

JAPAN Biocommunity






■ What is a Biocommunity?

In the field of biotechnology, with the aim of strengthening the system to invite human resources and investment from within and outside Japan and to supply products and services to the market(i.e., the innovation ecosystem), the Cabinet Office established an open application program in which applicants meeting certain requirements (such as world-class strengths (scientific and industrial infrastructures), key entities (industry, academia, government, and/or finance), participation of key persons, the network organization's capability to fulfill coordinating, collaborative, and other functions, and specific action plans) are certified as biocommunities.

The world's leading "global biocommunity" in developing strategic value chains involving various entities from research and development to commercialization, and "regional biocommunity", which develops its own distinctive efforts, have developed a system of complementary cooperation among bases in addition to initiatives at each site and have been promoting efforts to raise awareness in Japan.


We will appreciate your interest for this pamphlet summarizes the characteristics, strengths, and activities of each biocommunity. Please don't hesitate to contact us if you need some more informations.


Biocommunities Across Japan

-  Global biocommunities that lead the world in biotechnology
-  Regional biocommunities working in the field of biotechnology by taking advantage of their regional characteristics
-  Biocommunity registered as a nurturing stage that is expected to grow in the future



(P11~P12)

 鶴岡バイオコミュニティ
Tsuruoka Science Park
(p.13~p.14)

 みんなで創るみんなの長門
バイオコミュニティ
未来創造都市ながおか
The Bio Community Future Creating City Nagasaki
(p.15~p.16)


Tokai BioCommunity

Gunma Green Innovation Platform

Greater Tokyo Biocommunity
(p.3~p.6)

 福岡バイオコミュニティ
FUKUOKA BIOCOMMUNITY
(p.19~p.20)


BiocK
Biocommunity Kansai
(p.7~p.10)

 ひろしまバイオDXコミュニティ
(p.17~p.18)


Okinawa BioCommunity
(p.21~p.22)

What is the Bioeconomy?

The bioeconomy has been recognized as a concept to expand a sustainable, renewable circular economic society by utilizing biotechnology and biomass (renewable biological resources).

The bioeconomy can contribute to solving various social challenges such as environmental, resources, food, health and medical, as well as to sustainable economic growth. Expectations for it have rapidly been rising due to advances in biotechnology, such as recent synthetic biology and big data related technologies.

What is the Bioeconomy Strategy?

Japan has formulated the Bioeconomy Strategy (decided by the Integrated Innovation Strategy Promotion Council in June 2024) to expand the bioeconomy market, and the public and private sectors are working together to promote initiatives. In addition, more than 60 countries around the world have developed strategies for bioeconomy.

Aims of the Bioeconomy Strategy

Promote the incorporation of bioprocess in each industry, reduce environmental burden by utilizing unused resources, and increase the strength of supply chains.

Departing from fossil fuels and achieving a resource-autonomous economy, through biomanufacturing which produces various materials from modified microorganisms or plant or animal cells, etc.



Performance bioplastic derived from plant biomass



Brewed Protein developed by Spiber Inc.

Development of sustainable food systems

Contribute to establishing a food system that achieves increased productivity and reduced environmental burden through smart agriculture technology and through developing and introducing new varieties.

Difference in growth in a field test (Tsukuba City)



Development of wheat that reduces GHG emissions



Asparagus harvesting robot developed by inaho Inc.

Contribute to CO₂ emission reduction and have fewer countermeasures by spreading large-scale buildings utilizing wood.

Promoting circular use of forest resources by more use of wood in large buildings and improvement of productivity in forestry, and contributing to the reduction of CO₂ emissions and the alleviation of hay fever



Image of large-scale buildings utilizing wood
Source: Annual Report on Forest and Forestry in Japan

Globally roll out biopharmaceuticals from Japan.

A healthy life through biopharmaceuticals that have larger molecules and more complex structures than existing low-molecule pharmaceuticals.



LEQEMBI, an anti-Alzheimer's drug developed by Eisai Co., Ltd.

Increase healthy life expectancy through cooperation between medical and healthcare industries.

Promoting entry of new players into the healthcare area from other areas and creating new markets, through digitalization and data linkage of healthcare information etc., among other means.



Diagnosis and healthcare service based on data from Apple Watch.

Greater Tokyo Biocommunity (GTB)

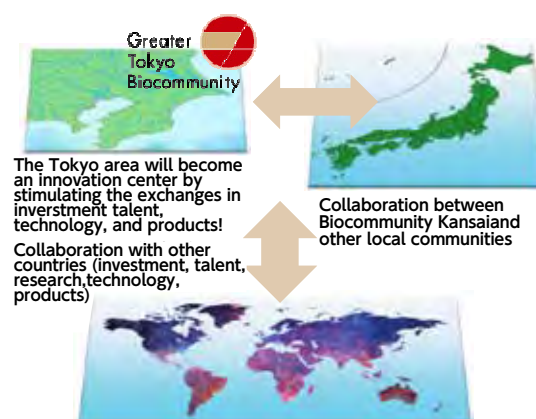
Aiming to Make the Tokyo Metropolitan Area the World's Premier Innovation Center



We aim to maximize the bioindustry's potential in a wide range of markets and become the world's premier innovation center by talent development, infrastructure improvement and stimulating investments.

Activity Policy

1. Illustrate the Tokyo area's capabilities and publicize them overseas
2. Strengthen ties and encourage exchanges with participating institutions and related organizations
3. Encourage domestic and foreign investment (R&D, production, talent development, incubation)
4. Make recommendations and proposals on regulations and systems
5. Review and strengthen R&D and production supply chains to maximize industry potential, including the nine market domains



Characteristics and Strengths

■ Superior Science and Technology

The GTB has a concentration of prominent research institutes and researchers, as well as numerous intellectual property rights and drug pipelines. Compared to other leading global metropolitan areas, Tokyo has a strong foundation in science, being second in papers cited, third in papers cited, second in pipelines, and second in patents filed.

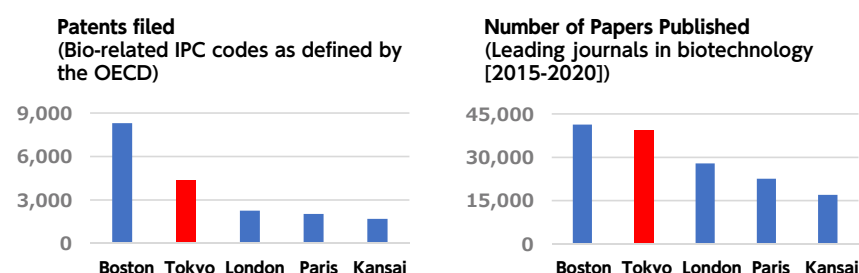
(Comparison of 12 metropolitan areas: Tokyo, Kansai, Boston, London, Paris, Stockholm, Munich, Singapore, San Diego, Copenhagen, Basel, Tel Aviv / METI survey, 2022)

■ Clusters of Large Companies

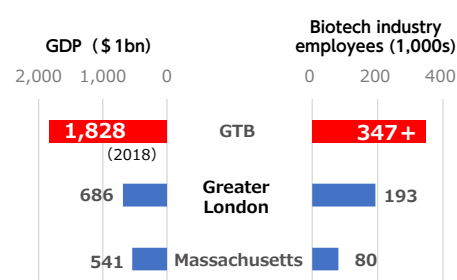
Tokyo is home to the world's greatest concentration of large companies and has several times the GDP and bio industry employment of major foreign cities, resulting in an extremely high concentration of existing industry. In fact, the 1,500 member companies of biotechnology organizations in the GTB cover all nine priority areas of Japan's Bioeconomy Strategy.

■ Growing Startups

About half of Japan's biotech startups are located in the Tokyo area, making it the country's leading region for startups.



Comparison of 12 Metropolitan Areas
(Top 5)



Comparison of Industry Size in Major Cities
(2019)

■ Active Private Investment

GTB encourages investment across the entire value chain. As of August 2023, we have achieved the following results and aim to expand further.

GTB Bio-innovation Promotion Center Investments (as of Jun 2024)

