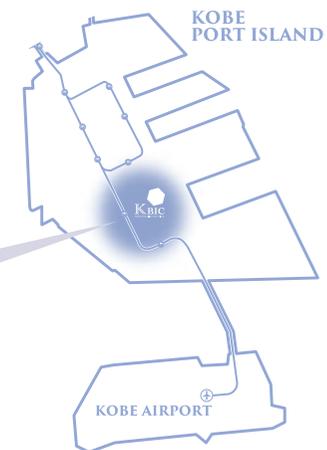
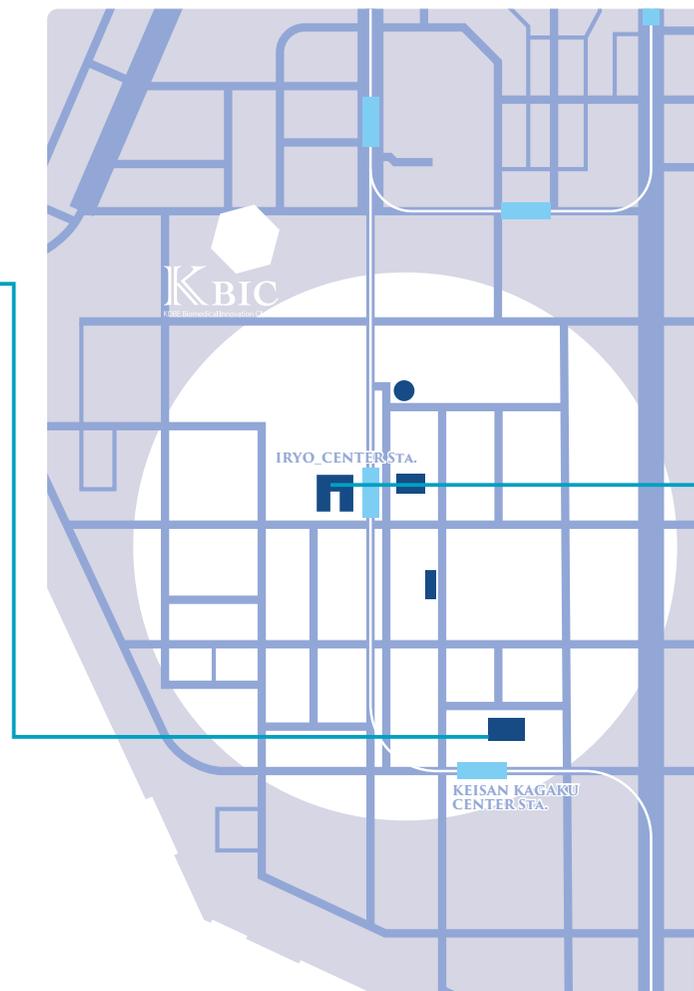
Creative Lab for Innovation in Kobe

- 1F ←
- Department of Animal Experimentation

The HBI was inaugurated in April, 2021 on the 1st and 6th floors of CLIK building, the Creative Lab for Innovation in Kobe, located in the lower south side of Kobe Biomedical Innovation Cluster. This research centre commemorated the 20th anniversary of the FBRI and honored the receipt of Nobel Prize in Physiology or Medicine 2018, achieved by our current Honorary President Tasuku Honjo.

On the 1st floor, it accommodates the Department of Animal Experimentation, which sufficiently meets international standards for animal testing. On the 6th floor we have the three of research departments of IBRI (i.e., Department of Immunology, Department of Brain and Neurodegenerative Disease Research, and Department of Infectious Disease Research), collectively and efficiently consolidated in one place.

It also has the “Shared-use Equipment Room” with advanced research equipment available for wide range of usage by researchers, private companies and other personnel working in the Kobe Biomedical Innovation Cluster.



### Institute of Biomedical Research and Innovation

Research lab

- 5F
- Department of Regenerative Medicine Research



Institute of Biomedical Research and Innovation

## TRI, continuously challenges to develop innovative medical technologies for extension of healthy life expectancy.

The Translational Research Center for Medical Innovation (TRI) was established in 2003 as the first academic data center and statistical analysis center. Since its inception, the Center has continued to grow and develop as an academic research organization (ARO), always available to all medical doctors and researchers domestically and internationally.

