

# Kobe Biomedical Innovation Cluster

Business opportunities through the Kobe Biomedical Innovation Cluster, Japan's most advanced Life Sciences industry ecosystem

Masahide Azuma Senior Coordinator FBRI at Kobe, Japan



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- 1. Introduction of KBIC and its ecosystem
- 2. Opportunities of collaboration with KBIC members
- 3. Your opportunities as a KBIC member



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## 1. Introduction of KBIC and its ecosystem

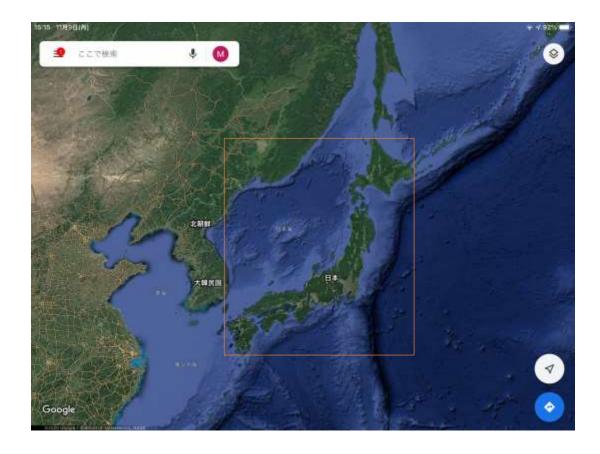
https://www.youtube.com/watch?v=bTD6encK4aY



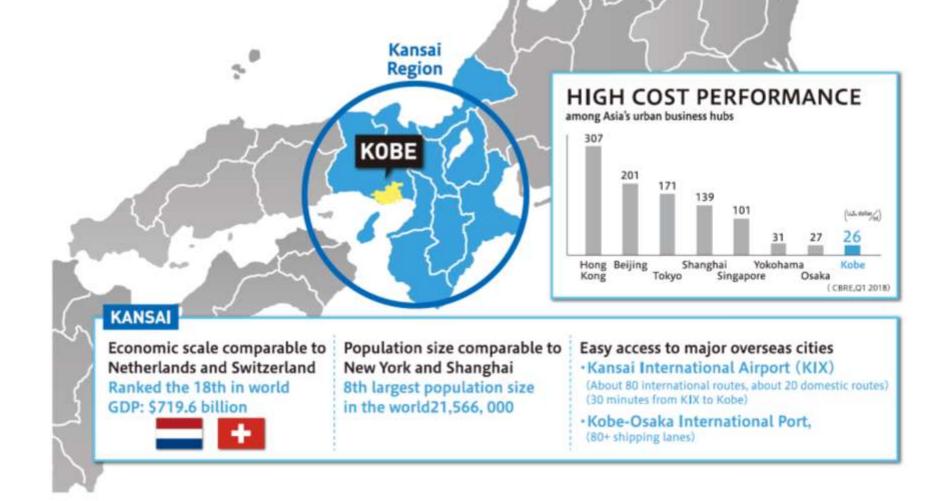








## Kobe as a Strategic Business Location



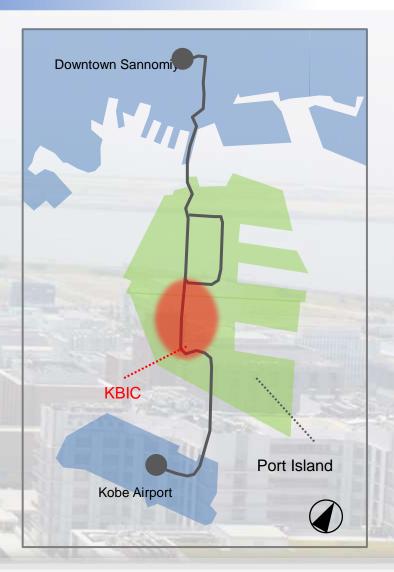




## Kobe Biomedical Innovation Cluster (KBIC)



- Japan First Biomedical Hub (since 1998)
- 3 Focus
  - Medical Devices
  - Drugs
  - Regenerative Medicines





