

# Kansai Life Science Cluster

- A Global Innovative Field -





# Introduction

Kansai is one region that has led the life science field in Japan. Historically, it is an area in which the medical and biotechnology industries developed early, and in recent years it is advancing cutting-edge R&D in regenerative medicine and other fields.

In Kansai, there are many researchers who have won the Nobel Prize in Physiology or Medicine, and a concentration of universities and research institutes that carry out R&D at the global forefront. The region also leads Japan's pharmaceutical and medical equipment industries and has a high concentration of companies that operate globally and firms with unique strengths in diverse life science fields. Furthermore, there are world-famous, advanced research institutes and laboratories that support these studies and their implementation. Consequently, major overseas manufacturers of pharmaceutical products and medical equipment have entered the Kansai market. With many startups also being created in the field of life sciences, Kansai is expected to further develop into a world-leading life science cluster.

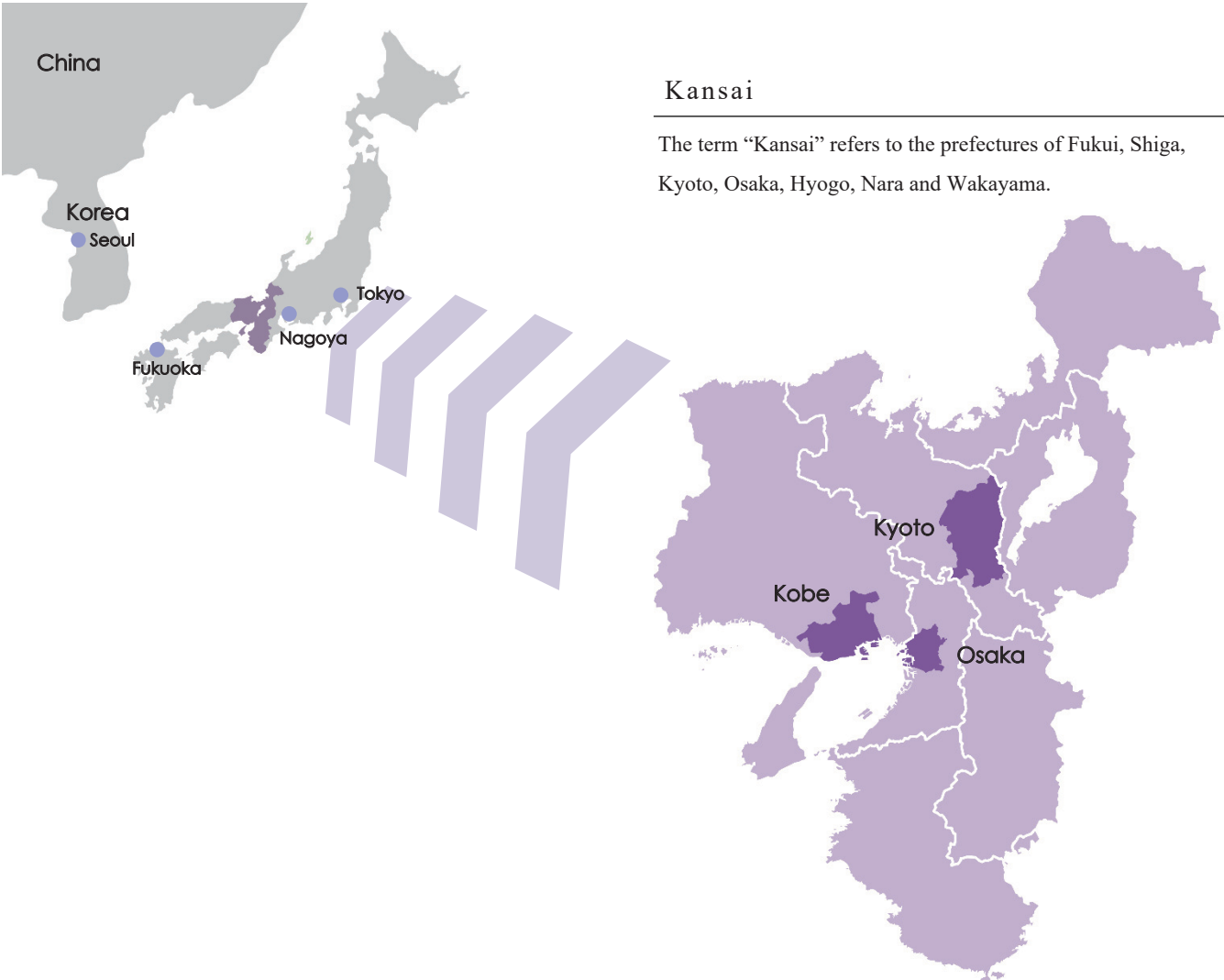
In terms of the business environment, costs such as office and industrial park rental fees are lower than in neighboring countries, and there is a solid support system provided by municipalities and support agencies. Furthermore, as well as being the birthplace of much of Japan's history, culture and art, Kansai boasts an excellent living environment, with its major cities having been ranked 4th in the Global Liveability Index, 1st in the Wanderlust Readers' Travel Awards, and 8th in Mercer's Quality of Living City Ranking of most hygienic cities.

On top of that, in 2025, Kansai is due to host Expo 2025 Osaka, Kansai, Japan, whose theme and concept are “Designing Future Society for Our Lives” and “People's Living Lab.” The Expo is gaining increasing attention and will enable life science business activities based in Kansai to be communicated to the world.

We hope this pamphlet helps kindle your interest in Kansai, and assists you when considering investing in business here.

# Table of Contents

Kansai's Large-Scale Markets and Rich Infrastructure	3
A World-Leading Life Science Cluster	5
Regional Clusters and Regional Projects in Progress Among Kansai's Diverse Life Science Fields	7
A Concentration of Universities That Lead the World in Advancing Cutting-Edge Research	9
A Concentration of the World's Best Research Institutes and Laboratories	11
A Concentration of Japan's Leading Companies in Pharmaceutical Products and Medical Equipment	13
Kansai, a Place Where it's Easy to Start Business	15
Extensive Support Systems	18
Easy Living in Kansai	19
Toward Expo 2025 Osaka, Kansai, Japan	20
(Appendix)	21



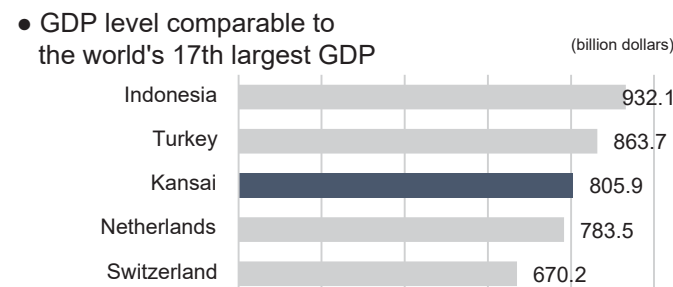
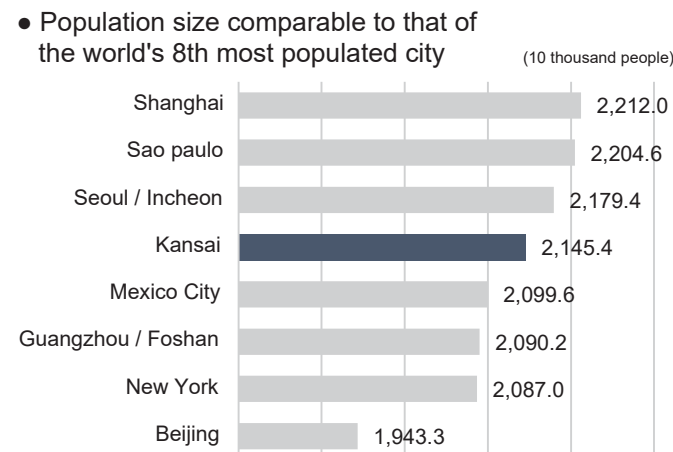


# Kansai's Large-Scale Markets and Rich Infrastructure

## Kansai's big economy

Kansai is located in the center of Japan and has a huge market with a population of around 21.45 million and GDP of about \$805.9 billion. It is the 17th largest economy in the world.

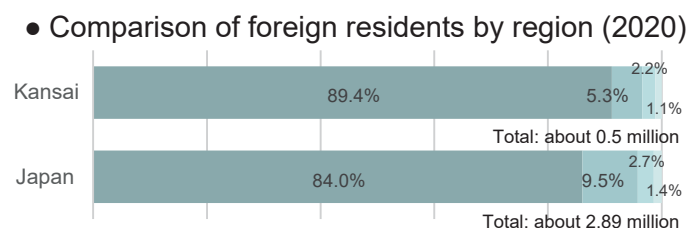
- Japan's second-largest economic region after the Tokyo metropolitan area
- An abundant labor force  
Working-age population: 12.677 million (FY 2018)  
Source: "Population Estimates" by the Statistics Bureau, Ministry of Internal Affairs and Communications
- Kansai's strong ties to the Asian economy
- A concentration of leading niche companies, and small- and medium-sized firms that can handle diverse prototypes



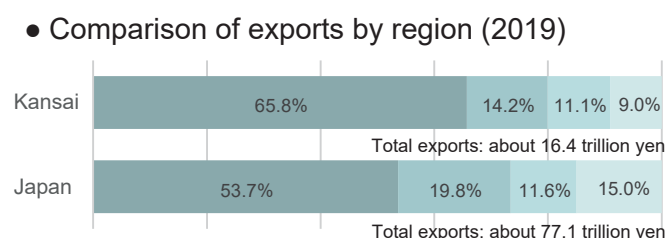
Source: Population based on the Basic Resident Register as of Jan. 1, 2020 (Ministry of Internal Affairs and Communications); Demographia World Urban Areas, 16th Annual Edition, April 2020; Annual Report on National Accounts and Annual Report on Prefectural Accounts in 2016 (Cabinet Office)  
(Note) Kansai GDP = computed from FY 2016 regional gross product (nominal); an exchange rate of \$1 = 108.37 yen was used

## Kansai's deep ties to Asia

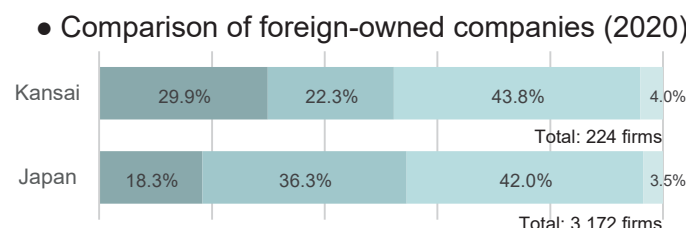
Historically, Kansai also has deep ties to Asia and has welcomed many foreigners from the region. Among the foreign-owned firms that have joined us in Kansai, about 30% are Asian companies, which is higher than the national ratio. Asia also makes up a high ratio of import and export, making Kansai an attractive region from which to advance into Asia.