Currently, TRI provides one-stop services for universities and other research institutions, medical institutions, and companies. These services range from advice on non-clinical development and intellectual property strategies for research seeds to the launch and operation of clinical trials and research. They also cover interactions with regulatory authorities, data analysis, and the publication of results. In addition, its scope of support is expanding to include corporate liaison with academic seeds and their international expansion.

For basic research scientists outside the medical community, TRI discovers and develops research seeds based on the needs of medical practice, including matching them with medical researchers or companies. It is also developing new strategies for conducting and facilitating clinical trials, using artificial intelligence (AI) technology in collaboration with external organizations. The department of information technology (IT) development of TRI develops applications to assist doctors and researchers in collecting and organizing research data.

At the core of all activities is the desire to “create a society where people can live healthy lives.” To this end, TRI is actively promoting the creation of the “soil” to further enhance Japan’s medical capabilities and the cultivation of “seeds” to grow into abundant trees and deliver the “fruits” needed in clinical practice. Through these initiatives, TRI continues to meet the challenge of “extending healthy life expectancy through the practical application of cutting-edge medical technologies.”



Director **Atsuhiko Kawamoto**



## 1 Cultivation of early-stage seeds

In addition to focusing on the development of internal research seeds and working toward their practical application, TRI's support activities include creating development strategies for promising external seeds, assisting in the acquisition of research funding, developing intellectual property strategies, and preparing non-clinical study plans, all aimed at leading to future clinical development. Since its founding, TRI has continued to provide research consulting services for academia and companies.

Recent topics include TRI being entrusted by the Japan Science and Technology Agency (JST) with the project "Survey and Proposal for Building a Foundation for Creating Sustainable Innovations of Research Results in the Life Science Field under the Strategic Creative Research Promotion Project," which has been ongoing since fiscal year 2018. TRI has also been entrusted by the AMED with the project "Commercialization and Practical Application Support in Medical Device Development," starting in fiscal year 2023. Through these activities, TRI not only develops seeds in the medical field but also strengthens its translational research support system, including the application of advanced science and technology from different fields such as engineering, science, information technology and other non-medical disciplines to medical development.



## 2 Promotion and management of clinical trials and research

TRI provides one-stop support for clinical trials and research conducted by companies and academia nationwide. The support covers research planning, interactions with regulatory authorities, administrative management, statistical analysis, conference presentations, and publication. The Center also actively supports registry studies led by academic societies and study groups.

TRI also has functions such as project management, monitoring, and data center operations. High-quality clinical data is efficiently collected there by utilizing its extensive knowledge, experience, and technology. TRI is staffed by clinicians and biostatisticians with extensive experience in clinical development, and they provide medical and statistical advice on the clinical data collected.

In recent years, TRI, in collaboration with the Center for Cluster Development and Coordination (CCD), another center of FBRI, has actively been involved in supporting clinical development promoted by member companies in the Kobe Biomedical Innovation Cluster.



## 3 Promotion of projects with high public interest

TRI facilitates projects with high public interest as an academic research organization (ARO) affiliated with a public interest incorporated foundation. For example, by utilizing and analyzing the extensive medical and health-related big data held by Kobe City, the Center accumulates expertise in organizing administrative big data with the goal of establishing a database provision service for researchers.

Since 2023, TRI has taken over the "New Notification Creation System for Clinical Trial Protocols" from the Japan Medical Association and operated it. This system enables easy and high-quality creation of regulatory filing documents required for conducting clinical trials. As this system is used by companies and academia nationwide, we are committed to fulfilling the significant responsibility of stable maintenance and management of this system.

In addition, as the representative organization in Japan in Orphanet, an international rare disease consortium (headquartered in Paris), the TRI is engaged in activities aimed at enriching information from the country and abroad by translating and publishing information on rare diseases and by registering related information.



## 4 Promotion of product commercialization by the Division for Regenerative Medical Product Development

The Division promotes the implementation and implementation support of manufacturing and quality control of cell-processed products for regenerative medicine.