## **KBIC Eco-system**



RIKEN Advanced Institute for Computational Science (the K computer)

**RIKEN Center for Developmental Biology** 

**RIKEN Center for Life** Science Technologies

> Institute of Biomedical Research and Innovation

Basis research (Research institutions)

**Medical Innovation** 

Hyogo Prefectural Kobe Children's Hospital

Kobe City Medical Center General Hospital

> Kobe Minimally Invasive **Cancer Center**

Nishi Memorial Port Island Rehabilitation Hospital

Drugs & Biotechnology

Regenerative medicine

Health promotion

Nursing care & rehabilitation

Clinical practice

(Hospitals)

Foundation for Biomedical Research and Innovation





Medical devices

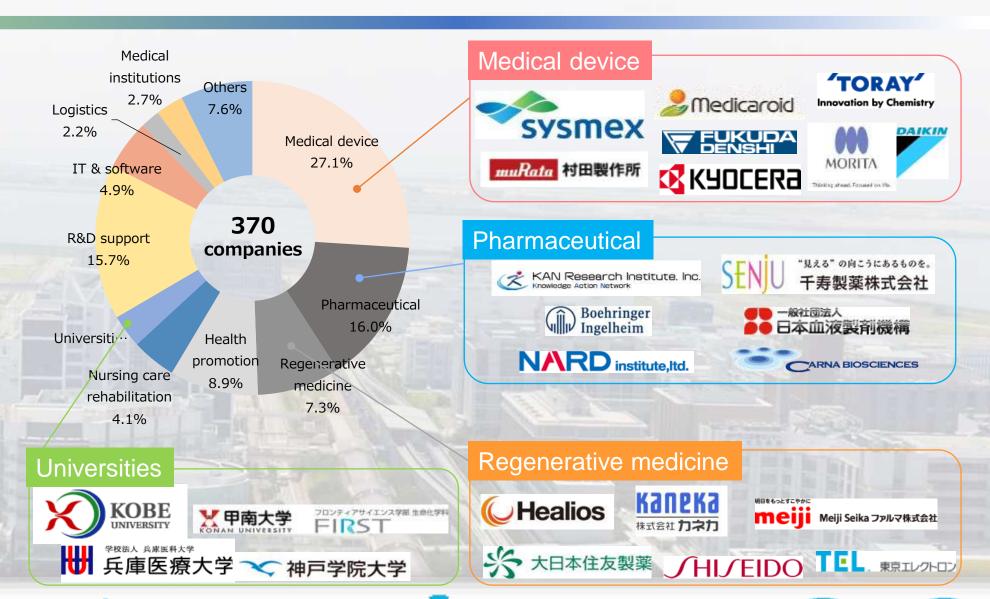
Industrialization (Companies)





## Company Breakdown as of April 30, 2021





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2. Opportunity of collaboration with KBIC members



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Nursing care & rehabilitation

Clinical practice

(Hospitals)

Medical devices

Industrialization (Companies)

Foundation for Biomedical Research and Innovation



Tasuku Honjo President

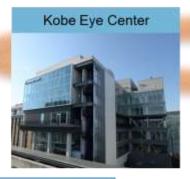




### Opportunity to collaborate with hospitals at KBIC



#### Provision of optimum medical care through collaboration within the cluster







Nishi Memorial Port Island Rehabilitation Hospital

Total number of beds: approx. 1,500
Total number of patients in 2017:
Inpatient approx. 400,000
Outpatient approx. 600,000













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#### FBRI as a liaison with medical institution in KBIC



Companies, Institutes, Universities wish to collaborate with medical institutions

Clinical trial

Joint research, development

Product evaluation

Comments on the product

Needs identification

Others

**KBIC** 

Hospital







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### Opportunity to collaborate with Research institutes at KBIC







**RIKEN Center for Biosystems Dynamics Research (BDR)** 



**Institute of Biomedical Research** and Innovation (IBRI)



**Translational Research and Informatics Center (TRI)** 



**RIKEN Integrated Innovation Building (IIB)** 



"CoLaborator Kobe"