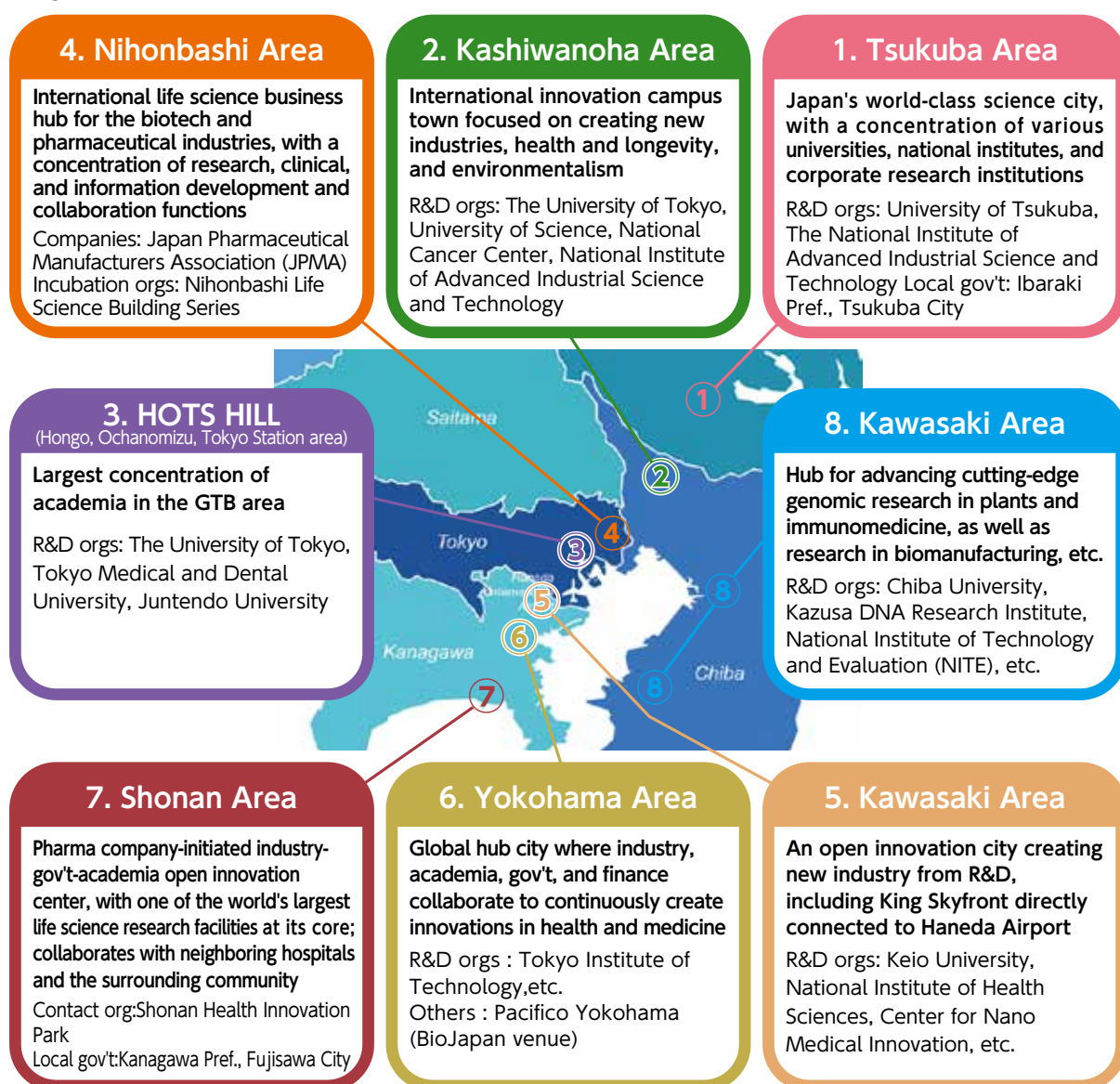
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|-------------------------|---|
| ① R&D | 24 Countries Project
Up to 200bn yen / 10 years (2021-2030) |
| ② Venture support | Gov't support
~ 175bn yen / 7 years (2023-2030) |
| ③ Production facilities | 12 production sites and HQ Gov't subsidies ~ 230bn yen |
| ④ Private investment | Total ~ 690bn yen / 3 years (2021-2024) |

System

■ **Network Organizations** Japan Bioindustry Association(JBA)

■ **R&D labs, companies, local gov't & incubation orgs** Total 47 organizations (as of Jan 2024)

The GTB encourages ecosystem formation from eight locations. The GTB promotes networking and collaboration among the eight Bioinnovation Promotion Areas.



GTB Bioinnovation Promotion Centers and Major Players

Greater Tokyo Biocommunity (GTB)

Main Participating Organizations and Activities

The GTB is home to universities that yield research seeds, incubation facilities that cultivate seeds, and pilot scale-up plant facility for commercialization. As the network organization for the GTB, Japan Bioindustry Association (JBA) is making efforts to build networks including with overseas countries, promote investment, and develop human resources and various bases, with the aim of maximizing the bioindustry's potential.

Universities



The University of Tokyo

The university that promotes world-class research. In the World University Rankings (2024), it ranks as the highest in Japan at 29th place.



Institute of Science Tokyo

Japan's top university of dentistry, as well as science and technology. It will be established in October 2024 through the merger between the Tokyo Institute of Technology and Tokyo Medical and Dental University.



University of Tsukuba

Core research institute in Tsukuba Science City where science and technology research institutes are concentrated.

Incubation Facilities



Shonan Site: Shonan iPark

One of Japan's largest science parks specialized in life science. About 150 organizations including pharmaceutical companies, biotech startups, and academic institutes are located in the 300,000-square-meter site, where about 2,500 people are working. It has laboratory spaces where various *in vitro* and *in vivo* experiments, including chemical synthesis, RI, biochemical, and animal experiments, can be conducted. Basic equipment, such as laminar flow cabinets, and advanced equipment, such as NMR, are available, and tenants can start research immediately after they move into the facility. (As of August 2024: Available for occupancy).



Kashiwa-no-ha Site: MITSUI LINK-Lab KASHIWANOHA 1

Lab space for biotechnology-related R&D with a total rentable area of 8,228 m² located near an academic institute (the University of Tokyo), a research facility (National Institute of Advanced Industrial Science and Technology), and an advanced medical hospital (National Cancer Center). It has shared equipment for conducting basic biological experiments, which helps tenants reduce initial investment costs. (As of August 2024: Available for occupancy).



Innovation Center of NanoMedicine (iCONM) Shared lab (left) and office (right)

A global premium incubator that provides an environment where startups can fully pursue growth and science. The iCONM has biotech, chemical synthesis, nanoprocess, and human disease model experiment facilities and more than 370 advanced analytical instruments, which allows tenants to start research immediately after they move into the facility. It also offers opportunities to receive business mentoring from experts in life science or access human resources with knowledge necessary for management such as intellectual property, VC, legal affairs, regulations, and accounting. Located only five minutes drive from Haneda Airport by car, it has convenient access to the airport. (As of August 2024: Available for occupancy).

Production Facilities

The GTB is encouraging the utilization of the government's measures to promote production facility introduction in the GTB region.



AGC's new biopharmaceutical CDMO facility (to be opened in 2026)



Facility for manufacturing mRNA for research/clinical testing in Elixir Scientific Japan Inc.



NEDO Biofoundry site of Green Earth Institute Co., Ltd.

■ Promotion of Joint Research and Business Matching



Business matching through BioJapan

BioJapan is one of Asia's largest partnering events. Participants include not only industrial, governmental, and academic organizations in Japan, but also overseas companies, startups, and academic and research institutes. BioJapan provides a place that accelerates global open innovation.



Business matching through the Japan Healthcare Venture Summit

With the aim of establishing an ecosystem that fosters healthcare startups, the summit provides a place where participants can run booths and/or make presentations to promote business matching and networking.

■ Fostering Venture Development

We facilitate business matching through BioJapan, the Japan Healthcare Venture Summit, etc.



Sharing issues through seminars



Organize pitch events that lead to the development of entrepreneurs and ventures



Networking at iCONM in collaboration with BioLabs

■ Promoting GTB abroad and Expanding foreign investment

We introduce GTB activities at international events and provide support for Japanese bio ventures to expand their business overseas in cooperation with the Japan External Trade Organization (JETRO) and other organizations.



Introducing GTB activities at BIO-Europe held in Germany



Supporting overseas expansion of Japanese bio ventures in collaboration with JETRO, etc. at BIO Int. Boston



HOTS HILL to hold Tokyo-Boston collaboration workshop

[Message from the Network]

Please feel free to contact us:

- Companies interested in having laboratories or factories around Tokyo or in seeds technologies at universities/institutes
- Companies or research institutes interested in the startup ecosystem around Tokyo.

Various biotechnology related events are held in around Tokyo. Please take the advantages to promote your businesses.

Contact (Network Organization)

Japan Bioindustry Association

E-mail : gtb@jba.or.jp

Website : <https://gtb.jba.or.jp/>

X : @TokyoGreater



Biocommunity Kansai (BiocK)

Building the Ultimate Biotech Ecosystem Based on the Kansai Region

~Shifting from Accumulation to Collaboration~

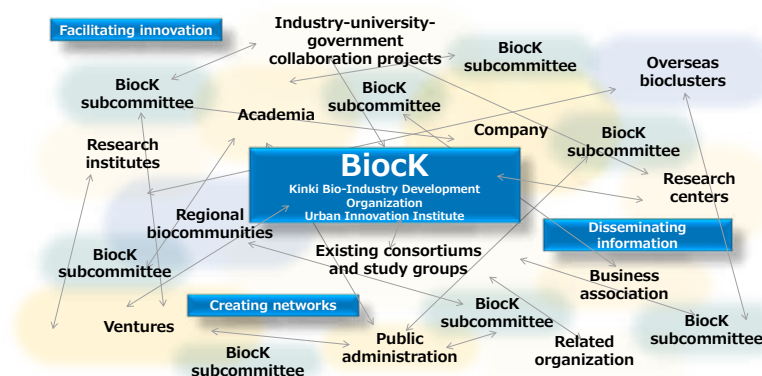
A committee consisting of representatives of Kansai corporations and organizations from industry, government, and academia manages the community. The Kinki Bio-Industry Development Organization and the Urban Innovation Institute jointly serving as its secretariat. Subcommittees have been established to ensure that promoting innovation, the most important work, is carried out. We have also established partner organizations as a base to foster the formation of networks. We encourage these collaborations and links to enhance synergies under one roof.



Activity Policy

Vision	Spreading a bio-first approach to build a Global Biocommunity and realize a sustainable society
Goal	Creating an ultimate ecosystem for the bio-fields in Kansai
Key word	Shifting from "Accumulation" to "Collaboration"

Shifting from "Accumulation" to "Collaboration"



Giving Meaning to Collaboration

By promoting exchanges of people and information within the community, led the network organizations, institutions will gain a deep understanding of each other's situation, share information appropriately, and cooperate with the partners they need. This will produce a virtuous cycle of people, goods, funds, and information, thus achieving economic growth as well as an increased global presence.