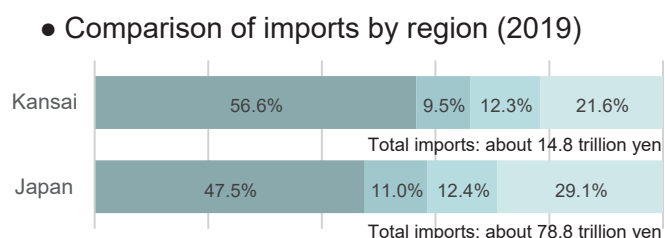
Source: Table of Statistics on Foreign Residents in each Prefecture by Nationality/Region as of June 2020 (Immigration Services Agency of Japan)



Source: Osaka Customs trade statistics, chart for Kinki area, chart by jurisdiction of Tsuruga Customs office (Fukui Prefecture) (for 2019)



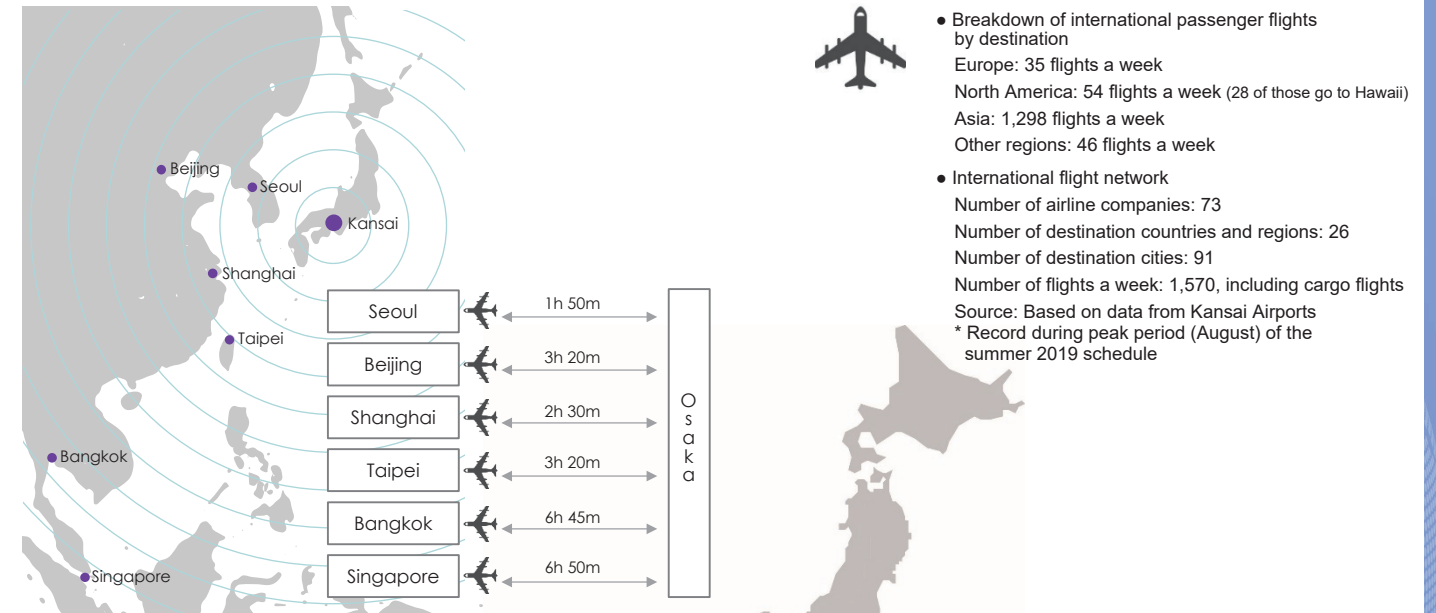
Source: Based on Toyo Keizai Inc.'s Data on Foreign-Owned Companies (2020)  
\* Foreign-owned company: foreign capital ratio of 20% or more (including some branches)  
\* For definitions of Asia, North America and Europe, see Ministry of Foreign Affairs homepage: <https://www.mofa.go.jp/region/index.html>



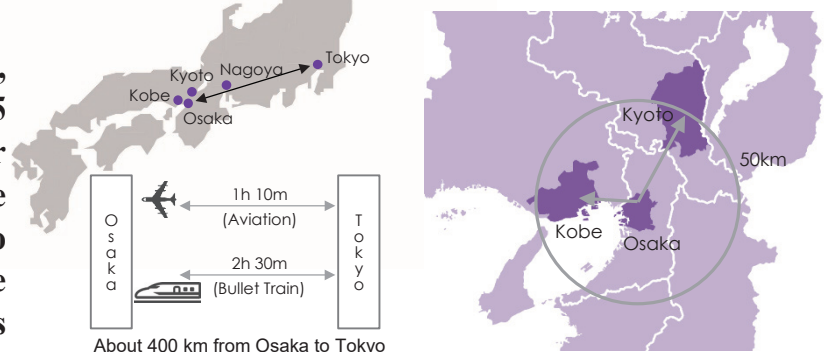
Source: Osaka Customs trade statistics, chart for Kinki area, chart by jurisdiction of Tsuruga Customs office (Fukui Prefecture) (for 2019)

## Rich infrastructure

Flights from Kansai International Airport go to 55 cities in Asia, and 20 international low-cost carriers fly to 28 cities, which is the highest in Japan for each category. Many cities in Asia are only a few hours away by air from Osaka. Cities such as Osaka and Kobe have large ports and, as bases of international trade, play a role as core cities in Asia.

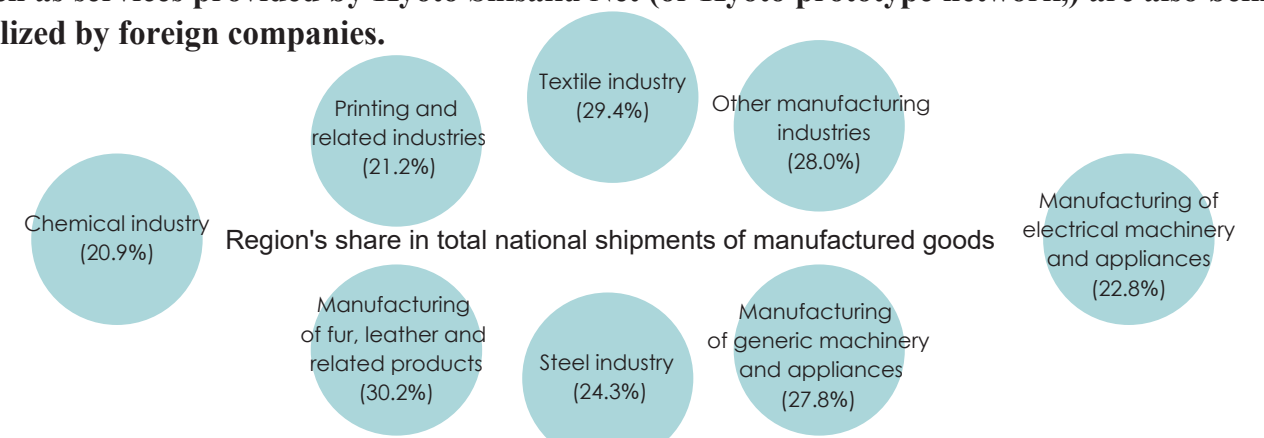


Osaka is about 400 km from Tokyo, which can be reached in only 2.5 hours by bullet train, or a one hour flight. The convenience of being able to reach the major cities of Kyoto and Kobe in about 30 minutes, since they are within 50 km of Osaka, is another attraction.



## Concentration of manufacturing industries – there is nothing that can't be made here

From raw materials and the processing of parts, to production of cutting-edge products, an extensive range of industry is concentrated in Kansai. In particular, there are many small- and medium-sized firms with technology in advanced machining, mechanical control and other areas that support Japanese manufacturing. Prototype creation and mass-production trials, such as services provided by Kyoto Shisaku Net (or Kyoto prototype network,) are also being utilized by foreign companies.

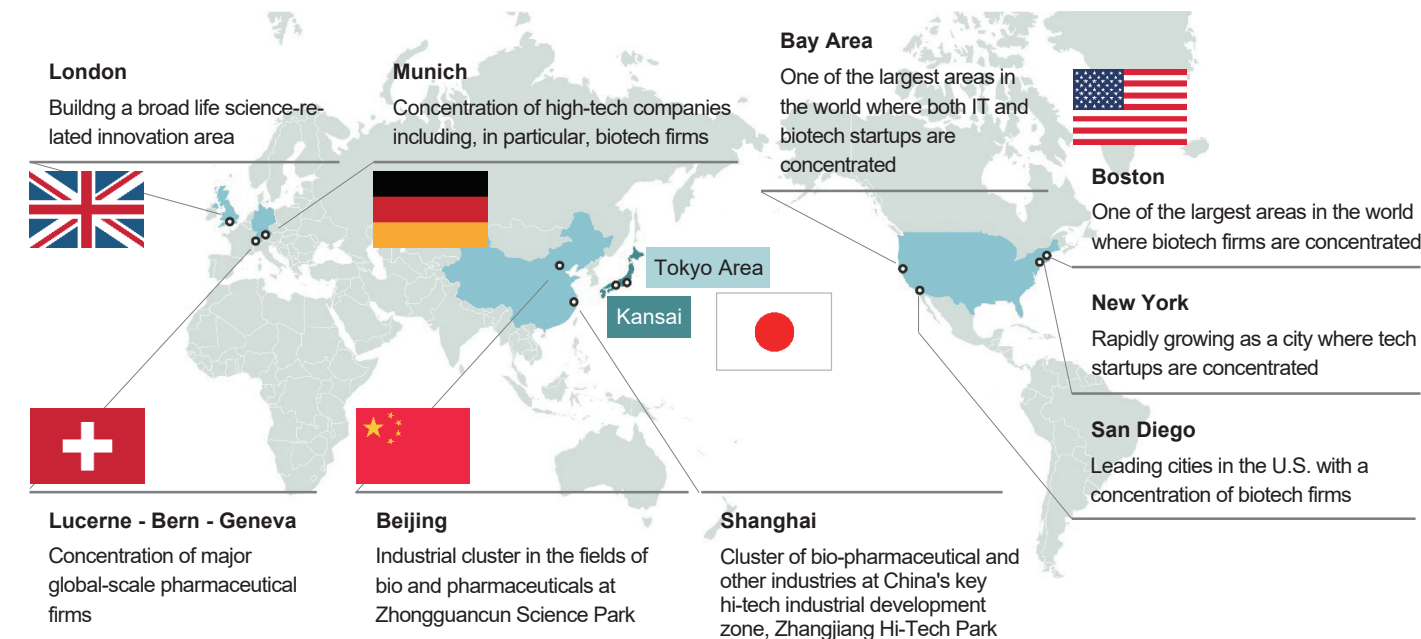


Source: Based on the Census of Manufacture 2018: Statistics Table by Region (Ministry of Economy, Trade and Industry.) Figures in the brackets indicate Kansai's share of the national total.



# A World-Leading Life Science Cluster

Kansai has a high concentration of universities and research institutes that carry out advanced R&D, and of pharmaceutical product and medical equipment companies. A large-scale life science cluster based on collaboration between industry, academia and government has taken shape and is expected to grow into a world-leading life science cluster.



## London (U.K.)

- In 2014, through a collaboration between five universities in Cambridge, Oxford and London, an organization called MedCity was established to widely promote the industrialization of life sciences.
- Cell and Gene Therapy Catapult, a center for innovation in the fields of cell and gene therapy, was established at Guy's Hospital in London. Also equipped with a manufacturing center, it is advancing the industrialization of cell and gene therapy in cooperation with domestic and foreign industrial organizations, including some from Japan.
- In 2015, the Francis Crick Institute was established to carry out cross-sectional research in fields including biology and physics.

## Boston (U.S.)

- Major global-scale pharmaceutical firms, and AI and robotics companies are located here. Massachusetts General Hospital and several other hospitals that receive large amounts of funds from the U.S. National Institutes of Health (NIH) are located here.
- World-leading universities, such as Massachusetts Institute of Technology (MIT) and Harvard University, produce many top-level research results and nurture highly talented researchers.
- The area around Kendall Square has a concentration of world-leading startups and fosters many bio startups.
- There are extensive support organizations, including investors.

