

**Economic &
Tourism Affairs Bureau,
City of Sapporo**

Sapporo Healthcare Industry Guide

About Sapporo

Introduction

Sapporo is home to universities known for their advanced research in healthcare and medical fields, to medical institutions engaged in forward-thinking initiatives, and to healthcare businesses playing a positive role in Japan and elsewhere. The city also has clusters of information technology (IT) and other firms expected to further enhance collaboration with organizations in healthcare and medical fields. To leverage these strengths with the intent of enhancing the city's charm and vibrancy, the City of Sapporo has positioned the healthcare industry as a priority field in its economic policy.

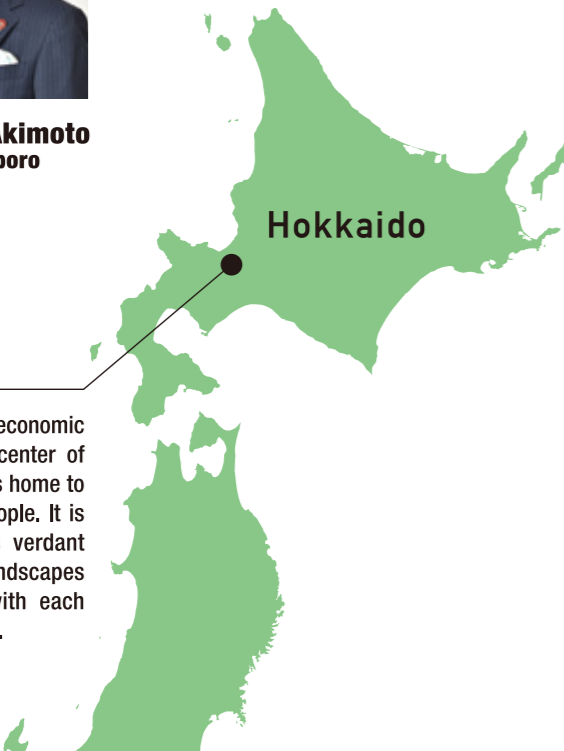
In addition to offering various subsidy programs, we also support networking opportunities and pioneering initiatives. I hope you will make Sapporo—a great city to live—your business destination.