Characteristics and Strengths

Research Centers and Knowledge Clusters

There is a concentration of sophisticated research institutions in the region, including Kyoto University, Osaka University, and RIKEN, and advanced researchers, including Nobel Prize winners, in addition to many private R&D companies. They promote quality R&D in regenerative medicine, immunology, and other fields, and are R&D leaders in cutting-edge fields, as exemplified by the supercomputer Fugaku. They actively engage in international joint research and research exchanges.

Kyoto University
Center for iPS Cell Research and Application (CiRA),
Foundation for iPS Cell Research and Application (CiRA_F)
RIKEN (Keihanna)
Research Institute of Innovative Technology for the Earth (RITE) Kyoto Research Park (KRP)

Osaka University
University Public Corporation Osaka
National Institute of Biomedical Innovation, Health and Nutrition
National Cerebral and Cardiovascular Center
National Institute of Advanced Industrial Science and Technology (Kansai Center)
RIKEN (Suita)
Saito, Kento, Nakanoshima
Kansai Pharmaceutical Industries Association, Doshomachi
Urban Innovation Institute
Kinki Bio-Industry Development Organization
LINK-J WEST

Kobe University
RIKEN (Kobe)
Kobe Biomedical Innovation Cluster (KBIC) /Supercomputer "Fugaku"
Organization for Engineering Biology (OEB)
Manufacturing Technology Association of Biologics (MAB)
Biologics Center for Research and Training (BCRET)
Harima Science Park City / Large Synchrotron Radiation Facility "Spring-8"

BiocK Research Centers

Bioindustry Clusters

Historically, the region has been home to bio industries such as pharmaceuticals, medical devices, and fermentation, as well as SME manufacturers. There is also a cluster of SME manufacturers concentrated in east Osaka. Bio contract manufacturing organizations (CMOs) and contract development and manufacturing organizations (CDMOs) have been aggressively expanding in recent years.

Regional Appeal

Osaka, Kyoto, and Kobe are internationally recognized as appealing cities and have strong international ties, especially in Asia. Office rents and industrial park rents are also highly cost-competitive.

Expectations for the Future

Many large-scale projects to promote R&D-oriented industries are ongoing, while the region is also home to promising startups. Furthermore, the Osaka, Kansai Expo 2025 is coming soon.

System

Network Organizations Kinki Bio-Industry Development Organization, Urban Innovation Institute,

R&D labs, companies, local gov't & incubation orgs Total 37 organizations (as of Mar 2024)

We have formed a consortium of subcommittees tasked with promoting open innovation to solve social issues, and are taking up the challenge of addressing matters that no single company or research institute can address. Key players in BioK serve as the leadership body for each subcommittee.

Main Participating Organizations and Activities

Universities and Research Institutes



(Source: Kyoto University)

Kyoto University

The university with outstanding research capabilities, having produced multiple Nobel Prize winners.



(Source: Osaka University)

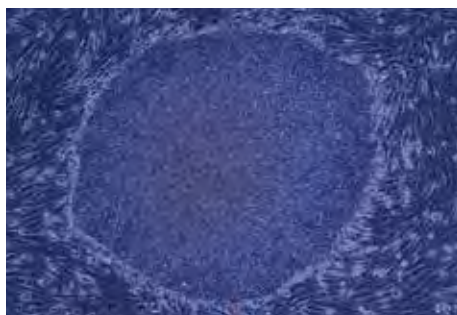
Osaka University

one of Japan's leading research-oriented universities that emphasizes basic and theoretical research and practical learning.



Supercomputer "Fugaku"

Supercomputer developed by RIKEN and Fujitsu Limited. It boasts the world's fourth highest computational speed (as of June 2024).



(Source: Kyoto University)

Center for iPS Cell Research and Application (CiRA), Kyoto University (left: building exterior, right: iPS cell)

Core organization that promotes Japan's research on iPS cells. With the mission of finding medical applications of iPS cells, CiRA is engaged in research to develop new drugs and treatment methods, and elucidate the causes of diseases using technology for producing iPS cells and apply the technology to regenerative medicine.



(Source: RIKEN)

Spring-8

Spring-8 is a large synchrotron radiation facility that can produce the world's highest performance synchrotron radiation. The radiation can be used in research in a wide range of industries including biotechnology.

Biocommunity Kansai (BiocK)

Incubation Hubs



(Source: Office of the Osaka Innovation Hub)

The Osaka Innovation Hub

Startup support hub opened by Osaka City. Entrepreneurs and engineers who challenge the world gather in this hub. It provides acceleration programs and other support programs for startups in different phases of growth and holds various events and programs that help participants create new businesses or expand in scale (about 200 events per year). It has more than 1,200 individual members, including entrepreneurs, and more than 450 organizational members, including companies and governmental agencies, with the cumulative total of funds procured for supporting startups reaching 40 billion yen.



(Source: Future Medical Promotion Organization)

Nakanoshima Qross

Opened in June 2024, Nakanoshima Qross is a unique facility supporting the industrialization of future medicine, where medical institutions, companies, startups, and supporting organizations gather under the same roof. Based on regenerative medicine, the tenants, including companies and medical institutions, are working together to promote the industrialization of cutting-edge future medicine adapted to future advances in medical technology, such as genomic medicine, artificial intelligence (AI), and utilization of IoT, and aim to provide such future medicine. The Future Medical R&D Center in the facility offers rental offices that are combined with a lab where cell experiments can be conducted with the aim of attracting and fostering startups.



(Source: Foundation for Biomedical Research and Innovation at Kobe)

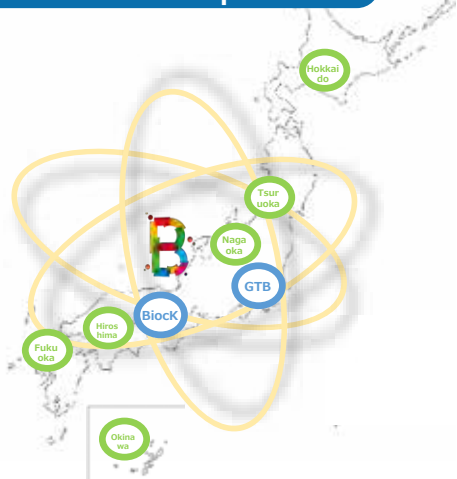
Biomedical Research and Innovation at Kobe

One of Japan's largest biomedical clusters. More than 400 hospitals, companies, groups, and organizations, including research institutes, such as RIKEN and universities, advanced special hospitals, such as Kobe City Medical Center General Hospital, and medical companies and groups are concentrated in Port Island in Kobe. The cluster has full-time coordinators offering hands-on support and provides other environments and services that fully support processes ranging from R&D to commercialization through industry-academia-government-medicine collaboration, helping to produce a number of medical innovations. It also offers a range of plans to meet various needs for business/R&D locations, ranging from shared labs/offices where you can rent starting with just one desk to rental labs/offices with an area of more than 1,000 m². It has experimental equipment for common use as well as facilities that allow tenants to start research without their own equipment.

Creating Networks

To form a bio ecosystem, we encourage exchanges of information through collaborative projects with other countries while accelerating domestic collaboration.

Domestic Cooperation



Bio community meetings

関西 バイオビジネス マッチング 2023

バイオ技術分野におけるシーズニーズのマッチングイベントとして、「関西バイオビジネスマッチング」を完全オンラインで開催します。新規事業の創出、新たなイノベーションの場として期待されています。

募集期間 2023年10月2日（月）～2023年11月17日（金）

実施方法 オンライン面談：2024年1月～2月の2か月間
ビッチ：2024年1月10日（水）14:00～18:00

募集対象 バイオ技術関連の企業、ベンチャー、アカデミア等
バイオ技術分野に特化した企業・機関からの参加を可

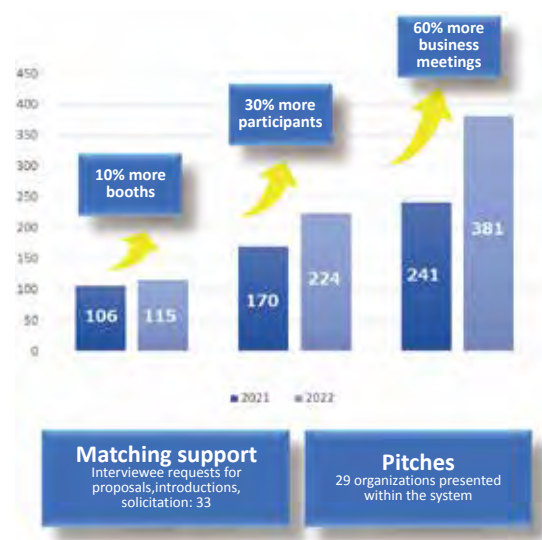
対象分野 バイオ技術分野全般
医療、創薬、診断、研究開発、再生医療、ヘルスケア、食品、環境バイオ、化粧品、素材、化学、分析、農・水産・産業、環境、エネルギー、デジタルAI等

参加費 企業：2万円（税込）※アカデミア・ベンチャー・スタートアップ等、アカデミア・ベンチャー・スタートアップ等、アカデミア・ベンチャー・スタートアップ等
アカデミア（大学、公的研究機関）：無料

申込方法 近畿バイオインダストリー振興会議のホームページから
お申し込みください
URL: <https://kansai-bio.com/information/3585>