## Bay Area (U.S.)

- Areas around Silicon Valley, the world's largest region for IT startups, also boast many bio startups.
- Stanford University's Biodesign Program develops medical equipment by unearthing clinical needs, helping to establish an ecosystem for medical equipment development.
- Stanford University and the University of California, with their prominent departments of engineering, create synergy between medicine and engineering.
- There are also many highly experienced venture capital companies here.

## Tokyo Area

- In a region that stretches from Shonan and Kawasaki to Tsukuba, there are many bases of Japan's leading research institutions and pharmaceutical companies, as well as many area bio clusters, such as KING SKYFRONT in the Tonomachi International Strategic Zone, Shonan Health Innovation Park, and LINK-J.

Note: Sourced from the Fifth Industrial Revolution — Cultivated with Biotechnology  
(Bio-industry subcommittee of the Industrial Structure Council, Ministry of Economy, Trade and Industry)

## Kansai (Kyoto, Osaka, Kobe) life science cluster

### Kansai (Kyoto, Osaka, Kobe)

- Through collaboration with the seeds of leading and innovative research in life sciences, including Kyoto University and Osaka University, diverse clusters have formed in each region, centered on the three cities of Kyoto, Osaka and Kobe. These are concentrated within a distance that can be traveled in about 30 minutes to one hour, and they connect to form a large-scale life science industry cluster in Kansai as a whole.
- Extensive support for startups, assisted by regional industrial support facilities and foreign-funded accelerators. From leading companies to biotech venture firms, an ecosystem of industry, academia and government collaboration in broad-based and diverse life science fields has been built.

### (Kyoto City, Kyoto Prefecture)

- Kyoto City Life Innovation Promotion Strategy (Kyoto City)
- Kyoto University
- Center for iPS Cell Research and Application, Kyoto University (CiRA)

### (Osaka City, Osaka Prefecture)

- Health and Medical Care-related Industry Cluster (Osaka Prefecture)
- Osaka University
- RIKEN Center for Biosystems Dynamics Research (BDR)
- National Institutes of Biomedical Innovation, Health and Nutrition (NIBIOHN)
- Japan Agency for Medical Research and Development (AMED) Department of Innovative Drug Discovery and Development Division of Strategic Planning and Evaluation

### (Kobe City, Hyogo Prefecture)

- KOBE Biomedical Innovation Cluster (Kobe City)
- Kobe University
- RIKEN Center for Biosystems Dynamics Research (BDR)

(Legend) The following major facilities are shown.  
Details appear on the pages shown in brackets.

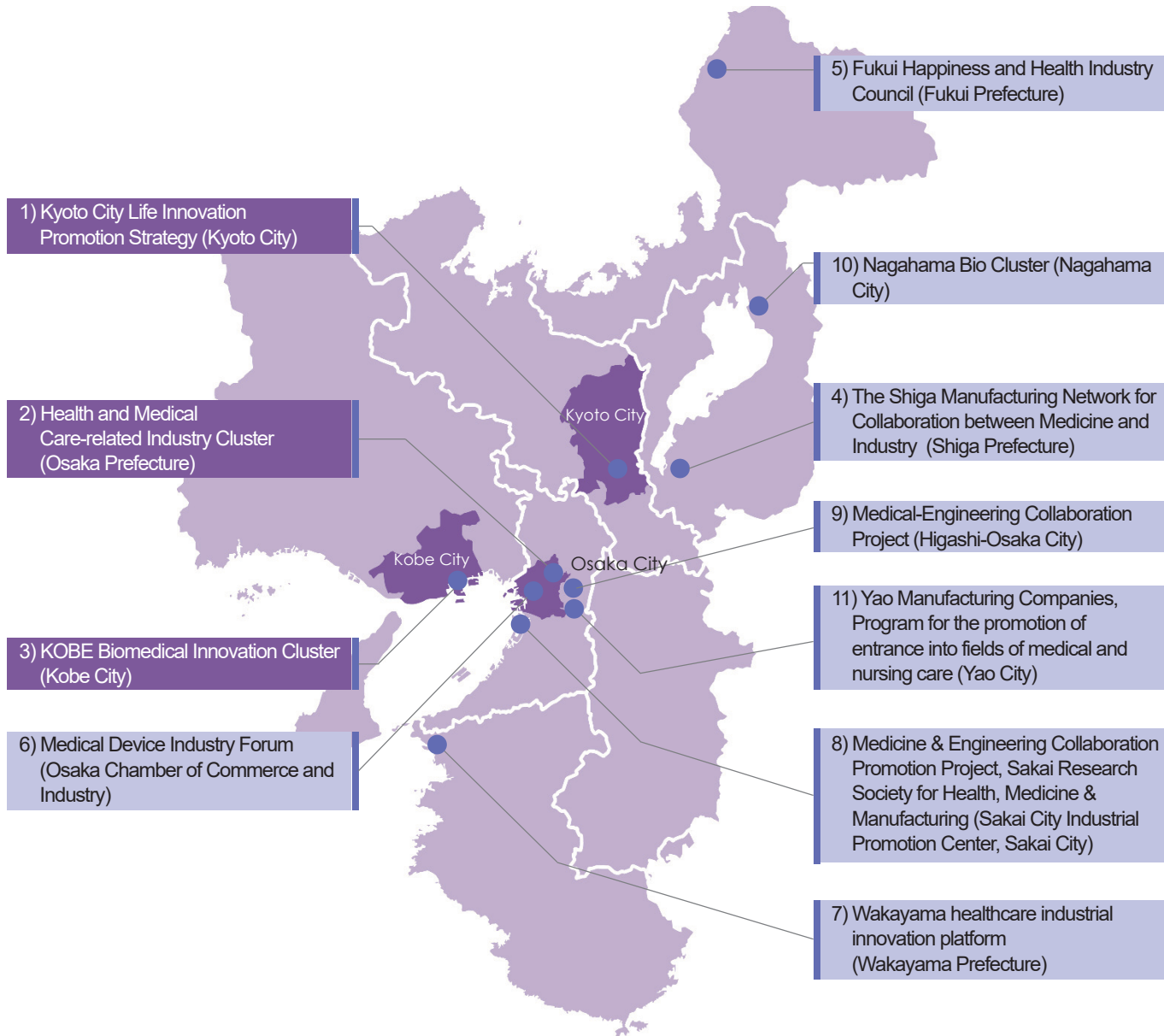
- Life science-related projects (refer to page 7-8)
- Universities (Faculty of Medicine and Pharmaceutical Sciences) (refer to page 10)
- Research Institutes and Laboratories (refer to page 11-12)



# Regional Clusters and Regional Projects in Progress Among Kansai's Diverse Life Science Fields

## Life science-related projects in various parts of Kansai

Centered on universities and research institutes in Kyoto, Osaka and Kobe, diverse life science industry projects and regional clusters that utilize the characteristics of each region have formed, and through collaboration among industry, academia and government, they drive the main cluster as growth engines of the ecosystem.



Kyoto Lifetech Innovation Support Center



Saito Life Science Park



KOBE Biomedical Innovation Cluster

	Summary	
1) Kyoto City Life Innovation Promotion Strategy (Kyoto City)	In addition to advancing initiatives in the fields of Next-Generation Medicine and Activation of Local Resources, which are based out of the Kyoto Lifetech Innovation Support Center through industry-academia-government collaboration, it focuses on the three fields of Health, Welfare and Nursing Care. These fields will give momentum to new R&D projects aiming to extend healthy life expectancy. (Number of companies: 604)	
2) Health and Medical Care-related Industry Cluster (Osaka Prefecture)	Many universities and research institutes with excellence in life sciences, as well as numerous pharmaceutical companies, are concentrated in northern Osaka. In Osaka Prefecture, the benefits of industry-academia-government collaboration have been utilized in life science fields for promoting the formation of the following three hubs: SAITO as a pharmaceutical R&D hub; KENTO for health and medical care; and NAKANOSHIMA for future medical care. Osaka aims to become a global-scale cluster in the health and medical care-related industries.	
3) KOBE Biomedical Innovation Cluster (Kobe City)	This international R&D hub for advanced medical technologies is located on Kobe City's Port Island. It is one of Japan's largest biomedical clusters, and brings together many research institutes, hospitals, and medical-related companies. (Number of companies: 369)	
4) The Shiga Manufacturing Network for Collaboration between Medicine and Industry (Shiga Prefecture)	This network is made up of companies, universities and research institutes, financial institutions, medical organizations, and government and support organizations that aim to develop new technology and products in the field of medical care. It is working on technological innovation and industrialization via collaboration between medicine and engineering. (Number of companies: 228)	
5) Fukui Happiness and Health Industry Council (Fukui Prefecture)	Through collaboration and cooperation among industries, universities and various organizations in the fields of healthcare, nursing care and health promotion, it works to create the Fukui Happiness and Health Industry with the objective of reducing the burden of nursing care and extending healthy life expectancy. (Number of companies and organizations: 148)	
6) Medical Device Industry Forum (Osaka Chamber of Commerce and Industry)	Promotes collaborative activities between medicine and engineering, and support for industrialization. They also use a global network with Europe, America and Asia for the development and industrialization of medical equipment with a view to expand into overseas markets in the future. (Number of companies: 137)	
7) Wakayama healthcare industrial innovation platform (Wakayama Prefecture)	To promote and create industry that helps resolve health care issues and extend healthy life expectancy, the prefecture established this platform together with members that include people in medical and nursing care, universities, financial institutions, and private business operators. It supports the joint R&D, product development and trials carried out by its members. (Number of members: 108 firms)	
8) Medicine & Engineering Collaboration Promotion Project, Sakai Research Society for Health, Medicine & Manufacturing (Sakai City Industrial Promotion Center, Sakai City)	It aims to create opportunities to enter the healthcare and welfare businesses. Full-time coordinators visit companies, hold educational seminars on entering the healthcare market, and work on business matching. (Number of member companies: 95)	
9) Medical-Engineering Collaboration Project (Higashi-Osaka City)	Utilizing the great technological and networking capabilities held by the local corporations, it assists manufacturing companies within the city to enter the health and healthcare markets by means of development of medical equipment and related peripheral instruments. (Number of member companies: 38)	
10) Nagahama Bio Cluster (Nagahama City)	Utilizes the superior technology of the Nagahama Institute of Bio-Science and Technology and bio-related companies to activate the local economy and create new enterprises through collaboration with local companies and business operators. (Number of companies: 36)	
11) Yao Manufacturing Companies, Program for the promotion of entrance into fields of medical and nursing care (Yao City)	Healthcare-specialized coordinators work within the Yao City municipal support center for small- and mid-sized companies to operate projects to assist local firms' entrance into the medical and nursing care markets.	




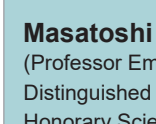
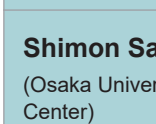
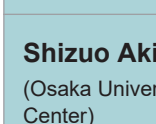
Note: the number of companies is as of February 2021



# A Concentration of Universities That Lead the World in Advancing Cutting-Edge Research

## World-class researchers

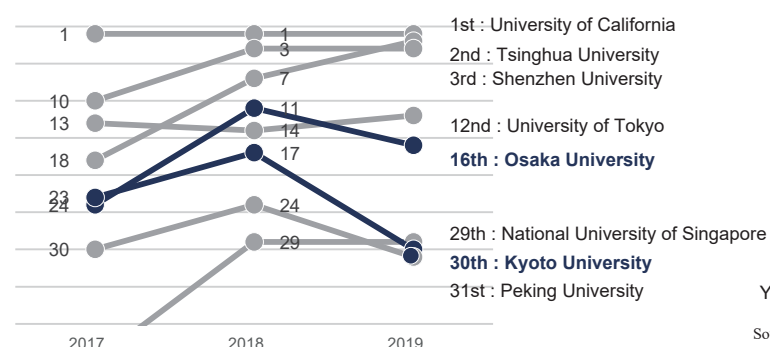
Kansai is home to a great many researchers whose high-quality work has been recognized on the world stage, including Nobel Prize winners and advanced research institutes at universities such as Kyoto University and Osaka University.