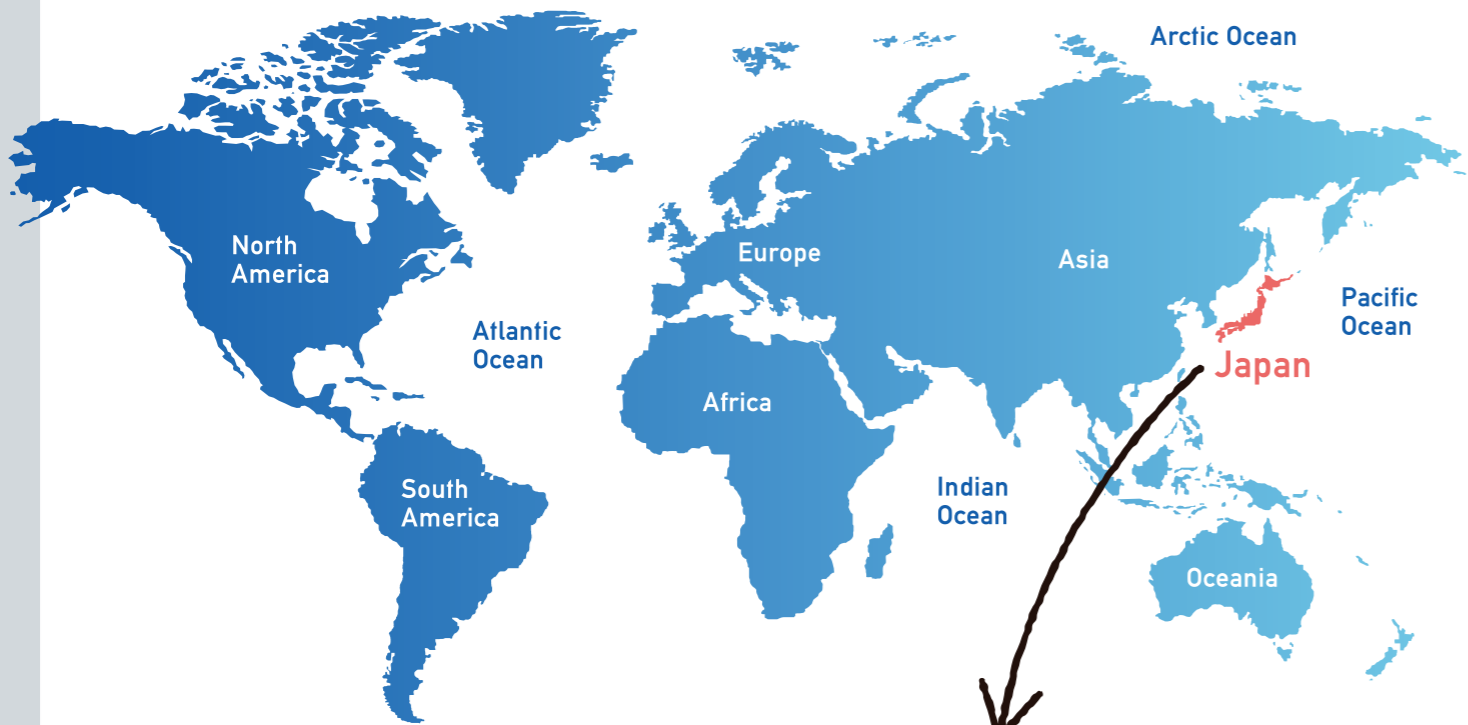


Katsuhiro Akimoto
Mayor of Sapporo

City of Sapporo

Sapporo is the economic and industrial center of Hokkaido and is home to 1.97 million people. It is popular for its verdant streets and landscapes that change with each passing season.





[Data] Overview of Sapporo

[Population] Sapporo **1.97 million**
(as of November 2018)
The fifth largest city in Japan

Hokkaido **5.3 million**
(as of November 2018)

[Area] **1,121.26 km²**
The fifth largest ordinance-designated city in Japan



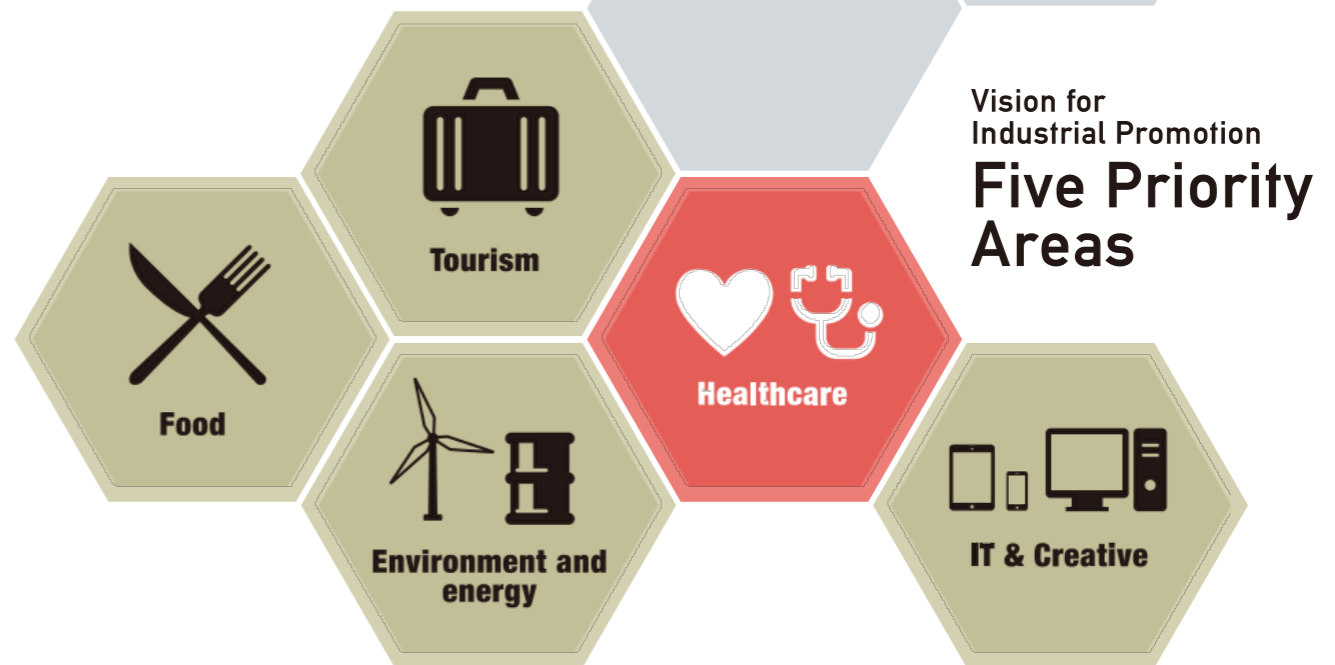
The economic center of Hokkaido
A magnet for people, goods and information in Hokkaido