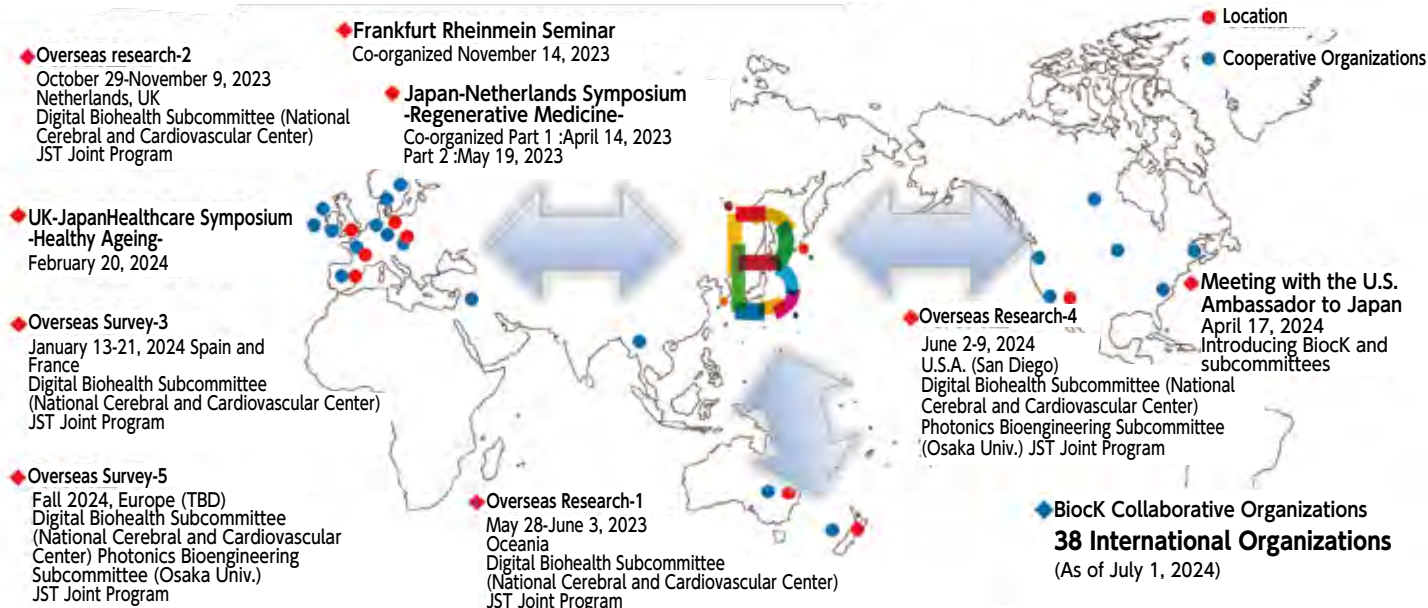
場所と時間の制約を受けません **納品まで面談可能**
営業種と会えます **アカデミアの新しいシーズにも期待**
マッチングサポートがあります **参加者は無料でビッチ登録できます**

お問い合わせ: NPO法人関西バイオインダストリー振興会議 電話：06-6666-4444 06-6666-4444 06-6666-4444
〒541-0048 大阪市中央区南船場4-6-3F 近畿バイオインダストリー振興会議 3F
TEL 06-6666-2107 FAX 06-6666-2127 URL: <https://kansai-bio.com/>
E-mail: biomatching@kansai-bio.com



Kansai Bio Business Matching

Overseas Cooperation



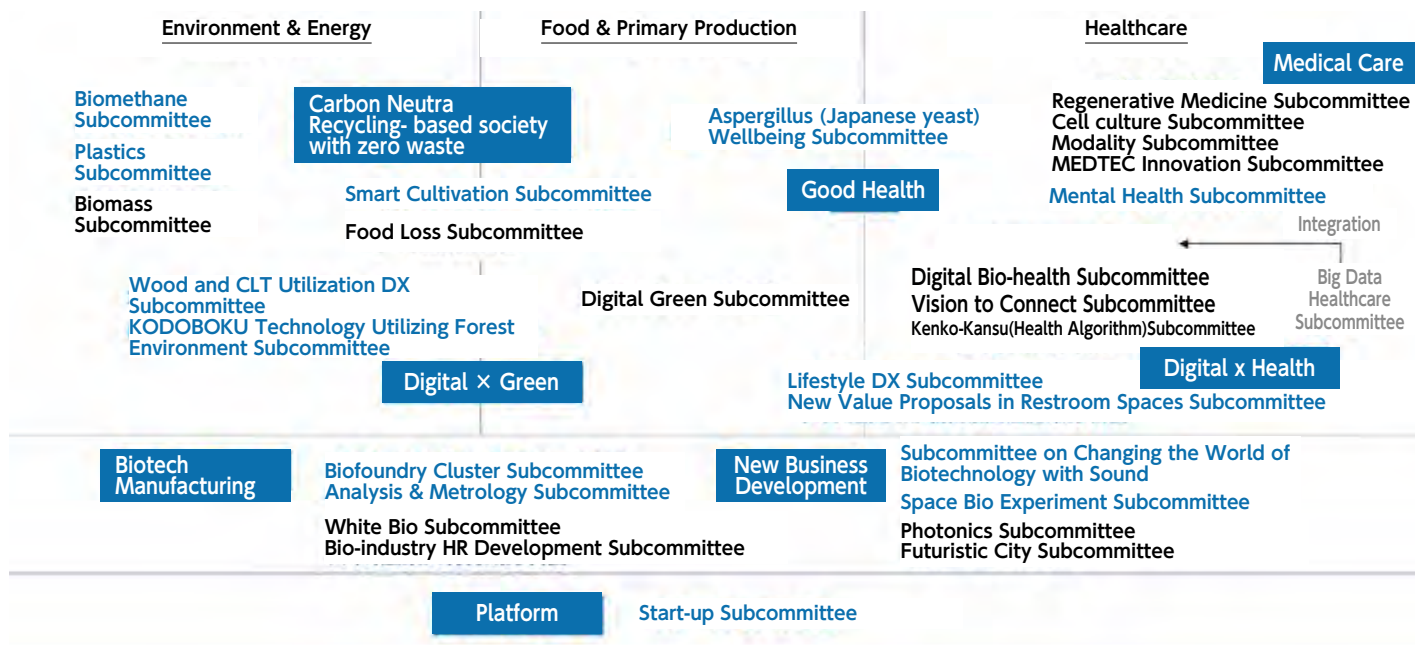
Planning new collaborative projects through exchanges with various countries

Promoting Innovation

We have formed a consortium of subcommittees tasked with promoting open innovation to solve social issues, and are taking up the challenge of addressing matters that no single company or research institute can address.

Light Blue: Subcommittee of Open Innovation from Businesses

Dark blue: Subcommittee of collaboration with Industry- Government-Academia projects



Subcommittee Mapping

[Message from the Network]

Biocommunity Kansai aims to build an ecosystem centered on the Kansai area, and promotes network-type open innovation to solve social issues. Let's succeed in open innovation together with Bio Community Kansai and expand globally with the aim of global standardization.

Contact (Network Organization)

Kinki Bio-Industry Development Organization
Urban Innovation Institute
E-mail : info@bioc.jp
Contact u: <https://bioc.jp/en/contact/>
Website: <https://bioc.jp/en/>



Hokkaido Prime Bio Community

Making Hokkaido into a Region where Everyone Wants to be Involved in Agriculture, Fisheries, and Forestry

Our goal is to become a region where everyone wants to engage in agriculture, forestry, and fisheries. To that end, we will improve labor productivity through smart primary industries, research and commercialize environmentally friendly production technologies, and establish Hokkaido's bio brand.



Activity Policy

In the Hokkaido Prime Bio Community, primary industry workers, companies, educational and research institutions, financial institutions, and local governments in Hokkaido collaborate to conduct R&D related to primary industries, which is one of Hokkaido's strengths. And by making the agriculture, forestry, and fisheries industries more sophisticated and smart, we aim to sustain and revitalize industry and expand markets.

Characteristics and Strengths

Education and Research Related to Primary Industries and Businesses

In Hokkaido, there are many universities, including Hokkaido University, which is a university that has both a School of Agriculture and a Faculty of Fisheries, the Obihiro University of Agriculture and Veterinary Medicine, which is engaged in education and research in practical learning of agriculture, animal science, and veterinary science, and the Otaru University of Commerce, which provides practical education specialized in business and has a graduate school that has an MBA program. These universities are engaged in comprehensive education and research in primary industries and business.

Active Primary Industries

Hokkaido has vast land with a total area of 83,422 km² and rich natural environments, and boasts one of Japan's largest agricultural, fisheries, and forestry industries.

- Agricultural production: 1.2919 trillion yen (largest production in Japan (14%) in 2022)
- Marine fisheries and aquaculture production: 313.5 billion yen (largest production in Japan (22%) in 2022)
- Forestry production: 48.0 billion yen (second largest production in Japan (9%) in 2022)

Collaboration with J-PEAKS of Hokkaido University

"Building and Developing a New Sustainable Food Production System for Regenerating the Global Environment Based on Field Science," a framework proposed by Hokkaido University, was adopted by the Program for Forming Japan's Peak Research Universities (J-PEAKS) of the Japan Society for the Promotion of Science. One major purpose of this framework is to establish a research base for further developing agricultural science, science of fisheries, etc., and build a sustainable food production system as part of an effort to promote the regeneration of the global environment. This biocommunity aims to solve regional issues in collaboration with this program.

Industry-Academia-Government Collaboration and Solid Systems for Supporting Startups

The Hokkaido University Research & Business Park provides a place of industry-academia-government collaboration for creating businesses. Designated as a hub city for supporting startups, Sapporo, Hokkaido has solid support systems for startups and provides a place suitable for the development and commercialization of new technologies and services in primary industries.