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### Research & Development Center for Cell Therapy (RDC)



## Supporting development of cell therapy and standardization of regenerative medicine

#### **■** Ensuring the safety of cell products

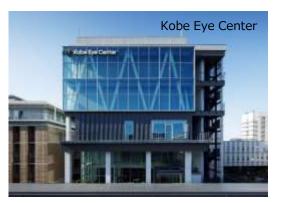
- Developing test measures to ensure safety
- R&D on standardization of cell culture and quality inspection method

## ■ Cell production and Management of Cell processing center

- Cell production in accordance with GMP (Good Manufacturing practice)
- Management of cell processing and quality inspection center

#### **■** Development for cell processing system

 Developing the system to enhance productivity and ensure security





Director Shin KAWAMATA













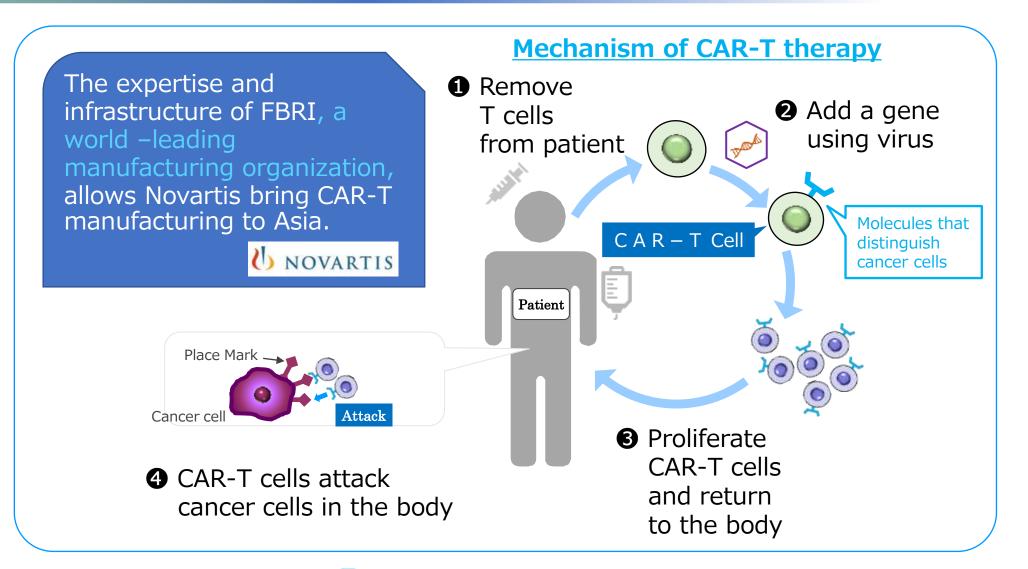




## UNOVARTIS partnered with FBRI for CAR-T cell production



- ☐ FBRI as first CAR-T cell therapy commercial manufacturing site in Asia!
- Prestigious FBRI is recognized for its world-class expertise and established practice in CAR-T cell therapy





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## **NOVARTIS** partnered with FBRI for CAR-T cell production



#### Why FBRI was selected

- · Develop human resources for cell manufacturing Efficient operation and · Meeting strict quality standards for

  - pharmaceutical manufacturing



- Technological capabilities that enable manufacturing of cell preparations in overseas standards · CPC management system results Regenerative medicine initiatives
  - in Kobe Medical Industrial City

Novartis global CAR-T footprint now spans four continents, bringing Kymriah closer to patients and healthcare professionals around the world





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## NOVARTIS partnered with FBRI for CAR-T cell production