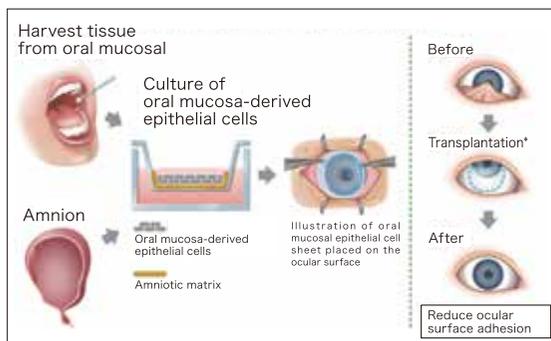
### Division for Regenerative Medicine Product Development

#### 1 Business related to the contract manufacturing of corneal regeneration products and modifications to manufacturing and quality control processes

The cornea on the surface of the eyeball is covered by corneal epithelium. After the corneal epithelium is damaged by trauma or disease, the corneal surface becomes covered with conjunctival epithelium and opaque, which can cause severe visual impairment that is difficult to treat. This cell-based product, an oral mucosal epithelial sheet for regenerative medicine, has been clinically developed by the Department of Ophthalmology at Kyoto Prefectural University of Medicine. It is effective for ocular surface reconstruction in treating intractable ocular surface diseases.

This cell sheet is produced by culturing cells collected from patient's oral cavity on the amnion obtained from a donor. This product has been transplanted into many patients in clinical research, advanced medical care, and investigator-initiated clinical trials, demonstrating its safety and efficacy. Ultimately, it was approved as a regenerative medicine product in 2022. We have consistently conducted the production and quality control of the product, and currently, we are conducting post-approval manufacturing for the marketing authorization holders.

#### ■ Production and Transplantation of Oral Mucosal Epithelial Cell Sheet

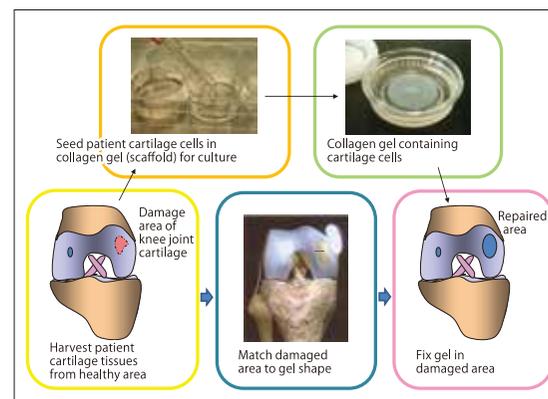


#### 2 Support for the manufacturing and regulatory approval application of the cartilage regeneration product (investigational product)

The cartilage in the knee joint has a very limited ability for self-repair. Once damaged by trauma, there is little chance of regeneration or repair. This cell-based product has been developed in Europe for cartilage regeneration; cells are produced by culturing patient's own cartilage cells (also known as chondrocytes) in a collagen gel scaffold. Transplantation of cultured chondrocytes to repair damaged cartilage is expected to eliminate the pain associated with knee cartilage damage and to restore the knee function.

While this product has undergone many clinical trials in Europe for the treatment of cartilage damage, also in Japan investigator-initiated exploratory and company-sponsored confirmatory trials have been conducted with favorable treatment results. In addition, an exploratory study in knee osteoarthritis, which affects more patients than cartilage damage, has shown a good therapeutic effect. Consequently, we are preparing to conduct the pivotal clinical trial to obtain regulatory approval. Our team consistently carries out the production and quality control of this product.

#### ■ Production and Transplantation of Autologous Cartilage Cell Processed Product (Collagen Gel containing Cartilage Cells)





Director **Masanobu Yamate**

## Concierge of the Kobe Biomedical Innovation Cluster — Advising and nurturing for future healthcare —

The Center for Cluster Development and Coordination (CCD) was established in fiscal year 2005 with the aim of accelerating cluster formation in the Kobe Biomedical Innovation Cluster (KBIC), through a variety of commercialization support for small and medium-sized local enterprises and cluster member companies, and promotion of both cooperation with overseas clusters and collaboration among industrial, government, academic and medical institutions. Since its founding, we have specifically promoted collaboration and integration among member companies, research institutes, universities, and medical institutions within KBIC to generate synergistic effects. In addition, we have been taking the initiative to establish a support system with business-support coordinators specialized in their expertise areas of medical devices, drug and biopharmaceutical discovery, health promotion, and startups. We will further leverage the networks we have built over the past 20 years to create medical innovations and will grow our ecosystem where innovative technologies will emerge one after another. We provide comprehensive commercialization support ranging from the discovery of

technology seeds to the market development, and we even support the global expansion of local companies' business; therefore, we achieve our succeeding goals to assist the development of innovative products and to grow more startups from KBIC to play active roles in Japan and abroad.

Also by providing a venue for interaction and networking and responsive consultation, we will be in accordance with our mission to enrich the collaboration and operational environment of research & development – offering the solutions to common themes around and form our cluster to be more attractive.