	<b>Shinya Yamanaka</b> (Director and Professor, Center for iPS Cell Research and Application, Kyoto University)	Joint recipient, with Sir John B. Gurdon, of the 2012 Nobel Prize in Physiology or Medicine “for the discovery that mature cells can be reprogrammed to become pluripotent.”
	<b>Tasuku Honjo</b> (Deputy Director-General and Distinguished Professor, Kyoto University Institute for Advanced Study)	Joint recipient, with University of Texas Professor James Allison, of the 2018 Nobel Prize in Physiology or Medicine “for their discovery of cancer therapy by inhibition of negative immune regulation.”
	<b>Kazutoshi Mori</b> (Professor, Graduate School of Science, Kyoto University)	For his achievements in elucidating the mechanism of endoplasmic reticulum stress response within cells, in 2014, together with Professor Peter Walter from the University of California, San Francisco, he received the Albert Lasker Basic Medical Research Award.
	<b>Masatoshi Takeichi</b> (Professor Emeritus, Kyoto University; Distinguished Professor, Nagoya University; Honorary Scientist, RIKEN)	Cellular and Developmental Biologist. Carried out detailed research at a molecular level into the mechanism of formation of multiple cells in animals, and discovered the cell adhesion molecule cadherin. For that work, together with Dr. Rolf Kemler of Germany's Max Plank Institute of Immunobiology and Epigenetics, he received the 2020 Canada Gairdner International Award.
	<b>Shimon Sakaguchi</b> (Osaka University Immunology Frontier Research Center)	For discovering regulatory T cells, elucidating their role in immunity and applying that in treatment of autoimmune disorders and cancer, he received the Gairdner International Award, the Crafoord Prize and the Robert Koch Award, etc. In 2019, he received Japan's Order of Cultural Merit. He is an international member of the U.S. National Academy of Sciences.
	<b>Shizuo Akira</b> (Osaka University Immunology Frontier Research Center)	Recipient of many awards, including the Gairdner International Award and the Robert Koch Award for his discovery of many Toll-like receptors that play a key role in natural immunity. In 2009, became a Japanese Person of Cultural Merit. A member of the Japan Academy. He is an international member of the U.S. National Academy of Sciences.

## High-quality research activities

Osaka University and Kyoto University are ranked among the highest in the world in terms of their number of applications for international patents.

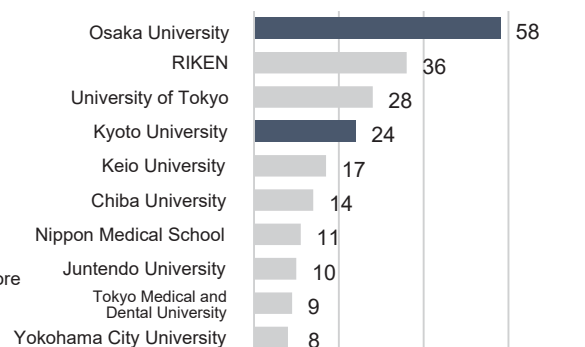
### • World university ranking by the number of patent applications in accordance with the PCT (Patent Cooperation Treaty)



Source: WIPO Statistics Database, March 2020.

Osaka University is ranked 1st in Japan for number of citations of its immunology research papers.

### • IMMUNOLOGY

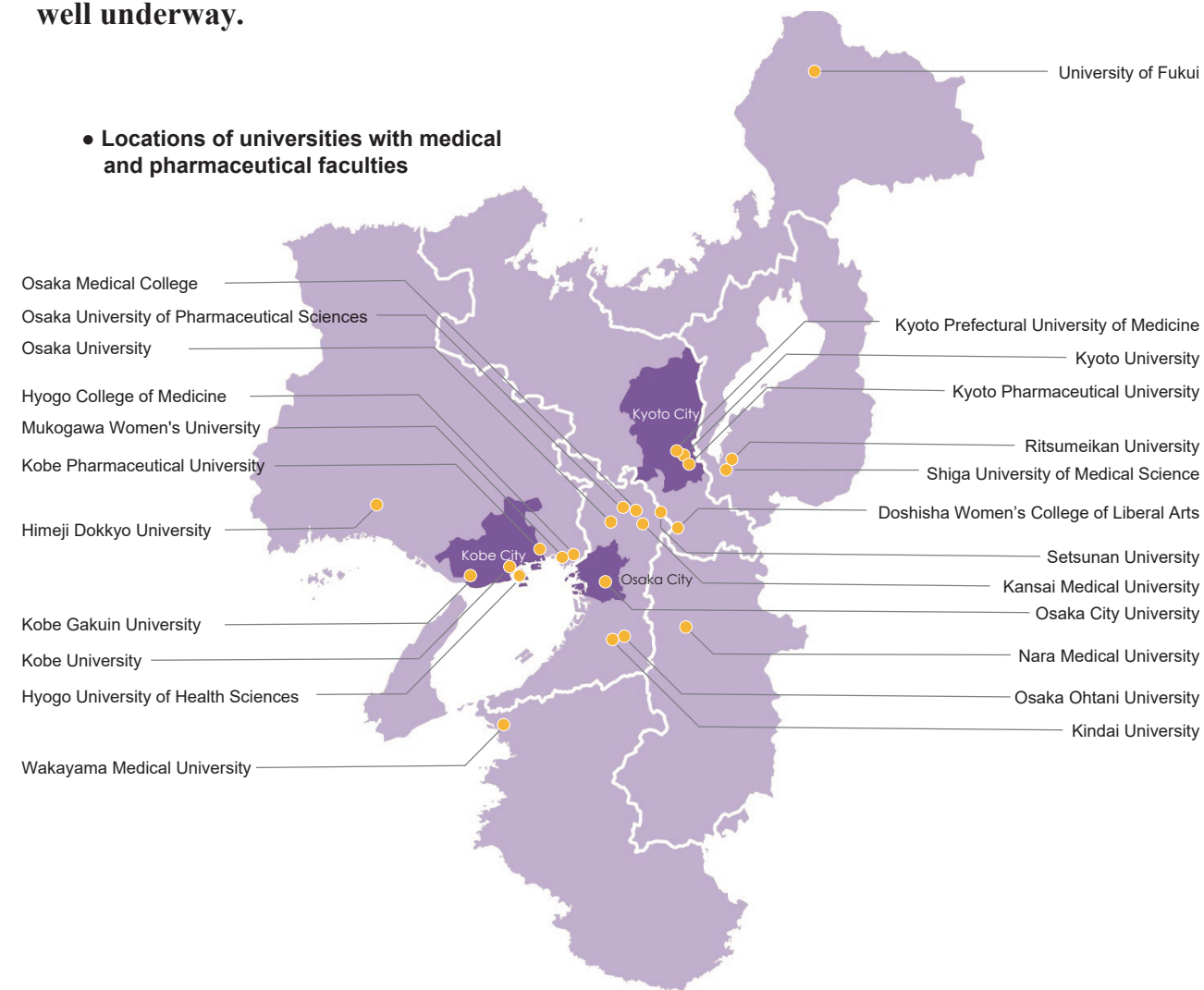


Source: “Japanese research institution rankings by analysis of the number of high-impact papers,” Clarivate Analytics, 2019 edition

(Note) Clarivate Analytics defines “highly-cited papers” as excellent papers that “ranked in the top 1% by citations for a field or fields.” The number of highly-cited papers was used as an index to rank Japanese research institutions.

## Concentration of life science-related universities in various regions of Kansai

Kansai has a concentration of universities of medicine and pharmacology, which enroll about 26,000 students. There are also many universities that teach biology and life sciences that are nurturing and producing a great number of personnel in these areas. Collaboration between industry and academia, including joint research with overseas groups, is also well underway.



	Faculty of Medicine (11,000 students)			Faculty of Pharmaceutical Sciences (15,000 students)	
National and Public Universities	Kyoto University	Kyoto Prefectural University of Medicine	National Universities	Kyoto University	Osaka University
	Osaka University	Osaka City University	Private Universities	Kyoto Pharmaceutical University	Setsunan University
	Kobe University	Nara Medical University		Doshisha Women's College of Liberal Arts	Kobe Gakuin University
Private Universities	University of Fukui	Wakayama Medical University		Ritsumeikan University	Kobe Pharmaceutical University
	Shiga University of Medical Science			Osaka Ohtani University	Hyogo University of Health Sciences
				Osaka University of Pharmaceutical Sciences	Himeji Dokkyo University
	Osaka Medical College	Kindai University		Kindai University	Mukogawa Women's University
	Kansai Medical University	Hyogo College of Medicine			

### Column: Kansai Innovation Initiative (KSII)

\* Adoption of NEXt University-Society Open Innovation Initiative (J-NEXUS) of Ministry of Economy, Trade and Industry

With the participation of 58 organizations, including 17 universities from the six prefectures in Kansai, the Kansai Innovation Initiative (KSII) promotes activities to create innovation that makes the most of the concentration of companies and universities with unique characteristics that are a strength of Kansai.

Specific initiatives include:

- (1) Make regional resources (Kansai region-wide technologies, university-originated ventures, etc.) more visible and responsive.  
Set up a base that can generate a positive cycle
  - (2) Boost university-originated ventures
  - (3) Create further value via collaboration with diverse communities
  - (4) Discover talent and provide them with opportunities to earn experience (the formation of a group of next-generation eco-system leaders)
- Through these initiatives, it aims to “realize a sustainable society that enables all generations to live a healthy and prosperous life.”

(Reference: <https://ksii.jp/>)