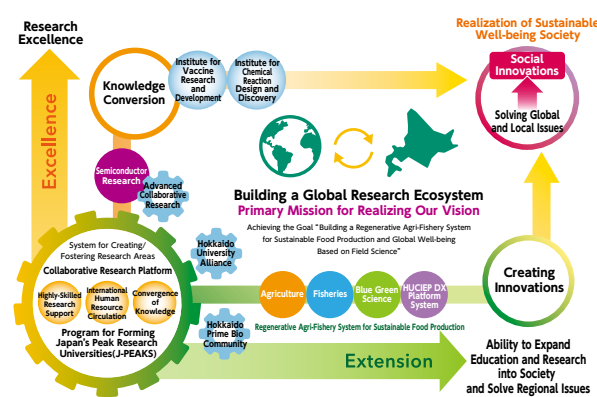
System

Network Organization : Hokkaido Cubix
Collaboration between three institutions in academia (Hokkaido University), local government (Hokkaido Pref.), and industry (Northern Advancement Center for Science & Technology)

R&D orgs : Hokkaido University, Otaru University of Commerce, Muroran Institute of Technology, Kitami Institute of Technology, Obihiro University of Agriculture and Veterinary Medicine, Sapporo Medical University, Hokkaido Information University

Companies : Hokkaido Association for Bio-Business, Hokkaido Bioindustry Association, Hokkaido Food Industry Association

Local gov't and incubation orgs : Hokkaido Pref., Sapporo City, Iwamizawa City, Hakodate City, Obihiro City, Kushiro City, Yoichi Town



Hokkaido University J-PEAKS

Hokkaido University is working to develop and demonstrate a regenerative and sustainable food production system.



Main Participating Organizations and Activities

We aim to create sustainable primary industries by promoting the R&D, advancement, and promotion of smart technologies in the three areas of agriculture, fisheries, and forestry, and make the functions and resources of the participant organizations work together.

■ Networking and Incubation Activities



Hokkaido University Research & Business Park

The park provides a place that supports all processes from R&D to commercialization through industry-academia-government collaboration. In 9 out of the 16 facilities located in the North Campus area of Hokkaido University, a total of 168 offices and laboratories with areas ranging from about 10 to 130 m² are available as incubation facilities. In some of these facilities, laboratory tables, draft chambers, and other equipment are available, and basic wet experiments can be conducted (As of June 2024: Available for occupancy).



Agricultural Learning Facilities

KUBOTA AGRI FRONT Courtesy of Kubota



Run by Kubota Corporation based on the concept “A place to connect with people who dream of a better future for food and agriculture,” KUBOTA AGRI FRONT is an agricultural learning facility. This facility displays cutting-edge smart agriculture-related products of various companies and provides a place that connects between startups and farming-related visitors who are potential users.

(Left photo: exterior of KUBOTA AGRI FRONT, right photo: closed-type plant production machine of PLANTX Corporation).

■ Activities to Promote the Advancement and Use of Smart Technologies in Primary Industries



Training Sessions for Farmers

The Hokkaido University Smart Agriculture Education and Research Center provides teaching materials and training sessions regarding smart agriculture.



Nanogrid demonstration site

Source: Hitachi, Ltd.

To improve productivity and realize a low carbon energy supply, experiments are conducted to demonstrate a stand-alone nanogrid system, a small power system that achieves local production and local consumption for energy by using solar power, etc. Power generated by this system is used for charging agricultural machines or drones for applying agricultural chemicals.



Training sessions for municipal personnel, agricultural cooperative personnel, etc.

To foster expert human resources, including municipal personnel, who are regional leaders in smart agriculture, companies and other organizations work together to provide various kinds of training.



Demonstration experiment of “Smart Forestry EZO Model Construction Council”

Verifications of advanced digital technologies for connecting information between forestry-related processes ranging from afforestation, cultivation, forest investigation, logging, and distribution to processing are conducted. The photo shows a scene of a demonstration test on an ICT harvester, which automatically harvests trees based on the raw wood prices, trends in demand, and other conditions so that log prices are maximized.

[Message from the Network]

We would like to improve Hokkaido's primary industries. Would you like to work with us to achieve this goal? Please feel free to contact us.

Contact (Network Organization)

Hokkaido Cubix

E-mail : h-cubix@jimu.hokudai.ac.jp

HP : <https://www.hbiocom.jp/>



Tsuruoka Bio Community

Contributing to Solving Global Problems Based in Tsuruoka Science Park



鶴岡バイオコミュニティ

Tsuruoka Science Park

The Tsuruoka Science Park serves as the central hub for Keio University's Institute for Advanced Biosciences (IAB), which is the core of advanced research in bioscience, as well as a cluster of education institutions, bio-startups originating from Keio, and companies aiming to develop innovators. Through leveraging biotechnologies, it focuses on the development and production of sustainable new materials, healthcare and functional foods, as well as R&D in pharmaceuticals and medicine, contributing to solving global challenges.

Activity Policy

Based on the foundation of over 20 years of accumulated achievements in research, education, and business from the collaboration between Yamagata Prefecture, Tsuruoka City, and Keio University, the academia cluster centered around Keio IAB serves as the base for research, technology, and talent development. Individual bio-startups grow and attract investment, leading to the expansion of a cycle where research, societal implementation, and human resource development evolve together. They are advancing research in new cancer treatments and drugs, functional foods, microbiome-related pharmaceuticals, new antibiotics, biofuels, and next-generation high-protein foods, aiming to create new businesses. The Tsuruoka Science Park Association fosters diverse collaborations within and outside the community.

Characteristics and Strengths

■ Startups Spun Out of a University

The Institute for Advanced Biosciences (IAB), Keio University, is a pioneer in the field of systems biology, actively working on data-driven life sciences and developing core technologies for metabolomics analysis. Leveraging these core technologies, faculty and students at Keio have founded numerous bio-startups, leading to the formation of a growing cluster of advanced institutions. As a successful example of innovative regional revitalization, it has attracted attention both domestically and internationally.



Tsuruoka Science Park and Shonai Plain

■ Fostering a Culture of Innovation and Long-term Support from Local Governments for Talent Development and Accumulation

The culture that values challenges acts as the engine for innovation. Yamagata Prefecture and Tsuruoka City have been providing significant subsidies to Keio IAB for over 20 years, ensuring stable financial resources for long-term research, educational activities, and human resource development. The unique talents nurtured here generate original research and businesses, attracting more talented individuals from Japan and abroad. The strong and fast collaboration between universities, companies, and government agencies is a key strength.

■ Synergies with the Surrounding Environment and Access to Research and Development, Plus a Rich Food Culture

In and around the Science Park, facilities such as the Shonai Hotel Suiden Terrace, the child education center "Kids Dome Sorai," the company-led daycare center "Yamanoko Hoikuen," as well as single-family and family-type apartments are available. With access from Haneda Airport to the Science Park in about 75 minutes (60 minutes by plane and 15 minutes by car), it boasts excellent connectivity to the metropolitan area. Tsuruoka City is the first in Japan to be recognized as a UNESCO Creative City of Gastronomy, and its rich seasonal foods provide significant support for the activities here.

System

■ **Networking Institutions** : Tsuruoka Science Park Association

■ **Research & Development Institutions** : Keio University's Institute for Advanced Biosciences, Tsuruoka National College of Technology, RIKEN Center for Sustainable Resource Science, etc.

■ **Companies** : Human Metabolome Technologies, Spiber, SalivaTech, Metagen, MOLCURE, BIPROGY, Incems Technologies, Fermentecs, etc.

■ **Local Government & Incubation Institutions** : Tsuruoka City

Main Participating Organizations and Activities

Research Institutions



**Institute for Advanced Biosciences
Keio University**

Established in 2001 through collaboration between Keio University, Yamagata Prefecture, and the 14 municipalities of the Shonai region (at that time), the Keio IAB plays a central role in fundamental research and higher education as the core organization of the Tsuruoka Science Park. It has over 50 metabolome analysis instruments (such as CE-MS) within the area, utilizing cutting-edge biotechnology to comprehensively measure and analyze cell activity in organisms and microbes, applying the data in fields such as medicine and food fermentation. The area also houses the Yamagata University Advanced Research Center for Agri-Food Systems, the RIKEN Center for Sustainable Resource Science, and the National Cancer Center Tsuruoka Collaboration Research Base.

Incubation Facilities



Tsuruoka Advanced Research Industry Support Center

This facility, with a site area of 4.3 hectares and a total floor space of 10,517 square meters, offers 82 rental rooms for companies and research institutions for experiments and research. Common areas include conference rooms, lecture halls, and communication lounges. Its cozy environment and scale encourage serendipitous communication, which is also a major attraction.

Tsuruoka-Keio Bio-Startup Initiatives

As of January 2024, nine startups (eight bioscience companies and one urban development company) have emerged from Tsuruoka and Keio. These include Human Metabolome Technologies Inc., which commercialized metabolome analysis, Spiber Inc., working on the production and commercialization of the structural protein material "Brewed Protein™" using microorganisms, SalivaTech Inc., aiming for early cancer detection through saliva testing, Metagen Inc., which analyzes microbiome information using its proprietary cutting-edge technology "Metabologenomics®", and MOLCURE Inc., advancing development through its AI drug discovery platform technology.



Human Metabolome Technologies, Inc.

The first bio startup born in Tsuruoka
Listed on the stock exchange in 2013 (the only one in the Shonai region of Yamagata Prefecture)

[Message from the Network]

We welcome individuals, companies, and organizations with the ambition to tackle the latest challenges and contribute to the world from the uniquely rich environment of Tsuruoka City, Yamagata Prefecture, a rural city in Japan. Whether it's basic research in life sciences, bio-manufacturing, healthcare, functional foods, or pharmaceuticals and medicine, we also encourage those with the passion to create new fields from scratch. We welcome outliers.