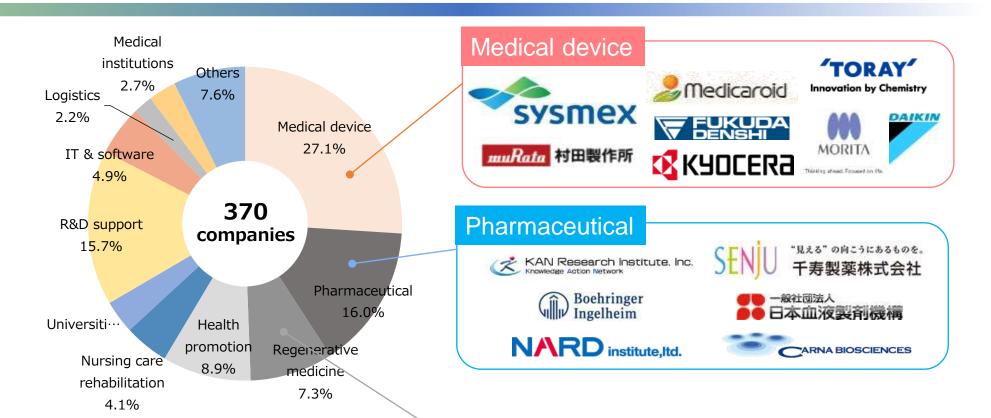
Kymriah® manufacturing sites – international supply chain network



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### Opportunity to collaborate with companies at KBIC





**Company Breakdown** as of 30th April 2021

























**Established in August 2013 Product development since April** 2015

Marketing, R&D, Manufacturing, Sales, Customer Support in Medical Robot

Technology, safty and reliability cultivated in the industrial robot business

Kawasaki Heavy Industries, Ltd.

Technologies and networks cultivated in the healthcare **Business in IVD** 

**Sysmex Corporation** 







## Medicaroid Medical Robot by Medicaroid











### Medicaroid Agreement with KARL STORZ SE & CO.KG





October 4, 2018

Medicaroid Corporation

Medicaroid Corporation and KARL STORZ SE & Co. KG concluded an umbrella agreement on a business alliance for the equipment of robotic assisted surgery systems.

Medicarold Corporation (Headquarter Kobe, Japan, President, Yasuhiko Hashimoto, hereinaffer called to as "Medicaroid") is pleased to announce the conclusion of an unibretia agreement with KARL STORZ SE & Co. KG (Headquarter Tuttlingen, Germany, Managing Directors, Dr. h. c. mult. Sybili Storz and Karl-Christian Storz; hereinafter called to as "KARL STORZ"), to form a business alliance for the equipment of robotic assisted surgery systems

Preventive and individualized healthcare as well as the development of medical cost raise the public interest in the developed countries including Japan. In such circumstances, the need for minimally mussive treatment, which aims for early detection and rapid cure of disease, is increasing, and the application and contribution of robot technology is expected in this field.

Medicaroid and KARL STORZ concluded an umbrella agreement to form a business alliance for the equipment of robotic assisted surgery systems. Based on this agreement, Medicaroid will be supplied with surgical devices from KARL STORZ, and develop a clinically useful robotic system by applying such premium products to the robotic system which is currently under development by Medicaroid.

In 2013, Medicaroid was established as a joint company by Kawasaki Heavy Industries, Ltd. (Headquarter Kobe, Japan; President and Chief Executive Officer, Yoshinon Kanehana), a leader in robotic technologies, and Sysmex Corporation (Headquarter Kobe, Japan; Charman and CEO: Hisastiletsugu), an experienced business player in the medical field. Medicaroid has been developing robotic assisted surgical systems since 2015.

Founded in 1945 in Germany, KARL STORZ is a world leader in endoscopic technology that designs, engineers, manufactures and markets products for advanced minimally invasive surgery. Their endoscopes and surgical instruments incorporate more than 70 years of experience and knowledge in the field of surgery.

Medicaroid will take advantage of the synergy created by the collaboration with KARL STORZ to contribute to the development in healthcare, by providing reliable robotic assisted surgery systems to the medical front lines not only in Japan but all over the world.