# A Concentration of the World's Best Research Institutes and Laboratories





## World-class research facilities

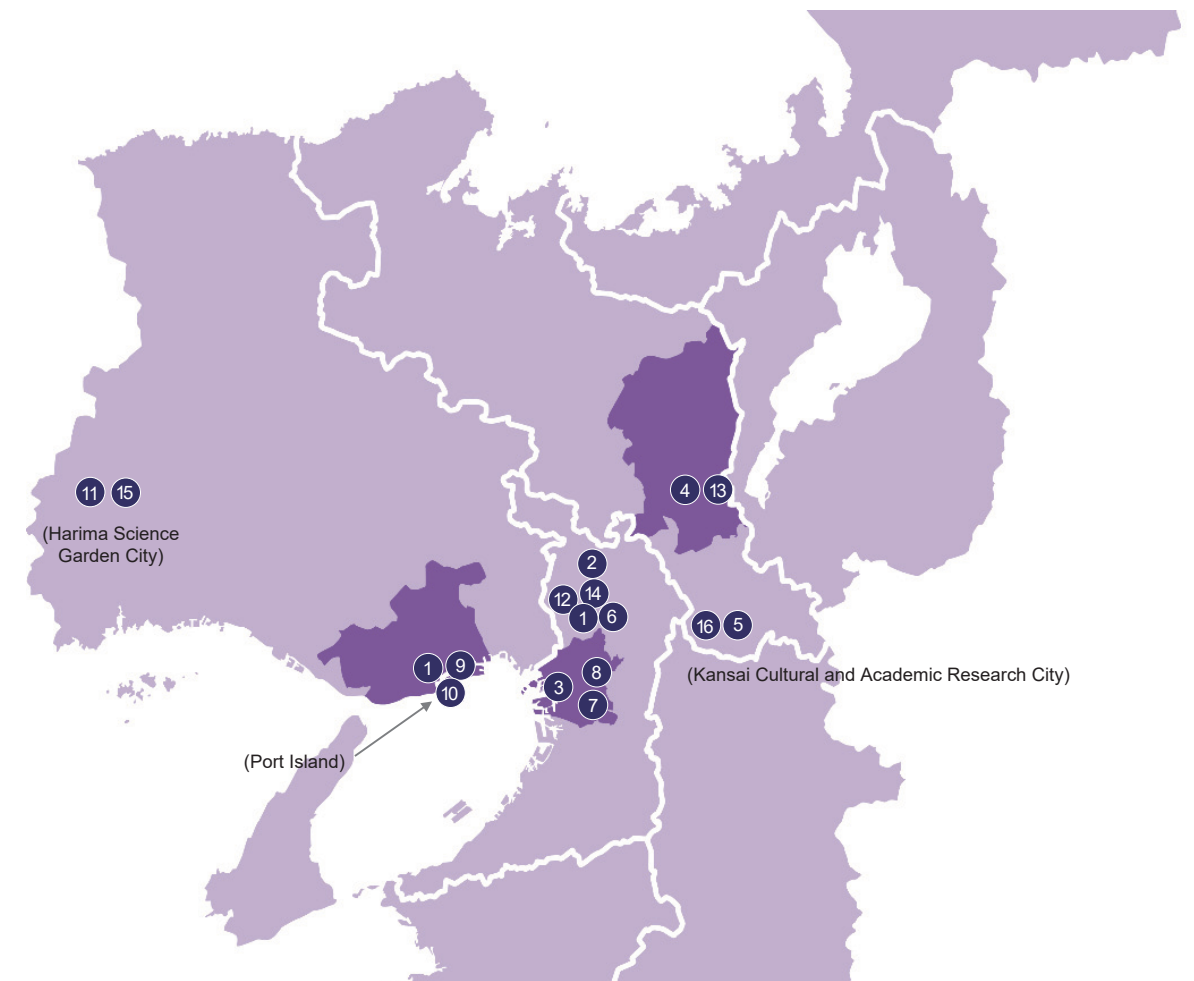
Kansai has a large concentration of research facilities, installed with a full range of state-of-the-art equipment and devices as part of a national project, where world-class research in life sciences ranging from basic and applied research to research on practical implementation, is conducted.

● R&D Institutions in the Field of Life Science

1 RIKEN Center for Biosystems Dynamics Research (BDR)	The center considers the progress in a living being's life cycle from birth to death as a dynamic process of the creation, maintenance and breakdown of the harmonized system comprised of the association of molecules, cells and organs and thereby strives to elucidate the life functions that support a living being's life. In Kansai, it has bases in Kobe City and Suita City.	
2 National Institutes of Biomedical Innovation, Health and Nutrition (NIBIOHN)	Established in 2005. Aims to lay the foundations for improvement of development technology for pharmaceuticals, etc. Promotes R&D in the private sector and elsewhere, of common research that contributes to the development of pharmaceuticals, etc.	
3 Japan Agency for Medical Research and Development (AMED) Department of Innovative Drug Discovery and Development Division of Strategic Planning and Evaluation	As an organization that plays a core role in pharmaceutical projects, it supports R&D, taking into account the characteristics and nature of modality, from exploring new drug targets all the way to clinical research in order to advance the application of pharmaceuticals that meet the clinical needs. In its work at the management division for Western Japan, the Japan Agency for Medical Research and Development helps connecting drug-discovery technology seeds held by academia to pharmaceutical firms, and provides support up to the pre-clinical stage.	
4 Center for iPS Cell Research and Application, Kyoto University (CiRA)	As a research institute that seamlessly initiates projects from basic research on iPS cells to its clinical application, it researches the use of iPS cells in drug discovery and regenerative medicine, and studies to resolve ethical matters.	
5 Research Institute of Innovative Technology for the Earth (RITE) Molecular Microbiology and Biotechnology group	As a national project, the group conducts fundamental technological development of biorefinery technology utilizing microorganisms, and technology to manufacture biofuel and green chemicals derived from renewable resources (biomass). It also works jointly with companies on commercialization.	

● Medical Institutions

6 National Cerebral and Cardiovascular Center (NCVC)	With the mission of elucidating and controlling cardiovascular disease, the hospital, research institute and the Open Innovation Center unite to work to provide advanced, leading medical care, as well as R&D and clinical application.	
7 National Hospital Organization Osaka National Hospital	The center treats patients with a broad range of diseases, in particular cancer, heart disease and stroke. Its clinical research center is actively involved in clinical trials, a process that is essential for the development of new drugs and medical equipment.	
8 Osaka International Cancer Institute (OICI)	The center consists of three divisions: Hospital — treating the largest number of cancer patients in Western Japan; Laboratory — conducting research directly linked to a clinical setting; and Cancer Control Center — researching epidemiological data that supports Osaka's cancer administration. It carries out advanced cancer treatment and development from the point of view of patients.	
9 World Health Organization Centre for Health Development (WHO Kobe Centre)	A research institute that is under the direct control of the headquarters of the World Health Organization (WHO). The center aims to ensure that more people worldwide can access healthcare services. To achieve this goal, it researches the impact of changes in society, economy and environment on people's health and the influence on healthcare policy, as well as studies health-care related issues.	



● R&D Institutions in the Field of Advanced Technology

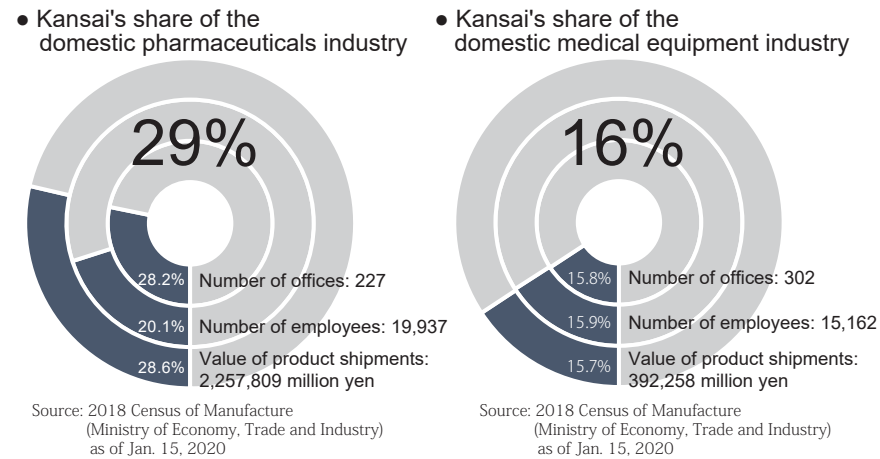
10 RIKEN Center for Computational Science (R-CCS)	As Japan's leading R&D institution in computer science and computational science, the center operates the supercomputer K (2012 – 2019). From 2014, it developed and operates FUGAKU, the successor machine (common use began in March 2021). It contributes to resolving social and scientific issues, while researching and constructing a system to catch up with the accelerating speed of changes in new IT fields such as Big Data and Artificial Intelligence.	
11 RIKEN SPring-8 Center (RSC)	While upholding the responsibility to stably operate the large synchrotron radiation facility SPring-8, which provides the world's highest-level of synchrotron radiation, and of the X-ray Free Electron Laser SACLA, the center develops state-of-the-art technologies for the production and utilization of brilliant X-rays and creates high-energy photon science.	
12 The National Institute of Advanced Industrial Science and Technology (AIST) AIST Kansai	Toward the realization of a healthy long-living society, the center strives to put into practice bio-related technology in society through the elucidation, measurement and application of bio-functions.	
13 AIST Kansai, Kyoto University Cooperation Site	Aiming to develop pioneering energy conversion and storage technology, it conducts R&D into next-generation energy chemical materials, based on new materials and concepts such as porous coordination polymers (MOF/PCP).	
14 AIST Kansai, Osaka University Cooperation Site	The institute develops bio-sensing technology that can go beyond the existing measuring capabilities, and bridges the technology to the societal demonstration and implementation stages structurally. It aims to attain the ultimate goal of setting the global de facto standards.	
15 Japan Synchrotron Radiation Research Institute (JASRI)	The center carries out R&D into quantum beam science. By leveraging that expertise, it contributes to life science research, including analysis of protein crystal structures through the support it provides for users of the large synchrotron radiation facility SPring-8 and the X-ray Free Electron Laser SACLA.	
16 Advanced Telecommunications Research Institute International (ATR)	It has a general research institute of neuroscience and communication that explores brain function and develops brain-machine interfaces (BMI) and biomarkers of psychiatric disorders, and the Thomas N. Sato BioMEC-X Laboratories — research laboratories that undertake a medical-engineering interdisciplinary approach.	



# A Concentration of Japan's Leading Companies in Pharmaceutical Products and Medical Equipment

## The domestic share of the life science industry

The life science industry is highly concentrated in Kansai, which accounts for about one third of the domestic market share in the field of pharmaceutical and quasi-pharmaceutical products.



## Examples of leading companies with strong goals to expand globally

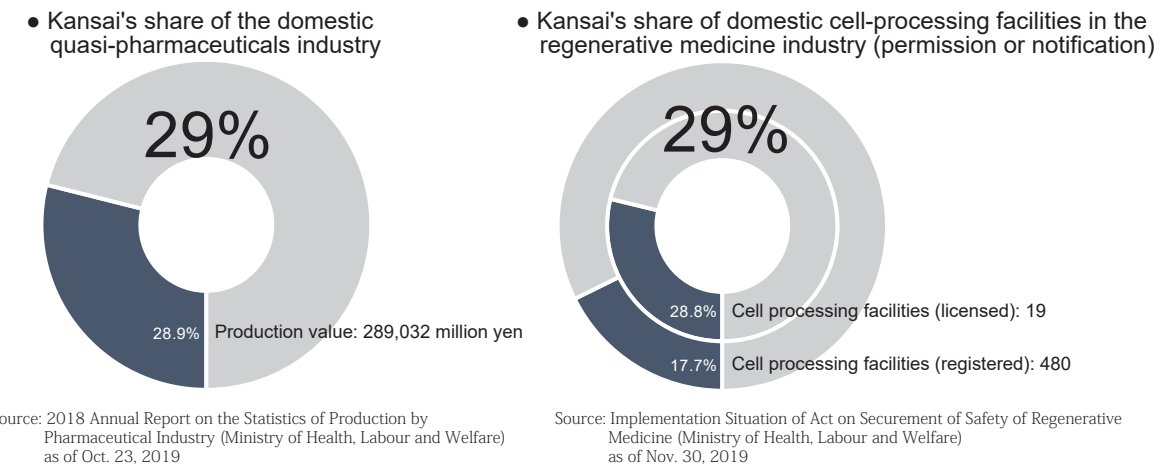
Because Kansai is home to Dosho-machi, a long-established pharmaceutical town, the head offices of many pharmaceutical firms are located here, and there is a concentration of Japan's leading companies in pharmaceutical products and medical equipment.