Efforts for Collaboration and Regional Revitalization Centered on Research and Human Resource Development



Local High School Students Conducting Research Activities

Keio IAB supports local high school students by accepting them to conduct independent research projects and welcomes employees from major corporations in the Tokyo metropolitan area to develop innovative human resources. It provides fields for university and corporate training programs and organizes the "Science Park Festival" in collaboration with the local community, promoting an open science community.



Spiber Inc.

Aiming to realize a circular economy. It has grown into one of the few unicorn companies in Japan.

Contact (Network Organization)

Tsuruoka Science Park

E-mail : info@tsuruoka-sp.jp

HP : <https://tsuruoka-sp.jp/>



Nagaoka Bio Community

Taking Advantage of Regional Resources to Realize a Recycling-Oriented Society and Create New Bioeconomy

We will build a value chain for rice and unused bio resources and create new industry by integrating the existing bio industry with manufacturing, thereby promoting and advancing regional resource recycling to realize a recycling-oriented society.



Activity Policy

- Seek to utilize unused resources in the region for resource recycling
- Create new projects to realize the Nagaoka Bio Community based on the Nagaoka Bioeconomy Consortium, a platform operated through industry-academia-finance-government collaboration (chaired by the mayor of Nagaoka)

Characteristics and Strengths

■ Active Development and Commercialization of Resource Recycling Technologies Through Industry-Academia-Finance-Government Collaboration

Nagaoka has had strong industry-academia-finance-government collaboration since some time ago and its facilities have been used as places for demonstration. Nagaoka has a biogas power generation center for food waste with the largest processing capacity of all municipalities in Japan, and efforts to promote resource recycling are also common among citizens. The Nagaoka University of Technology is engaged in a wide range of R&D for resource recycling, including research on filamentous fungi aimed at completely decomposing wood biomass, and makes maximum use of these resources to promote co-creation projects.

■ Active Primary and Secondary Industries and Industrial Structure Expected to Have Economic Ripple Effects

The city of Nagaoka possesses water and nature nurtured by 891 km² of land, which is about 40% larger than downtown Tokyo's 23 wards, and primary industries and manufacturing industries using products from those industries are prospering in the region. For example, the city has the second largest area for rice cultivation in Japan, has 16 sake breweries, the second largest number in Japan, and is the second largest producer of rice biscuits in Japan.

Nagaoka has developed as a town to manufacture advanced elemental technology. Among Niigata's 38 municipalities with a population of 200,000 to 300,000, Nagaoka ships manufactured goods worth 657.1 billion yen (as of 2015), more than any other on the Sea of Japan coast. Nagaoka also has the second largest area for rice cultivation in Japan.

■ Location of higher education institutions and collaboration between industry-academia-finance-government

Nagaoka City is characterized by an ecosystem (industrial development) in which industry, academia, finance, and government work closely together. Nagaoka City is characterized by an ecosystem in which industry-academia-finance-government work closely together.

Nagaoka City is a city that is developing in a variety of areas, such as solving social problems, promoting industry, urban development, and nurturing human resources. There are four universities and one college of technology: Nagaoka University of Technology, the only university in the world designated as a United Nations Academic Impact SDG 9 Hub; the National Institute of Technology, Nagaoka College, which trains engineers and other specialist human resources; Nagaoka Institute of Design, the only university in Japan specializing in design; the business administration powerhouse, Nagaoka University, and; the leading health, medicine, and welfare educational institution, Nagaoka Sutoku University.

System

■ Network Organizations : Nagaoka Bioeconomy Consortium (Chairman: Mayor of Nagaoka City; Industrial Creation Advisor: Tomohiro Fujita, Founder & CEO, Chitose Group; Research Advisor: Tomohiro Tamura, Director of Bioengineering, National Institute of Advanced Industrial Science and Technology)

■ R&D labs : Nagaoka University of Technology, National Institute of Technology at Nagaoka College, National Institute of Advanced Industrial Science and Technology and more

■ Companies : companies, financial institutions, various organizations within and outside the city and more

■ Local gov't and incubation orgs : Nagaoka City, Nagaoka Chamber of Commerce and Industry, Nagaoka Activation Zone of Energy (NAZE) and more

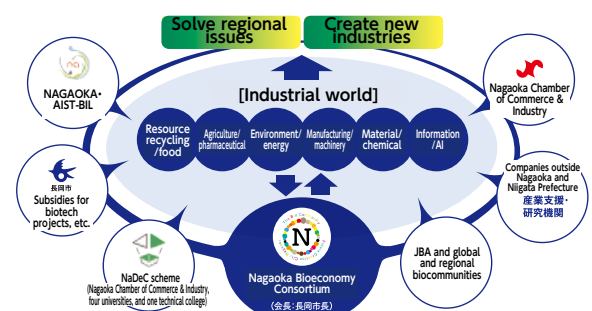


Filamentous fungi capable of complete decomposition of woody biomass *Trichoderma reesei*



Number of breweries 16 is the second largest sake brewery in Japan.

[産業活性化の長岡版エコシステム]



Nagaoka Bioeconomy Consortium

Main Participating Organizations and Activities

■ Efforts to Realize a Recycling-Oriented Society



Biogas power generation center for food waste

This facility uses microbes to ferment sorted and separately collected food waste and generates electricity using the resulting biogas. The biogas power generation center for food waste can process 65 tons of food waste per day, which is the largest processing capacity of all municipalities in Japan. As an environmentally friendly renewable energy center, the facility attracts attention both in Japan and abroad.

■ Networking Activities



Create industry-academia-finance-gov't collaboration Matching HUB Nagaoka

With over 100 companies, universities, and organizations from within and outside the city participating, the exhibition is an opportunity for companies and universities to introduce their technology seeds and create collaboration between industry, academia, finance, and government. Proactive information exchanges and business discussions are an effort to link new technologies, products, and businesses.

[Message from the Network]

Nagaoka, which is conveniently located about 1 hour and 30 minutes from Tokyo by shinkansen, is a city full of seasonal beauty. The bioeconomy plays an important role in industrial promotion, which is a pillar of urban planning. Nagaoka's ecosystem (for industrial development) fully supports companies and research institutes through close industry-academia-finance-government collaboration. Would you like to take advantage of Nagaoka as a place to take on challenges in a new industry?

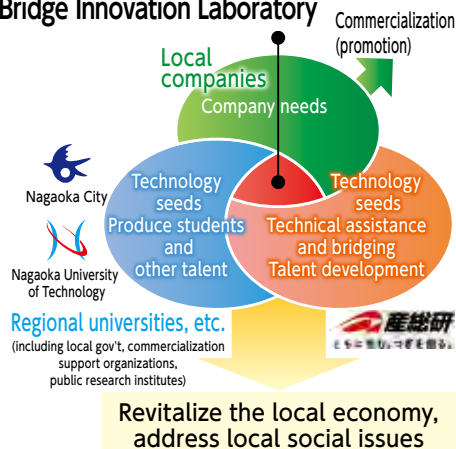


High-value-added recycling of water from rice washing

We are recycling resources used in wet rice cultivation by collecting highly concentrated water from rice washing, an unused resource that had been disposed of by a Iwatsuka confectionery Co.,Ltd., and converting it into organic fertilizers with use of a fermentation technology developed by the Nagaoka University of Technology and compost manufacturing technology developed by Honenagri Co., Ltd.

■ Incubation Activities

Bridge Innovation Laboratory



the Bridge Innovation Laboratory for biological resource recycling

The city of Nagaoka, the National Institute of Advanced Industrial Science and Technology, and the Nagaoka University of Technology jointly conduct R&D on recycling of organic waste and other biological resources, and support food and biotech companies in Nagaoka and surrounding areas. MIRAIE NAGAOKA, the hub of these activities, also has facilities for rent for companies and other organizations.

Contact (Network Organization)

Nagaoka Bioeconomy Consortium (Secretariat:
Industrial Innovation Division, Commerce and
Industry Department, Nagaoka City)

E-mail : sangyou-seisaku@city.nagaoka.lg.jp

HP : <https://nagaoka-biocommunity.jp/>

Facebook : <https://www.facebook.com/biocommunity.nagaoka/>



Hiroshima Bio-DX Community

Forming a Regional Biocommunity Through Bio-DX



ひろしまバイオDXコミュニティ

To make the Hiroshima region a genome business hub, we further social implementation of related technologies based on accumulated seeds in research genome analysis and editing, lure genome companies and startups, and create new genome industries. Our aim is also to form a regional biocommunity and revitalize the bio market through Bio-DX by fostering social acceptance of genome technologies.

Activity Policy

We are working toward the following three goals.

- Using Hiroshima's strength in genome tech to solve local and global social issues and contribute to the SDGs
- Develop R&D and business strategies to build successful cases of market penetration with high value-added products
- Establish mechanisms for investing profits from successful cases and making new investments for the next growth areas

Characteristics and Strengths

■ Internationally Competitive Genome Editing and Bio-DX Technologies

Hiroshima University is home to top runners in the fields of genome editing and bio-DX, who are working on industry-government-academia co-creation projects aimed at maximizing the functions of living organisms through their programming (genome editing and synthesis) and digitization (decoding and analysis of genetic information), so as to solve problems that humanity faces concerning food, health, and energy.