MARL STORZ SE & Co KGI

Company name: KARL STORZ SE & Co. KG Tuttingen, Germany

Business lineup: Development, manufacturing and distribution of surgical devices

I Corporation # Medical Device Alliance, 1-6-5; Minami-marchi, Chuo-ku, Kobe 600-0047, Japan on (as of September 30, 2018)

robotic dev

sent, Medicaroid Corporation

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< Extracted from the press release by Medicaroid Corporation on 4/10/2018>





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3. Your opportunity as a KBIC member



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Medical devices

Industrialization (Companies)





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## Valuable Programs for KBIC Companies and Organizations



- ◆ Networking
- Support commercialization
- Support for HR recruitment
- ◆ Joint participation in exhibitions
- ◆ Subsidies and grants



For more in details, please visit at;

https://www.fbrikobe.org/kbic/english/movies/do

wnload/kbic attract eng A4.pdf





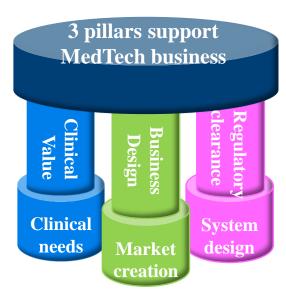




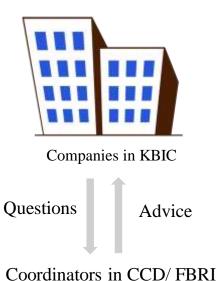


## Platform to support MedTech commercialization







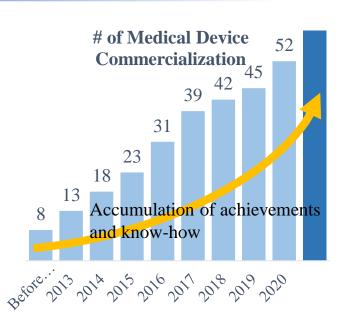




Ask Opinions

Professional Advice







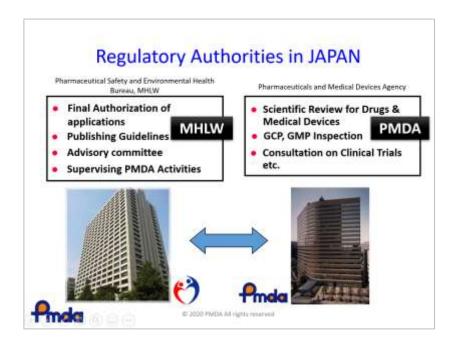
Professional Adviser for KBIC



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#### PMDA Kobe Branch at FBRI office









### Support system by Kobe City





#### **Entry Plan**

- Provide information (site environment, subsidies/grants)
- Consultation

STEP 2

#### **Company Registration**

- Introduce specialists
- Consultation (one time F.O.C.)
- Subsidy for registration fee

STEP

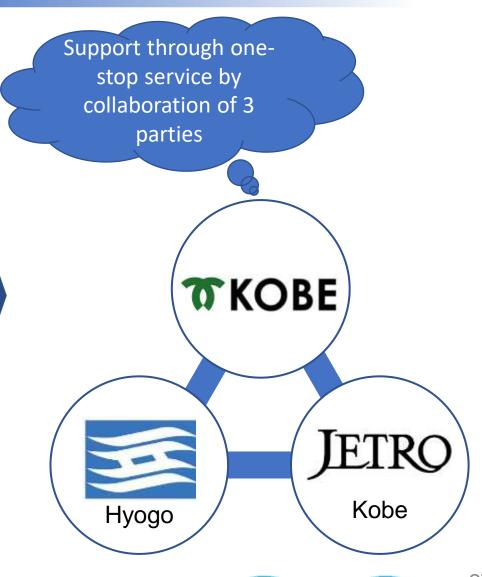
#### Preparing office

- Temporary office
- Support to find office

STEP 4

#### Preparing business operation

- Subsidies (office rent, employment, market research)
- Tax reduction,







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### DÜRR DENTAL KBIC member from Germany



Dürr Dental Japan
Established in 2014
KBIC member since 2019







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## Thank you for your attention!







inquiry@fbri.org



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



https://www.linkedin.com/company/kbic/







Foundation for Biomedical Research and Innovation at Kobe