Pharmaceuticals, etc.	Takeda Pharmaceutical Company Limited (Osaka City)	Top sales among domestic pharmaceutical firms. Takeda is a patient-focused, values-based, R&D-driven global biopharmaceutical company committed to bringing Better Health and a Brighter Future to people worldwide.	
	Sumitomo Dainippon Pharma Co., Ltd. (Osaka City)	A long-standing pharmaceutical manufacturer established in 1897. Besides its pharmaceuticals business, it also operates businesses in food ingredients and veterinary medicines, etc.	
	Mitsubishi Tanabe Pharma Corporation (Osaka City)	Conducts R&D, manufacturing and sales of pharmaceuticals centered on ethical drugs.	
	Shionogi & Co., Ltd. (Osaka City)	Conducts R&D, manufacturing and distribution of pharmaceuticals with its strength in infectious diseases and psychiatric and neurological disorders. Also provides value as a total healthcare service, including diagnosis and prevention.	
	Nippon Shinyaku Co., Ltd. (Kyoto City)	An R&D-driven pharmaceutical manufacturer studying new drugs, primarily for intractable and rare diseases, using proprietary technology. Based on its technological capability acquired in the pharmaceutical sector, it is expanding its business into functional food.	
	Taiko Pharmaceutical Co., Ltd. (Osaka City)	Founded in 1946. Two pillars of its operation are a pharmaceutical business centered on the gastrointestinal medication "Seirogan," and an infection control business with a special focus on the sanitation control product "Cleverin."	
	Takara Bio Inc. (Kusatsu City, Shiga Pref.)	Realizing innovative biomedical care, such as gene therapy that utilizes biotechnology.	
Health care, etc.	Suntory Holdings Limited (Osaka City)	The Suntory Group operates a broad range of businesses worldwide, centered on its alcohol and soft drink business, and is achieving steady growth.	
Medical equipment, etc.	OMRON Corporation (Kyoto City)	Active in more than 110 countries worldwide via businesses such as its health and medical equipment and services businesses for thermometers and sphygmomanometers, etc.	
	KYOCERA Corporation (Kyoto City)	Produces medical equipment such as artificial joints and implants that use materials technology and processing technology.	
	KANEKA CORPORATION (Osaka City)	Its products include pharmaceutical bulk and intermediates, as well as catheters for intravascular treatment. Active also in the leading-edge medical fields of regenerative medicine and cell therapy.	
	SYSMEX CORPORATION (Kobe City)	A general manufacturer that provides an integrated process from R&D, manufacturing, and sales all the way to service & support of diagnostic instruments, reagents and related software. Conducts business in more than 190 countries and regions worldwide.	
	SHIMADZU CORPORATION (Kyoto City)	Creates the latest medical-use equipment, such as medical X-ray devices, diagnostic imaging devices, and PCR testing systems.	
	NIPRO CORPORATION (Osaka City)	With the mainstay businesses of medical equipment, pharmaceuticals, PharmaPackaging and regenerative medicine, it provides truly essential products and technology to the world.	
	Yasojima Proceed Co., Ltd. (Kobe City)	By combining 3D technology and the machining technology it has cultivated over many years, it is expanding its business into the field of medical equipment.	

## Column: An Example of Collaboration with a Foreign-capital Firm

In May 2019, Sumitomo Dainippon Pharma Co., Ltd. (Osaka City) entered into an agreement with Novartis Pharma K.K. (Minato Ward, Tokyo) on the joint domestic promotion and sales of Novartis Pharma's therapeutic drugs on sale at the time for the treatment of type-2 diabetes, the selective DPP-4 inhibitor Equa® 50 mg tablets, and the selective DPP-4 inhibitor/biguanide combination agent, EquMet® combination LD/HD tablets.

The field of diabetes is regarded as a key area of domestic sales, and it sells more than one type-2 diabetes medications with different action mechanisms. As a result of the agreement, Equa® and EquMet® were added to its product line of diabetes medications. With this new product line, the company aims to contribute to treating more diabetes patients in Japan.



## A concentration of venture companies that originated at universities

In the field of life sciences, Kansai has produced a great number of venture companies originated from universities.

Pharmaceuticals, etc.	AnGes, Inc. (Ibaraki City, Osaka Pref.)	A biopharmaceutical company that aims to become a global leader in the field of gene medicine. Proactively engaged in joint development with both domestic and foreign firms for the innovative development of pharmaceuticals.	
	KOTAI Biotechnologies, Inc. (Suita City, Osaka Pref.)	Commercializes research achievements made by Osaka University Immunology Frontier Research Center and works on ultra high-speed structural modeling and an analysis platform for immune cell receptors.	
	Bio Palette Co., Ltd. (Kobe City)	A Kobe University-originated startup that aims to develop innovative microbiome therapeutics that use new gene editing technology to modify and control microbiomes instead of a "cutting" genome editing method.	
Medical equipment, etc.	Medicaroid Corporation (Kobe City)	Conducts development, manufacturing and sales of medical robots through a joint venture by Kawasaki Heavy Industries, Ltd. and Sysmex Corporation. Launched "hinotori Surgical Robot System," the first domestically developed robotic assisted surgery system.	
	AFI Corporation (Kyoto City)	Development, production and sales of devices, equipment, and reagents related to the evaluation, control and production of cells and microorganisms.	
Regenerative medicine, etc.	iHeart Japan Corporation (Kyoto City)	In collaboration with the cardiovascular surgery department of Kyoto University, it develops iPS cell-based regenerative medicinal products.	
	Vision Care Inc. (Kobe City)	Conducts research, development and consultation in the fields of ophthalmology, regenerative medicine, and low vision care.	
	Myoridge Co. Ltd. (Kyoto City)	A Kyoto University-originated startup. Based on its proprietary protein-free technology, it develops various kinds of cell culture media mainly for iPS cell-derived cardiomyocytes.	

## Examples of foreign companies that have entered Kansai (in the life science field)

Foreign-owned, life science companies that have set up head offices in Kansai are active.

	Company name	Nationality of parent company	Business summary	Operational sites in Kansai (underline indicates the location of the Japan headquarters)
	Bayer Yakuhin, Ltd.	Germany	Development, import, manufacture and sales of pharmaceuticals, medical devices	<u>Osaka</u> , Shiga, Hyogo
	AstraZeneca K.K.	England	Development, production and sales of prescription pharmaceuticals	<u>Osaka</u> , Shiga, Kyoto, Hyogo
	Eli Lilly Japan K.K.	U.S.	Invention, development, production and sales of pharmaceuticals	<u>Hyogo</u> , Kyoto, Osaka
	PRA Health Sciences K.K.	U.S.	Clinical development related to pharmaceuticals, medical devices, regenerative medicine products, vaccines, and consignment business such as post marketing surveillance, post-marketing survey, and clinical research	<u>Osaka</u>

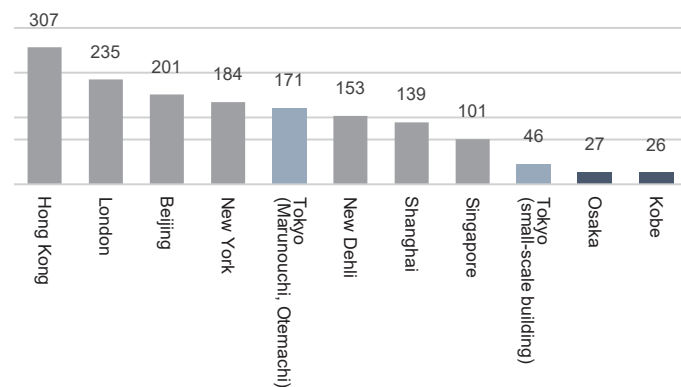


# Kansai, a Place Where it's Easy to Start Business

## Low business costs

Office rent is lower than in Hong Kong or Beijing, and industrial park rental fees are cheaper than in Shanghai or Manila, giving Kansai superior cost competitiveness.

### ● Comparison of office rent in the world's major cities and various Japanese cities (average annual cost per square foot) Unit: U.S. dollars



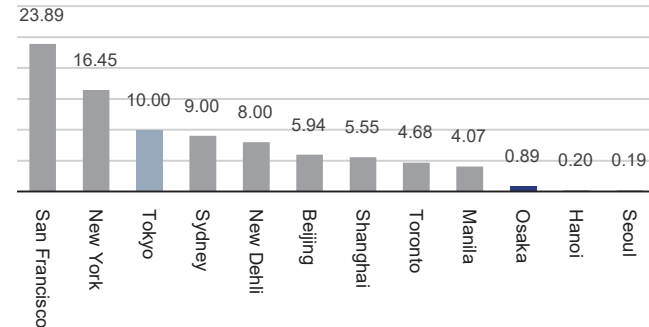
Source: "Comparative Survey of Investment-Related Costs" Model case — Cost estimation guide (JETRO)

(Note 1) The areas subject to survey in each city are as follows. New Delhi: Connaught Place; Shanghai: Pudong; Tokyo: Marunouchi/Otemachi; New York: Midtown Manhattan; London: West End; Beijing: Financial Street; Hong Kong: Central

(Note 2) Rent in the Japanese cities is calculated by JETRO based on the average rent in their respective business district.

(Data) CBRE, "Global Prime Office Occupancy Costs, July 2018," Sanko Estate, 2018

### ● Rent is more affordable in Osaka Industrial Park than in Shanghai or Manila (monthly rental cost per square meter) Unit: U.S. dollars



Source: Comparative Survey of Investment-Related Costs (JETRO) — calculated in July, 2018

## Specialized incentives for foreign and foreign-owned companies from local municipalities

Local municipalities in Kansai are proactively inviting corporations to the region, and many of them offer specialized incentives for foreign and foreign-owned companies.

Examples of incentives for foreign and foreign-capital companies are listed in the table below:

For details and the latest information on incentives from municipalities that also apply to domestic firms, please view each municipality's website via JETRO's "Navigation system for investing in Japan's local regions."



Kyoto Prefecture	Subsidies to help foreign-capital firms establish corporate locations	Registration costs (up to 150,000 yen per location) (For details, please contact the Kyoto Prefecture, Department of Commerce, Labor, and Tourism, Overseas Economy Division. Phone: +81-75-414-4840)
Osaka Prefecture	Osaka Prefecture, corporate location promotion subsidy (Subsidy for Business Startups of Foreign-Capital Companies)	Subsidizes part of investment costs incurred by foreign-capital companies (foreign capital ratio of one-third or more) when establishing a new head office in Osaka Prefecture. (5% of building acquisition costs, or one-third of office rent, etc. up to the subsidy limit.)
	O-BIC Support Program for Foreign-capital Companies	Subsidies provided up to 100,000 yen for registration costs; up to 50,000 yen for residency status application expenses
Hyogo Prefecture	Reduction of corporate enterprise tax	Reduction ratio: one-third for 5 years
	Office Rent Subsidy	Subsidy ratio: up to one-half for 3 years, 1,500 yen per square meter a month, maximum of two million yen a year)
	Employment Subsidy	300,000 yen per newly employed full-time worker (in some regions, 600,000 yen per newly employed full-time worker, 300,000 per newly employed contract worker) up to 300 million yen
	Establishment Support Subsidy	Subsidizes one-half of expenses (up to one million yen for market research costs, etc.; up to 200,000 yen for corporate registration costs, etc.)
Kobe City	Office rental subsidies for foreign and foreign-capital firms	Hyogo Prefecture — Kobe City Cooperation: rental subsidy (up to one-half for 3 years, 1,500 yen per square meter a month, maximum of 2 million yen a year) Kobe City Supplemental: rental subsidy (up to one-quarter for 3 years, 750 yen per square meter, maximum of 9 million yen a year)

Note: Information as of December 2020

## Amply equipped incubation facilities and wet labs

There are extensive incubation facilities that support newly founded companies and the establishment of local offices. There are also many wet lab facilities (about 50) that support the promotion of R&D for researchers with seeds that are expected to be put into practical use.