Share of population **37%** 1.97 million / 5.30 million Sapporo / Hokkaido

Share of GDP **35%** 6.6 trillion yen / 18.35 trillion yen Sapporo / Hokkaido

[Economic scale] **6.4 trillion yen** Gross City Product (real GDP) in FY 2015

The fifth largest ordinance-designated city in Japan



Vision for Industrial Promotion
Five Priority Areas

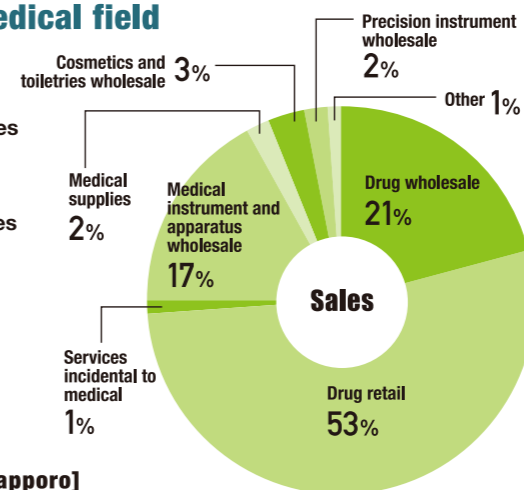
Overview of the medical field

[Healthcare industry]

Number of companies **478^{*1}**

Number of employees **21,967^{*2}**

Sales **1,486 billion yen^{*3}**



[Medical institutions in Sapporo]

202 hospitals **1,351 clinics**
Source: Medical Facility (Dynamic) Survey in 2017, the Ministry of Health, Labour and Welfare

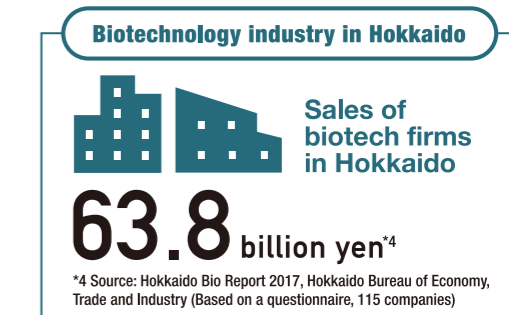
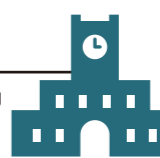
Many educational institutions in Sapporo in healthcare, medicine, science and engineering

Universities and Research Institutions

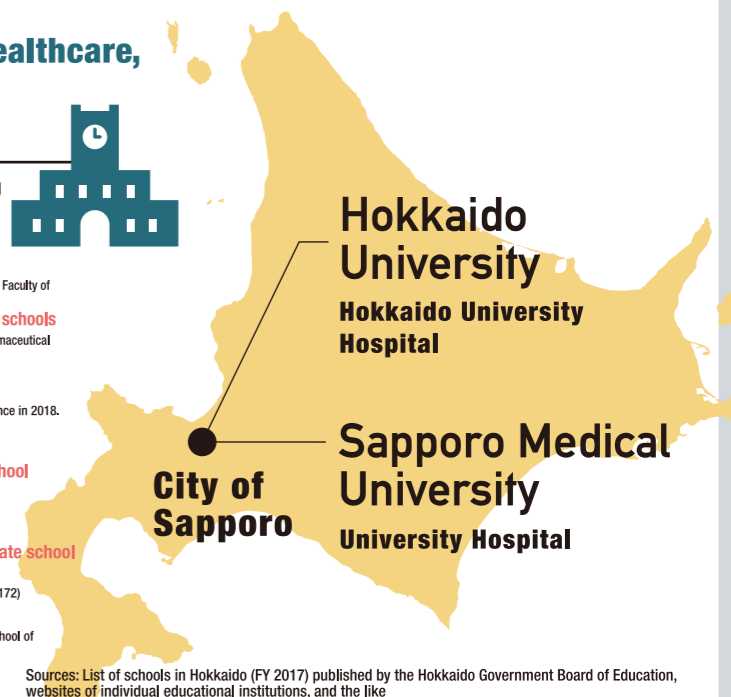
Educational institutions in healthcare, medicine, science and engineering

Note: The list below shows schools in medicine, science, engineering, and healthcare alone. The numbers in parentheses indicate enrollment capacity in the academic year 2017.