Hiroshima University

■ Active Efforts to Produce Startups

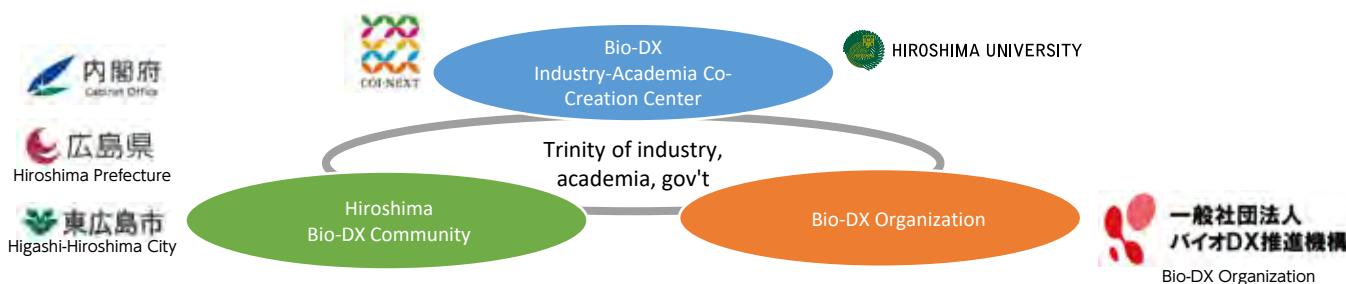
Hiroshima Prefecture is designated as a hub for supporting startups. The prefecture provides various kinds of support for producing startups. This includes the Hiroshima Unicorn 10 Project aimed at producing 10 unicorn companies from Hiroshima in 10 years. In addition, incubation talent for global expansion, startup support, and ELSI services are concentrated in the prefecture.

■ Various Networks and Strong Industry-Academia-Government Collaboration

The prefecture has various networks of relevant companies, such as the Hiroshima Biotechnology Promotion Council. Local companies and startups are gradually making greater efforts to utilize genome technologies, and are accelerating collaboration with companies in other prefectures taking advantage of industry-academia-government co-creation centers.

System

- **Network Organizations:** **Bio-DX Organization** (Representative Director: Takashi Yamamoto / Professor and Genome Editing Innovation Center Director at Hiroshima University / Vice Chair, Japanese Society for Genome Editing)
- **R&D Orgs :** Hiroshima University, COI-NEXT Bio-DX Industry-Academia Co-Creation Consortium
- **Companies:** PtBio, Chugoku Electric Power Company Energia Economic and Technical Research Institute, Hankyu Hanshin Properties, Dentsu, Asahi Shimbun, Asahi Broadcasting Corporation, RCC Broadcasting, Chugoku Shimbun, Hiroshima Biotechnology Promotion Council, Hiroshima Loves It Consortium
- **Local gov't and incubation orgs :** Hiroshima Pref., Higashi-Hiroshima City



■ Efforts in the Fields of Genome Editing and Bio-DX

We provide breeding and commercialization facilities where cutting-edge NGS equipment, domestic genome editing technologies, etc. can be used. These facilities give consideration to the effects of genome-edited crops on biodiversity.



Development of Allergy-Reduced Eggs

Ovomucoid is known as a major allergen in hen's eggs. By knocking out the ovomucoid gene in hens using a genome editing technology developed by Hiroshima University, they succeeded in developing allergy-reduced eggs.



Genome Editing Innovation Center, Hiroshima University

The innovation center has shared labs and co-working spaces and supports companies that use genome editing technologies.

■ Supporting Startups



Higashihiroshima City Challenges
Reducing Electricity Consumption at the Sludge Reclamation Center

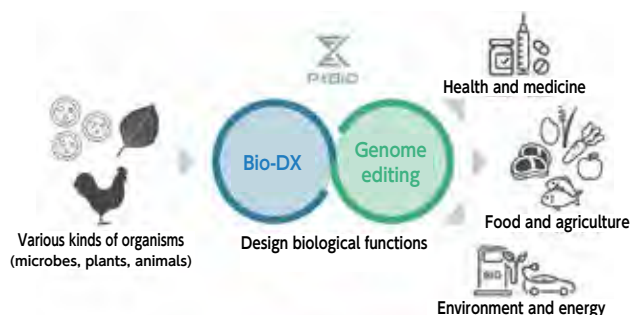
Platinum Bio Corporation's Solution
Visualization of the relationship between the seasonally fluctuating load and the microorganism population through metagenomic analysis to improve the efficiency of facility operation.

Hiroshima Sandbox, a place for challenge (organizer: Hiroshima prefecture)

Hiroshima Sandbox, where companies and talent gather from across Japan to solve problems, matches startups with the prefecture's municipalities. Municipalities join to collaborate with startups possessing innovative ideas and technologies to address local issues, such as those concerning residents' services and administrative tasks. As one such startup, PtBio Inc. is working on issues facing Higashi-Hiroshima.

[Message from the Network]

We utilize our platform technologies in "Bio-DX" and "genome editing" to realize the world's most advanced bioeconomy society in Hiroshima. Join us in taking on the challenge of solving the social issues humanity faces!



PtBio Inc.

PtBio Inc. is a startup company launched from Hiroshima University. It was established centered on Platinum TALEN, a genome editing tool developed by the university. The core technology FirmCut Platinum TALEN enables precise and efficient genome editing.



Agricultural Technology Research Center, Hiroshima

Prefectural Technology Research Institute

To develop the agricultural sector, the center encourages corporate support by installing genome editing equipment.

U10 HIROSHIMA
UNICORN 10

**STARTUP
ACCELERATION**

急成長を志す挑戦者をサポート

経験豊富な専門家とスタートアップのユニコーン候補の出会いをサポート

Unicorn 10 Project (Hiroshima Prefecture)

Project launched with the aim of producing 10 unicorn companies from Hiroshima in 10 years. The project helps startups search for business partners, secure demonstration fields, procure funds, and relocate to Hiroshima, among various other types of support.

Contact (Network Organization)

Bio-DX Organization

E-mail : info@biodx.org

HP : <https://www.biodx.org/>



Launch Bio Businesses that Create the Future of Global Health from Fukuoka and Kurume

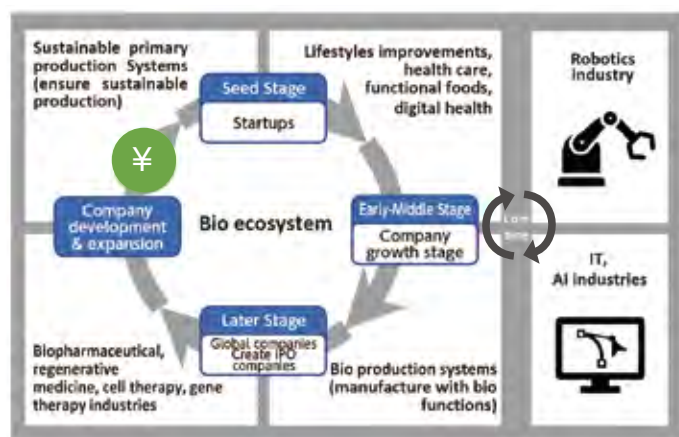


As we work to make Kurume City a center of the bio industry, we will build an ecosystem to rapidly commercialize technologies that contribute to solving social issues by leveraging our strengths in drug discovery, medicine, and food.

福岡バイオ
コミュニティ
FUKUOKA
BIOCOMMUNITY

Activity Policy

Our action to date has yielded certain results, including a concentration of biotech companies, the creation of distinctive leading companies, and the development of original functional food products. Our goal is to create one of the leading bio-communities in Japan. To do this, we will leverage these results as we attract diverse players and build a bio ecosystem that enables a virtuous cycle of people, goods, and money. This will help us collaborate organically with bio communities in Kyushu's other prefectures, elsewhere in Japan, and abroad.



Vision of Fukuoka Biocommunity

Characteristics and Strengths

Robust Networks

We have an industry-academia-government-finance network of more than 800 companies and organizations, and have in place systems that support the commercialization of biotech seeds and the growth of companies. In addition, facilities at partner universities and research institutes can be used at low prices.



Promotion Council Forum

Appealing Infrastructure

Incubation facilities for bio-venture development and open laboratories with state-of-the-art equipment are available.

Environment Conducive to R&D

We subsidize R&D extensively, from the seed stage to product commercialization, and carry out platform businesses to support various R&D projects.

Versatile Business Support

We have special advisers who provide bio ventures with fine-tuned support for different growth levels from the stage of business launch to commercialization. We also provide a lot of support in a wide range of fields, including acceleration programs that promote commercialization, support for participation in large exhibitions in and outside Japan, and technical seminars.



Institute for Disease Modeling
at Kurume University



Biotechnology and Food Research
Institute in Fukuoka Prefecture



Kurume Research Park

System

Network Organization : Fukuoka Biocommunity Promotion Council

(Chair: Keisuke Nishimura <Former Senior Executive Vice President, Kirin Holdings Co., Ltd.>, Secretariat: Kurume Research Park Co., Ltd.)

R&D orgs : Kyushu University, Kurume University, Fukuoka University, University of Occupational and Environmental Health

Companies : various companies, ventures, agricultural cooperatives, hospitals, banks, investment funds and more

Local government and incubation orgs : Fukuoka Prefecture, Kurume City, Kyushu Bureau of Economy, Trade and Industry and more

Main Participating Organizations and Activities

■ Developing an Attractive Infrastructure

Kurume Research Park, which plays a role in Fukuoka Biocommunity, has three incubation facilities that can be used for biotech R&D and an open laboratory, where expensive experiment equipment and analyzers are available for use by the hour.



Fukuoka Bioinnovation Center
It has a total floor area of 1,758㎡ and consists of 12rooms.



Fukuoka Biofactory
It has a total floor area of 2,219㎡ and consists of 15rooms.



Fukuoka Incubation Center
It has a total floor area of 1,365㎡ and consists of 17rooms.