(Details of incubation facilities and wet labs appear in the appendix)

### ● Examples of Kansai Facilities Equipped with Wet Labs



Creation Core Kyoto Mikuruma

Provides wet labs aimed at R&D in life sciences. Adjacent to the Kyoto Prefectural University of Medicine and Kyoto University's Yoshida Campus, it provides various support including assistance by resident staff and eligibility for rent subsidy programs sponsored by municipalities.



Saito Bio Incubator, Saito Bio Hills Center, Saito Bio Innovation Center

Located in Ibaraki City, northern Osaka. Centered on a wet lab with about 70 square meters in area, it is equipped with a shared equipment room and (common use) animal stable. Available for genetic modification experiments, and experiments using microorganisms such as pathogens. Subsidies available from local municipality for rent and equipment costs.



Kobe Medical Device Development Center (MEDDEC)

Comprised of 25 wet-use labs (31.5 – 80.5 m<sup>2</sup>), three operation rooms and a training room. The operation room is equipped with an endoscope set and fluoroscopy, and can feed audio and video images bidirectionally to and from the training room, which can hold up to 42 people.

### Column: CELLINK K.K., a foreign-capital company that settled in Kyoto Mikuruma



CELLINK is a foreign-capital company from Sweden that accomplished the world's first commercialization of bio-ink in 2016. It is a life science firm that creates the future of medicine. It boasts 3D bio-printing, imaging and automatic dispensing technology, which are anticipated to be applied to a broad range of fields including regenerative medicine, cell biology, drug discovery, dentistry and synthetic biology.

In 2017, with the help of the Swedish Embassy's support system, CELLINK was introduced to Kyoto University's Innovation Hub Kyoto (an innovation facility that opens its doors to bio-venture companies) where its Japanese base was established for future business expansion in the Japanese market. CELLINK's bio-printer, bio-ink and dispensing technology has been used in research laboratories at Kyoto University and Osaka University. Researchers from those labs joined CELLINK as technological support staff, contributing to the rapid expansion of the company's business. In line with further business expansion in Japan, and with the support of JETRO, CELLINK moved into Creation Core Mikuruma, which is operated by the Organization for Small and Medium Enterprises Regional Innovation.

## International Strategic Comprehensive Special Zone for Innovation in Kansai

### International Strategic Comprehensive Special Zone for Innovation in Kansai (Cabinet Office)

For companies looking to set up new businesses in six key fields (pharmaceuticals, medical equipment, state-of-the-art medical technology, preemptive medicine, batteries and smart communities), the national government, municipalities and business associations unite to provide support. In addition to preferential regulatory measures, it comprehensively implements fiscal, tax and financial support measures.

### Pharmaceuticals and Medical Devices Agency (PMDA) Kansai Branch PMDA WEST

Established at the request of Kansai Innovation International Strategic Comprehensive Special Zone. Based on Japan's revitalization strategy, it works to promote innovation in medical care.



## Support for domestic and foreign startups

United initiatives from industry, academia and government to build a startup ecosystem are also making progress.

### Global Startup City, “Osaka, Kyoto, Hyogo-Kobe Consortium”

The Cabinet Office selected four domestic locations that encompass the Global Startup City Consortiums. Places a focus on the fields of healthcare, manufacturing and telecommunications. Collaboration among universities, research institutions and companies, centered on Osaka University, Kyoto University and Kobe University. Ahead of Expo 2025 Osaka, Kansai, Japan, the cities of Kyoto, Osaka and Kobe, and their financial circles, have united to build a support system and create opportunities for new technology and new services from startups.

The Ministry of Economy, Trade and Industry and JETRO (the Japan External Trade Organization) are supporting matching with promising foreign startups.

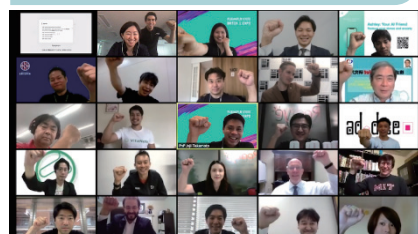
### Japan Innovation Bridge “J-Bridge”

Coordinators stationed at locations within Japan and overseas introduce promising foreign startups to Japanese companies. It supports open innovation in Japan by assisting cooperation and collaboration in key fields, such as digital and green technology.

In recent years, foreign-owned accelerators have entered the Kansai region one after another. Various acceleration programs are being carried out from the seed and early stages to the middle stage.

### Plug and Play Kyoto

Plug and Play Kyoto's theme of “Hardtech & Health” is built on a foundation of Kyoto's strong craftsmanship and life science. Under this theme, it runs a consortium-style acceleration program in the fields of data health, medical equipment and the use of AI in medical care.



### Startupbootcamp Scale Osaka

Its programs are overseen by the Rainmaking Innovation group, whose headquarters are located in the U.K. It targets projects from the middle stage and onward, and supports growth by promoting verification trials and cooperation with partner companies. It places a major focus on developing business jointly with major Japanese companies and executing pilot programs.



### 500 KOBE ACCELERATOR

U.S.-based 500 Startups and Kobe City have teamed up to invest in seed and early-stage projects. Under the program, mentors - who are experienced entrepreneurs - run through the process with novice startups for six weeks. The theme for 2020 was “COVID-19 Emerging Technology” and included collaboration with companies from the Kobe Biomedical Innovation Cluster.



Many initiatives to build business communities and to feed local information such as business matching and pitch events are currently underway.

### HVC Kyoto (Healthcare Venture Conference Kyoto)

Pitch events in English help startup firms in the healthcare field advance globally.

(Organizers: JETRO, Kyoto Prefecture, Kyoto City, Kyoto Research Park Corp.)

### Global Innovation Conference Hack Osaka

Attended by high-profile entrepreneurs and accelerators from around the world.

(Organizers: Global Innovation Conference Hack Osaka Executive Committee (Osaka City, Urban Innovation Institute (a public foundation), JETRO Osaka Headquarters)

### MedTech Grand Prix KOBE

A program to discover and train life science startups. Its objective is to discover and foster teams in pharmaceuticals, medicine and health that passionately work with next-generation technology to change the world. (Organizers: Kobe City, Foundation for Biomedical Research and Innovation at Kobe (a public foundation), Leave a Nest Co., Ltd.)

### Column : AstraZeneca K.K. “i2.JP”

AstraZeneca K.K. (Head office: Osaka City) has set up “i2.JP,” a new initiative to drive forward open innovation activities in the healthcare sector. Through partnerships with participating companies, academia, government and other organizations, it aims to contribute to next-generation healthcare by offering support solutions to patients, resolving issues faced by medical personnel, and nurturing new healthcare technology and solutions.

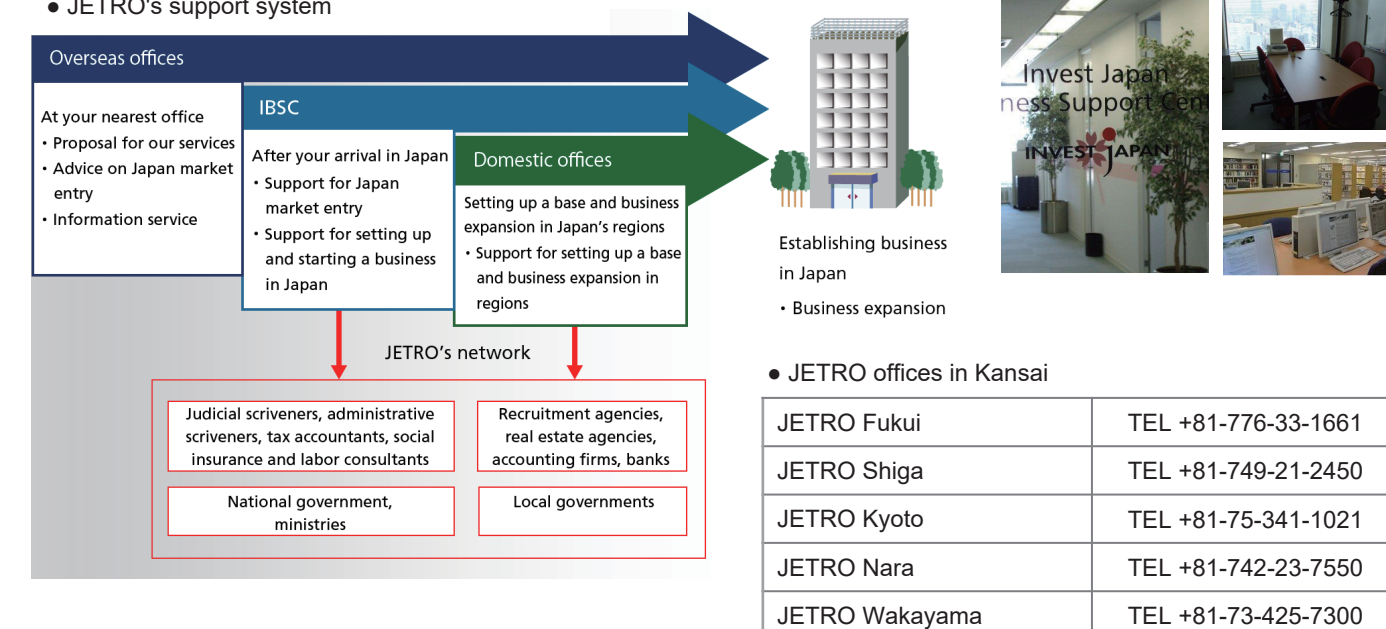
## Extensive Support Systems

### First contact points for entering Kansai and Japan

#### • JETRO offices in Kansai

<b>JETRO</b> Japan External Trade Organization	JETRO, through its network of 76 offices in 55 countries, collects information about companies interested in investing in Japan and shares that information with its domestic offices, who then work with local investment promotion agencies to provide support.	
Invest Japan Business Support Center (IBSC)	In six major Japanese cities, including Osaka and Kobe in the Kansai region, JETRO IBSCs (Invest Japan Business Support Centers) offer detailed and integrated support from the office set-up phase through business expansion. They also provide foreign and foreign-capital companies with temporary offices free of charge to enable the companies to establish a base in Japan.	JETRO IBSC Osaka TEL +81-6-4705-8660
		JETRO IBSC Kobe TEL +81-78-252-7505

#### • JETRO's support system



The support agencies for investment in Japan at the various municipalities also provide a range of one-stop support services.

<b>Kyoto Overseas Business Center</b> (JETRO Kyoto, Kyoto prefecture, Kyoto city, Kyoto Chamber of Commerce and Industry, KYOTO Industrial Support Organization 21, Advanced Science, Technology & Management Research Institute of KYOTO(ASTEM))	As a publicly funded support agency assisting Kyoto-wide international businesses, it provides an integrated support system ranging from international strategic planning to implementation in order to expand local small to mid-sized companies' exports, encourage foreign firms to set up business bases in Kyoto, and promote joint business between local and foreign firms.	TEL +81-75-366-4364 
<b>O-BIC</b> Osaka Business and Investment Center	A one-stop service center set up by Osaka Prefecture, Osaka City and the Osaka Chamber of Commerce and Industry to help foreign companies, foreign diplomatic missions, and business associations establish a presence in Osaka. It offers basic information about Osaka in four languages (English, Chinese, Korean, Japanese). Information the center offers includes: how to set up a company and apply for residency status; real estate related info (offices, warehouses, factories, housing); and daily life related info (schools and healthcare, etc.). It also holds seminars for foreign-capital companies and foreign government agencies to help smooth their transition into local life.	TEL +81-6-6944-6298 
<b>Hyogo-Kobe Investment Support Center</b>	A one-stop service organization to help domestic and foreign companies establish a presence in the area. In addition to providing information essential for their business expansion, such as a summary of local environment, economy and industrial parks, it also offers support both for business and daily life, advises on how to apply for permissions, and introduces various support agencies.	TEL +81-78-271-8400 



# Easy Living in Kansai

Since Kansai is the birthplace of many forms of art and culture, and its cities are rich in history and nature, it has extensive services and an environment that offer a rich lifestyle. Osaka City has ranked 4th in the Global Liveability Index.