## 1 Creating mechanisms for innovation

By leveraging the networks we have built over the past 20 years and the cumulative information of seeds and needs we have collected, we are working to make a system to further promote the creation of medical innovation.

In order to create medical devices originated in Kobe, we undertake various initiatives, such as promoting the "Kobe Vision for the Healthcare of Tomorrow," a Kobe city's initiative which aims to create an ecosystem for developing medical devices through industry-government-academia-medical institutions partnership. Regarding fields other than medical devices, we organize the "Kobe Regenerative Medicine Study Group," which aims to commercialize regenerative medicine through membership collaboration between researchers and companies within KBIC.

We are also promoting the "HBI Innovation Program," a collaborative research program that leverages research & development infrastructures associated with research institutes and the life science ecosystem created in KBIC.

Through these efforts, we aim to grow our ecosystem in Kobe where new innovative technologies emerge one after another.



## 2 Offering commercialization support to local companies seeking global expansion

We have been continuously providing members with coherent commercialization support from seed exploration to market development in the areas of medical devices, drug and biopharmaceutical discovery, health promotion, and startups. In the health promotion field, which is closely related to citizens' daily lives such as rest, nutrition, and exercise, we have been utilizing "citizen supporters system" in order to offer the comprehensive support for member companies conducting demonstration tests to obtain the scientific evidence required for commercializing products and services; moreover, to foster life science startups with the potential for global expansion, we offer a variety of support programs tailored to their respective development stages.

For instance, we support the global expansion of local companies targeting international markets, through joint participation in exhibitions held in overseas and enhances cooperation with major international life science clusters – likewise, we actively welcome the entry of overseas companies into Kobe.

Through all these efforts, we maintain our scopes to create representative innovative products and foster startups that are active both domestically and internationally.



## 3 Forming a more attractive cluster

We operate the "One-Stop Support Program," in which coordinators with expertise provide one-stop support to member companies and researchers who have joined KBIC. Consultations are available on a wide range of challenges in life science fields, such as commercialization of R&D seeds, collaborations with medical institutions, and regulatory strategies.

We also host the "OPEN INNOVATION cafe" as a place for companies, researchers, and medical institutions to gather and network or exchange information. This is an effort to expand the possibilities of future cooperation and collaboration in KBIC by sharing knowledge and experience to strengthen relationships among participants.

In order to increase our recognition globally, we are also actively involved in establishing a network with other medical clusters in Japan and overseas through promotional activities and visiting tours.

Through these efforts, we aspire to further strengthen various cooperation in KBIC, provide better support for commercialization, and further improve Kobe's visibility.



# OUR HISTORY

## FBRI Foundation for Biomedical Research and Innovation at Kobe

# 2000

### 2000

- Foundation For Biomedical Research and Innovation (FBRI) established.
- Construction of Institute of Biomedical Research and Innovation (IBRI) started.



### 2003

- Institute of Biomedical Research and Innovation (IBRI) fully opened.
- IBRI Hospital started its operation.
- Translational Research Informatics Center (TRI) opened.



### 2004

- Hiroo Imura appointed as the President of the FBRI.

### 2005

- Center for Cluster Development and Coordination (CCD) established.

### 2012

- The FBRI transitioned to a public interest incorporated foundation.

# 2012

### 2013

- PMDA Strategic Consultation Cooperation Center established.

## 2000

## 2005

## 2010

### 1999

- Kobe Medical Industry Development Project Study Group launched.



### 2000

- RIKEN Center for Developmental Biology (as it was known then) inaugurated.



- Selected for the national reconstruction project related to the creation of new industry.

### 2003

- Certified as the "Advanced Medical Industry Special Zone" under the First Special Zones for Structural Reform.

### 2002

- Selected as an implementation area for the Creation of Knowledge Cluster by the Ministry of Education, Culture, Sports, Science and Technology.

### 2007

- Selected for the Creation of Knowledge Cluster (Phase II) by the Ministry of Education, Culture, Sports, Science and Technology.

### 2006

- Number of companies and organizations reached 100.



### 2012

- Shared use of the K computer started.
- Selected as a project for the Regional Innovation Strategy Support Program.



### 2011

- Number of companies and organizations reached 200.
- Designated as part of the Kansai Innovation International Strategic Comprehensive Special Zone.