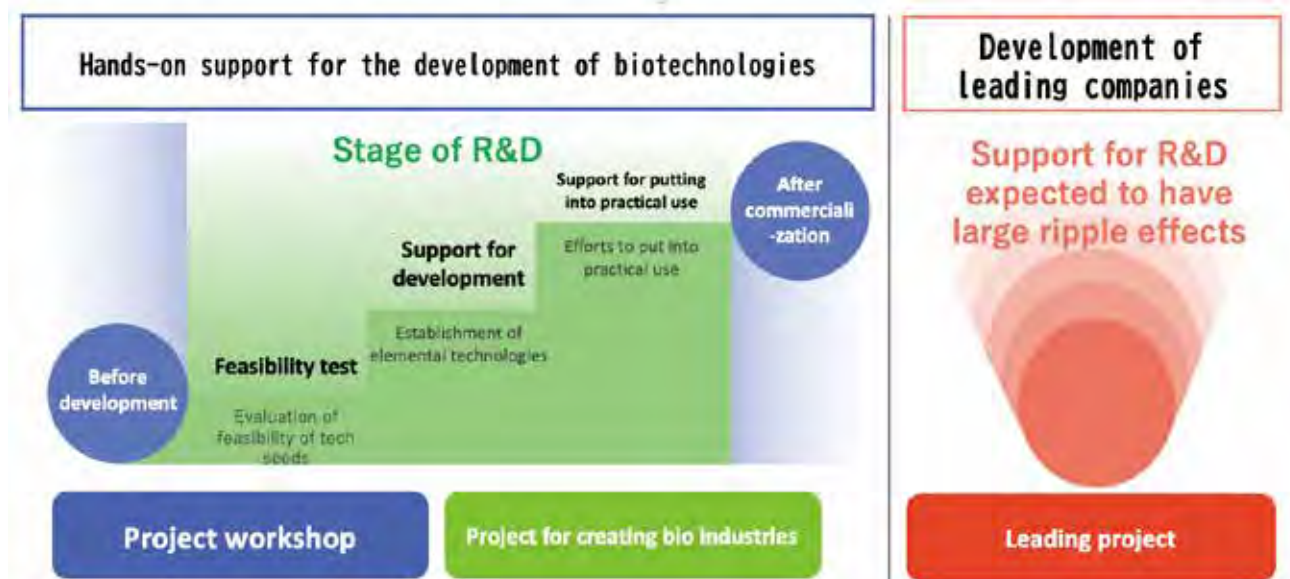


Open Labs
The open laboratory has about 100 kinds of expensive, cutting-edge equipment, such as mass spectrometers and automatic pipetting devices.

■ Support various R&D projects.

Subsidies for R&D

We offer end-to-end R&D support, from the seed stage to product commercialization. (Grant: About 500,000 to 10,000,000 yen)



R&D Platform

We are developing three platform businesses to create a structure that will serve as a foundation for technology development that will lead to the advancement of innovative materials, production technologies and capabilities.



Development of orphan drugs

Provide information or advice about diseases necessary for the development of pharmaceuticals for rare diseases in cooperation with Kurume University



Industrialization of genome editing

Provide an environment and technical support to help venture companies and local small- and medium-sized companies to use genome editing technologies



Development of Functional Foods

Provide a wide range of support for functional food development, including advice before notification, expert assessment, and check of notification forms before submission

[Message from the Network]

Fukuoka Biocommunity provides ideal environments where biotech companies can promote innovation while reducing initial investment costs. We have various subsidy systems to support R&D and business growth. The entire community provides support as a unified team.

Contact (Network Organization)

Fukuoka Bio Community

E-mail : fbv@kurume-rp.co.jp

HP : <https://www.fbv.fukuoka.jp>



Aiming to Be a World-Class Glocal Community

沖縄バイオコミュニティ
Okinawa BioCommunity

Our goal is to revitalize local industry and become a world-class glocal community by taking advantage of our unique subtropical biological resources, involvement with the Okinawa Institute of Science and Technology, which is attracting global attention, and our geographical advantage as a potential hub for Asia.

Activity Policy

We aim to spur innovation and promote sustainable industry for future generations. This will enable us to transition towards innovation-driven economic growth that creates new added value through the synergies of organic collaboration utilizing science and technology among industry, academia, government, and finance.

Characteristics and Strengths

■ Home of the Okinawa Institute of Science and Technology Graduate University (OIST), a Global Top-Class Research Institute, and Venture Companies Launched from the OIST

Okinawa has the Okinawa Institute of Science and Technology Graduate University (OIST), one of the world's top-class interdisciplinary graduate universities, where there are various R&D seeds using biological materials. A number of venture companies that use these resources have been launched from OIST.



■ Biological Resources Unique to the Subtropics

As the only Japanese prefecture with a subtropical maritime climate, Okinawa Prefecture has a unique natural environment that is one of the world's most biodiverse, including sites inscribed as World Natural Heritage. This rich biodiversity contains a wide variety of biological resources with potential industrial applications.

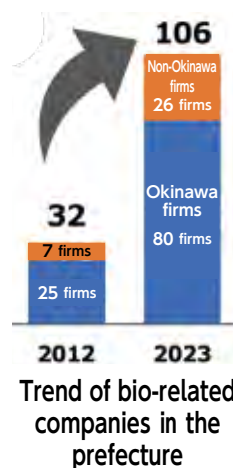


■ Laying the Foundation to Promote the Bio Industry

Efforts to lay a foundation, including the development and operation of incubation facilities and R&D support, have more than tripled the number of biotechnology firms in Okinawa from 32 in FY2012 to 106 in FY2024.

■ Geographical advantage of Okinawa location

Okinawa is located in the center of the massive markets of Japan, South Korea, China, and Southeast Asia, with a total population of 2.1 billion. These markets can be reached within four hours from Okinawa. As networks have developed to form hubs for logistics and other activities, Okinawa is becoming a bridge between Japan and Asia.



Trend of bio-related companies in the prefecture

(Data from Okinawa Prefecture)

Ventures launched from OIST



Geographical advantage of Okinawa

System

- **Network Organizations** : Okinawa Prefecture, Tropical Technology Plus
- **R&D labs** : Okinawa Institute of Science and Technology University, University of the Ryukyus, Meio University, National Institute of Technology, Okinawa College and more
- **Companies** : biotech companies, Okinawa Industrial Federation, Okinawa Health Industry Association, Okinawa Development Finance Corporation, banks, investment funds, hospitals and more
- **Local gov't and incubation orgs**: Okinawa Pref., Okinawa General Bureau, Okinawa TLO, Okinawa Science and Technology Center, Innovation Support Okinawa, etc.

Main Participating Organizations and Activities

■ Network Building and Talent Development



Collaboration through networking

We provide environments for fostering innovation in Okinawa by establishing places where biotech companies, universities, and research institutes can showcase their ideas and build industry-academia-government-finance networks.



Disseminating information at exhibitions, etc.

Our community is working as a team to attract talent and investment from both domestic and international sources by showcasing our initiatives and promoting our brand.



Development of talent who will lead the future of biotechnology

We conduct hands-on programs for fostering children's interest in and curiosity of science, and make other efforts to secure and develop talent required in bio industries.

■ Support of Okinawa Bio Advisors

We have experts in biotechnology registered as advisors to promote effective public support and the growth of biotech companies in Okinawa Prefecture. The members of Okinawa BioCommunity can receive useful advice from these advisors.



■ Incubation Facilities

Support and incubation facility for startups and R&D in bio industries.



Okinawa Health Biotechnology Research and Development Center

Incubation facility that provides comprehensive support in the fields of health and biotechnology, from R&D to commercialization. This facility features functional and convenient laboratories, advanced analyzers, and equipment for demonstrating food processing processes such as drying, pulverization, and sterilization.



Okinawa Biotechnology Business Support Center

Support and post-incubation facility for startups and R&D in the bio industries. The facility offers laboratories of various sizes and provides support for those who want to commercialize their products or technologies, develop sales channels, and seek expert advice.



Okinawa Life Science Research Center

Rental laboratory facility established to enable ventures and research institutes to collaborate on R&D and to promote science, technology, and industrialization in biotechnology and life science. Approximately 40 types of equipment are available for shared use.

[Message from the Network]

At Okinawa BioCommunity, we are engaged in collaborative efforts between industry, academia, government, finance, and support organizations to promote the commercialization and collaboration efforts of bio-related companies and universities, utilizing Okinawa's unique resources and geographical advantages. Biotech companies and organizations interested in this community or in starting a business or research in Okinawa, please feel free to contact us.

Contact (Network Organization)

Okinawa Bio Community Secretariat
(Tropical Technology Plus)

E-mail : okinawa-bc@ttc.co.jp

HP : <https://okibic.jp/>





(P11~P12)



鶴岡バイオコミュニティ
Tsuruoka Science Park
(p.13~p.14)



みんなで創るみんなの長岡
バイオコミュニティ
未来創造都市ながおか
The Bio Community Future Creates City Nagaoka
(p.15~p.16)

Tokai BioCommunity

Gunma Green Innovation Platform

Greater Tokyo Biocommunity
(p.3~p.6)



(p.19~p.20)

BiocK
Biocommunity Kansai
(p.7~p.10)



ひろしまバイオDXコミュニティ
(p.17~p.18)

沖縄バイオコミュニティ
Okinawa BioCommunity

(p.21~p.22)

Contact information for each biocommunity

- Greater Tokyo Biocommunity (GTB) <https://gtb.jba.or.jp/>
- Biocommunity Kansai ((BiocK) <https://biocK.jp/>
- Hokkaido Prime Bio Community <https://www.hbiocom.jp/>
- Tsuruoka Bio Community <https://tsuruoka-sp.jp/>
- Nagaoka Bio Community <https://nagaoka-biocommunity.jp/>
- Hiroshima Bio-DX Community <https://www.biodx.org/>
- Fukuoka Biocommunity <https://www.fbv.fukuoka.jp>
- Okinawa BioCommunity <https://okibic.jp/>