Wanderlust "Wanderlust Reader Travel Awards 2020 :Top city"



The Economist Intelligence Unit | The global liveability index 2019  
"The ten most liveable cities in 2019"



Mercer | Quality of Living Ranking 2018  
"City Sanitation Ranking"

## Daily support for foreign nationals

In order to help foreign nationals, each municipality offers comprehensive, multilingual consultation services for general daily living support related to issues such as visa status, labor and employment, medical care, social services, education, etc. (See the appendix for more details)



Osaka Foundation of International Exchange  
Multilingual (11 languages, including Japanese)  
provision of a wide range of information related to daily living, including consultation services.

## Educational institutions for children

Mainly in Kyoto, Osaka and Kobe, many educational institutions are available for foreign children, including schools accredited by the International Baccalaureate (IB) program.

### • Kansai's major international schools

Kyoto	Osaka	Kobe
Kyoto International School [PYP] (Kyoto City)	Osaka YMCA International School [PYP] (Osaka City)	Canadian Academy [PYP, MYP, DP] (Kobe City)
Doshisha International School, Kyoto (DISK) [PYP] (Kizugawa City)	Abroad International School [PYP] (Osaka City)	Kansai International Academy [PYP, DP] (Kobe City)
	Osaka International School of Kwansai Gakuin [PYP, MYP, DP] (Minoh City)	Deutsche schule Kobe International [PYP] (Kobe City)
		Marist Brothers International School [DP] (Kobe City)

## Column: Interview with the President of a foreign-capital firm, "What makes Kansai attractive"

In Kansai, there are many pharmaceutical firms and universities with Schools of Pharmacy. Compared with Tokyo, where companies are highly concentrated, competition for best talent is not as fierce. It seems easier to recruit personnel. Also, due to the nature of the nation's capital, Tokyo is over-crowded, pushing living costs and commuting time up. So when compared with Tokyo, these costs remain relatively low here, which makes Kansai attractive. Many students, particularly recent graduates, prefer to work in Tokyo. However, I would like them to know that Kansai can also offer a plenty of opportunities for them to join the front line of world-class businesses.

PRA Health Sciences K.K. President ATSUSHI OGAWA



# Toward Expo 2025 Osaka, Kansai, Japan

In 2025, Japan will host Expo 2025 Osaka, Kansai, Japan under the theme "Designing Future Society for Our Lives." The Expo aims to contribute to the achievement of the Sustainable Development Goals (SDGs) set forth by the United Nations, with Society5.0 as the key, based on the concept of a "People's Living Lab" where new ideas are generated one after another and tried out for social implementation. Worldwide, there are great expectations for the Expo.

In particular, Japan is one of the first countries to already become an ultra-aging society, and as an advanced nation on this issue, we see an ideal opportunity in the sub-themes of Expo 2025 Osaka, Kansai, Japan of "Saving Lives," "Empowering Lives," and "Connecting Lives." We will share with the world ways to resolve issues that the world faces together, by taking advantage of the various existing life science clusters in Kansai and encouraging further collaboration among industry, academia and government to carry out cutting-edge societal experiments.



Logo of EXPO 2025 OSAKA, KANSAI

Theme
"Designing Future Society for Our Lives"
Concept
"People's Living Lab"

Subthemes
▶ Saving Lives ▶ Empowering Lives ▶ Connecting Lives
Goals of EXPO 2025 Osaka, Kansai, Japan
<ul style="list-style-type: none"> <li>Toward a Future Society for Our Lives</li> <li>A chance to make great strides toward achieving SDGs and beyond</li> <li>An opportunity to trial Society5.0 initiatives</li> <li>An opportunity for Japan to take a leap into the future</li> </ul>



A venue where you can feel the sea and the sky (bird's eye view)



Image of venue for environment-themed production at Waterworld

(from the homepage of the Japan Association for the 2025 World Exposition)

Outline of the exhibition
<ul style="list-style-type: none"> <li>Location: Yumeshima Island, Osaka City</li> <li>Schedule: April 13 to October 13, 2025</li> <li>Number of expected visitors: about 28.2 million</li> <li>Venue construction costs: approximately 185 billion yen or less</li> <li>Economic effect (estimated value): Construction related costs: about 400 billion yen Management related costs: about 500 billion yen Consumer spending: about 1.1 trillion yen</li> </ul>

## Column: Preparing an international base for future medicine



Medical care is moving forward by adopting technologies such as genomic medicine and artificial intelligence (AI), and use of IoT. Based on regenerative medicine, Osaka Prefecture drives forward initiatives for industrializing "Future Medical Care" that copes with the ongoing progress in medical technology. It also aims to open an "international base for Future Medical Care" in spring 2024, with a view to contributing to the world by providing patients both in Japan and overseas with "Future Medical Care."

\* The image is a perspective drawing as of time of proposal (January 2019). May be subject to change.

\* Supplied by management and development operator of International Base for Future Medicine at Nakanoshima 4th district site



(Appendix) Operations bases

Many operations bases are available according to the stage of business development in Japan, such as opening a representative office, incubation facilities for shortly after founding the business, and wet lab facilities.









Kyoto	Kyoto-University Katsura Venture Plaza (KKVP)		Creation Core Kyoto Mikuruma		Kyoto Research Park (KRP) Venture Incubation Office (VIO)	
	Kyoto Industrial Science and Technology Innovation Center (KISTIC)		Advanced Science, Technology & Management Research Institute of KYOTO (ASTEM) Science, Technology & Culture Commercialization Community (STC')		Kyoto University Venture incubation Center (KUViC)	
	Innovation Hub Kyoto		Uji Venture Business Incubation Factory (Uji VIF)		Doshisha University incubator (D-egg)	
	KEIHANNA PLAZA office / lab space		Keihanna Open Innovation Center @KYOTO (KICK)		Advanced Chemical Technology Center in Kyoto (ACT Kyoto) RAKUNAN SHINTO	
Osaka	Osaka City University incubator		Technoseeds IZUO		LINK-J Lifescience Hub West	
	Sakai New Business Creation Center (S-Cube)		Creation Core Higashi Osaka		AIST Kansai, Kansai Open Space Laboratory (Kansai OSL)	
	Saito Bio Incubator, Saito Bio Hills Center, Saito Bio Innovation Center		Research Park for companies, The Institute of Scientific and Industrial Research, Osaka University		Hirakata Business Support Center	
	Yao Incubation room		Izumi Center Incubation facility, Osaka Research Institute of Industrial Science and Technology (ORIST)			
Hyogo	Kobe Medical Device Development Center (MEDDEC)		Kobe Healthcare Industry Development Center (HI-DEC)		Kobe Incubation Office (KIO)	
	Business Support Center for Biomedical Research Activities (BMA)		Kobe KIMEC Center Building (KIMEC)		Kobe International Business Center (KIBC)	
	Kobe Hybrid Business Center (KHBC)		UNOPS Global Innovation Center JAPAN (GIC JAPAN)		Institute of Biomedical Research and Innovation (IBRI)	
	Translational Research Informatics Center (TRI)		International Medical Device Alliance (IMDA)		Computational Science Research Support Center, Foundation for Computational Science (FOCUS)	
	Kobe Center for Medical Innovation (KCMi)		Creative Lab for Innovation in Kobe (CLIK)		Amagasaki Research Incubation Center (ARIC)	
Fukui	Fukui Industrial Information Center Incubation Room					
Shiga	Ryukoku Extension Center (REC) rental labo, Ryukoku University		SHIGA Prefectural TECHNO FACTORY		Ritsumeikan University BKC Business Incubator	
	Rental Laboratory for Industrial-ization, Industrial Research Center of Shiga Prefecture		The University of Shiga Prefecture Collaborative Research Center		Nagahama Bio Incubation Center (NBIC)	
Nara	Yamato Business Incubator in Yamato-Takada (New Business Support Office, Nara Prefecture Industrial Hall)					
Wakayama	Wakayama Business Square		Wakayama Prefectural Information Center (Big and U) SOHO booth			

(Appendix) Venture companies in the life science field

Pharma-ceuticals, etc.	Osteopharma Inc. (Osaka City)	Develops pharmaceuticals for bone formation that use BMP (Bone Morphogenetic Protein)	
	Carna Biosciences, Inc. (Kobe City)	A drug discovery-focused bioventure that operates the Drug Discovery Support business and the Drug Discovery business (R&D to create new proprietary kinase inhibitors) simultaneously.	
	Ajinomoto Bio-Pharma Services, GeneDesign (Ibaraki City, Osaka Pref.)	While expanding its business activities as a CRO and CMO involved in development of nucleic acid therapeutics, it is proactively involved in the development of new production methods.	
	Synplogen Co., Ltd. (Kobe City)	Provides a variety of services, including DNA synthesis, DNA library development and synthesis, and viral vector development for gene therapy applications.	
	BioAcademia Inc. (Suita City, Osaka Pref.)	Utilizing academic intellectual property, it manufactures and sells reagents for proteins and antibodies used in medical and biological research. Development and contract services of infection related diagnostic drugs, and therapeutic antibodies based on human antibodies.	
Medical equip-ment, etc.	Integral Geometry Science Co., Ltd. (Kobe City)	Manufacturer of world's most advanced measuring instruments. Runs operations for improving the reliability of electronic parts and electronic equipment, preventative maintenance of social infrastructure, and future medicine.	
Regen-erative medicine, etc.	Ig-M Co., Ltd. (Kobe City)	Connecting sensuous symptoms, such as fatigue, a heavy stomach, firmness of skin, etc. with biochemical data verification. Application of basic ecology cultivated in development of regenerative medical products. Analysis of clinical sensations using numerical data.	
	iPS Portal, Inc (Kyoto City)	Supports client companies' R&D (cell technology-based research, including iPS cells) and their operations. Supports clients' operational activities involving cells (primarily in the pharmaceutical field) from both technological and commercial perspectives.	
	aceRNA Technologies, Co., Ltd. (Kyoto City)	Using RNA Switch technology, which visualizes intracellular activity of micro RNA, it explores and researches new functions of micro RNA and develops nucleic acid therapeutics based on the newly found functions.	
	Stem Cell & Device Laboratory, Inc. (Kyoto City)	A venture that originated at Kyoto University. It develops cell devices for drug discovery, and drug efficacy and pharmacology assays that use those, based on iPS cell-derived nerve cells and skeletal muscle cells.	
	PHG Co., Ltd. (Kobe City)	On the basis of the research achievements made by Professor Tanihara of the Graduate School of the Nara Institute of Science and Technology, it manufactures and sells laboratory reagents, and researches, develops, and commercializes new materials.	
Health-care, etc.	Micro Bio Factory Co., Ltd. (Osaka City)	Using renewable plant biomass resources as raw material, it produces useful biochemicals through microorganism fermentation.	

(Note) Example extracted from "Questionnaire on Japanese investment in Kansai life science industry" conducted by the Kansai Bureau of Economy, Trade and Industry (November 2020)

(Appendix) Consultation service offices for foreign nationals

Kyoto City International Foundation		Kyoto Prefectural International Center	
Osaka International House Foundation		Osaka Foundation of International Exchange (OFIX)	
Kobe International Center for Cooperation and Communication (KIC)		Hyogo International Association	
Fukui International Association		Shiga Intercultural Association for Globalization	
Nara Prefecture International Citizens Center		Wakayama International Exchange Association (WIXAS)	