### 2009

- Selected as a Base for Industry-Academia-Government Collaboration (Global Industry-Academia-Government Collaboration) by the Ministry of Education, Culture, Sports, Science and Technology and the Ministry of Economy, Trade and Industry.

### 2014

- The location of the post-K computer decided to be Kobe.
- Designated as part of the Kansai Area National Strategic Special Zone.
- World's first transplantation surgery of autologous iPS cell-derived cells performed. (Target disease: Wet-type age-related macular degeneration)



# 2014

### 1998

- Kobe Medical Industry Development Project Discussion Group launched. (Chairperson: Hiroo Imura, then Director of Kobe City Medical Center General Hospital)

# 1998



## KBIC KOBE Biomedical Innovation Cluster

## 2015

- Tasuku Honjo appointed as the President of the FBRI.

## 2016

- Signed a Letter of Intent with Life Science Nord, one of the largest life-science clusters in Europe.
- Signed a MoU with BIOCOM California, the largest life-science cluster on the West Coast of the United States.
- Concluded an agreement with Eli Lilly Japan Co., Ltd. and Kobe City for cooperation and collaboration in promoting a dementia-friendly city.



## 2017

- Division for Regenerative Medical Product Development established.
- IBRI Hospital integrated into Kobe City Medical Center General Hospital.

## 2018

- The name of the foundation changed to the Foundation for Biomedical Research and Innovation at Kobe.
- President Tasuku Honjo received the Nobel Prize in Physiology or Medicine.

## 2019

- Concluded an agreement with Bayer Yakuhin Co., Ltd. and Kobe City to foster and support venture companies.
- Building of Honjo Kobe Research Center for Biomedical Innovation (HBI) was decided to commemorate President Tasuku Honjo's receipt of the Nobel Prize and the 20th anniversary of the FBRI.

## 2020

- Concluded a comprehensive collaboration agreement with Nagasaki University.
- Concluded an international joint research agreement with the Fraunhofer-Gesellschaft (IME) in Germany.
- Honjo Memorial Kobe Fund established.

## 2021

- The head office of FBRI moved in the Creative Lab for Innovation in Kobe (CLIK).
- Honjo Kobe Research Center for Biomedical Innovation (HBI) opened.



## 2022

- Concluded a basic collaboration agreement with MAGIA, an alliance of four leading European medtech and health clusters.
- Concluded a collaboration agreement with Nippon Boehringer Ingelheim Co., Ltd. and Kobe City regarding building a startup ecosystem, etc.



# 2015

## 2015

- Number of companies and organizations reached 300.



- Selected for the World-Class Regional R&D and Demonstration Center (Research Complex) Program by the Ministry of Education, Culture, Sports, Science and Technology.

## 2016

- Selected for the Regional Science and Technology Demonstration Base Establishment Project by the Ministry of Education, Culture, Sports, Science and Technology.

## 2017

- Selected for the Program for Building Regional Innovation Ecosystems by the Ministry of Education, Culture, Sports, Science and Technology.
- Kobe Eye Center inaugurated.



- World's first allogeneic iPS cell-based transplantation surgery performed. (Target disease: Wet-type age-related macular degeneration)



## 2018

- The 20th anniversary of the Kobe Biomedical Innovation Cluster (KBIC).

# 2020

## 2020

- Selected as a startup ecosystem hub city by the Cabinet Office.
- hinotori™ Surgical Robot System obtained regulatory approval.



# 2020

# 2021

## 2021

- Shared use of the supercomputer Fugaku started.



# ACTIVITY BASE

Main Activity Bases of the Foundation for Biomedical Research and Innovation at Kobe



PORT ISLAND

International Medical Device Alliance (IMDA)

A photograph of a modern, cylindrical building with a glass facade, identified as the International Medical Device Alliance (IMDA).

Translational Research Center for Medical Innovation (TRI)

A photograph of a large, modern building with a glass facade, identified as the Translational Research Center for Medical Innovation (TRI).

Institute of Biomedical Research and Innovation (IBRI)

A photograph of a large, multi-story building with a brick facade, identified as the Institute of Biomedical Research and Innovation (IBRI).

Creative Lab for Innovation in Kobe (CLIK)

A photograph of a modern, multi-story building with a glass facade, identified as the Creative Lab for Innovation in Kobe (CLIK).

Kobe Hybrid Business Center (KHBC)

A photograph of a modern, multi-story building with a glass facade, identified as the Kobe Hybrid Business Center (KHBC).

## Foundation for Biomedical Research and Innovation at Kobe

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