- **Hokkaido University**
School of Science (300), School of Medicine (287), School of Dental Medicine (53), School of Pharmaceutical Sciences and Pharmacy (80), School of Engineering (670), School of Agriculture (215), School of Veterinary Medicine (40)
- **Hokkaido University graduate schools**
Graduate School of Information Science and Technology (219), Graduate School of Environmental Science (222), Graduate School of Science (185), Graduate School of Agriculture (184), Graduate School of Life Science (182), Graduate School of Health Sciences (50), Graduate School of Engineering (395), Graduate School of Chemical Sciences and Engineering (167), Graduate School of Medicine (110), Graduate School of Biomedical Science and Engineering (17), Graduate School of Global Food Resources (15), Graduate School of Dental Medicine (40), Graduate School of Veterinary Medicine (16), Graduate School of Infectious Diseases (12)
- **Sapporo Medical University**
School of Medicine (110), School of Health Science (90), Graduate Course in Midwifery (NA)
- **Sapporo Medical University graduate schools**
Graduate School of Medicine (60), Graduate School of Health Sciences (32)
- **Sapporo City University**
School of Design (85), School of Nursing (80), Graduate Program in Midwifery (NA)
- **Sapporo City University graduate schools**
Graduate School of Design (21), Graduate School of Nursing (21)
- **Hokkaido University of Science**
Faculty of Engineering (392), Faculty of Health Sciences (290), Faculty of Future Design (130)
- **Hokkaido University of Science graduate schools**
Graduate School of Engineering (27), Graduate School of Pharmaceutical Sciences (3), Graduate School of Health Sciences (13)
- **Hokkaido College of Pharmacy**
Department of Pharmacy (210)
Note: The college merged with Hokkaido University of Science in 2018.
- **Hokkai-Gakuen University**
Faculty of Engineering (260)
- **Hokkai-Gakuen University graduate school**
Graduate School of Engineering (16)
- **Sapporo International University**
Faculty of Sports and Human Studies (120)
- **Sapporo International University graduate school**
Graduate School of Sports and Health Instruction (5)
- **Tenshi College** School of Nursing and Nutrition (172)
- **Tenshi College graduate schools**
Graduate School of Nursing and Nutrition (19), Graduate School of Midwifery (40)
- **Sapporo University of Health Sciences**
Faculty of Nursing and Medical Care (180)



Source: City of Sapporo data published in November 2018 (based on data of Teikoku Databank, Ltd.)
*1 Companies headquartered in Sapporo in the following industry segments: Research institutes for medicine and pharmacy, Drug wholesale, Medical material preparations, Drug retail, Medical product preparations, Services incidental to medical, Medical instrument and apparatus wholesale, Medical measuring instruments production, Medical glassware production, Medical supplies wholesale, Medical supplies production, Cosmetics and toiletries wholesale, Inspection and testing services, Reagent production, Dental laboratories, Natural drugs and Chinese-style medicines, Precision instrument wholesale, Research institutes for physical sciences
*2 Total number of employees of companies headquartered in Sapporo (incl. employees working outside Sapporo and Hokkaido)
*3 Sum of the total sales of companies headquartered in Sapporo



Sources: List of schools in Hokkaido (FY 2017) published by the Hokkaido Government Board of Education, websites of individual educational institutions, and the like

Medical Cluster City Sapporo

The Sapporo Chamber of Commerce and Industry has launched a Medical Cluster City Sapporo (MeCCS) initiative to develop new industrial clusters (networks) that bring together food, tourism, IT, housing and other businesses around medical institutions. To implement this initiative, a Government-Industry-Academia Medical Cooperation Council was established in 2016 with members including management officials from local universities, the Sapporo Chamber of Commerce and Industry, the Northern Advancement Center for Science & Technology (NOASTEC), and the City of Sapporo.



Development of new industrial clusters (networks) that bring together food, tourism and other industries around medical institutions



Medical institutions × IT industry

Support for new business creation based on the integration of medical and IT technologies

Sapporo has been at the forefront of municipal efforts to promote the IT industry and serves as a major center for IT companies in Japan today. The private sector is also abuzz with initiatives for IT adoption, including the Sapporo City IoT Innovation Promotion Consortium (IoT Acceleration Sapporo City Lab) and Sapporo AI Lab. The City of Sapporo supports new business creation based on the integration of medical and IT technologies. More specifically, the city takes advantage of the concentration of IT companies to encourage them to enter the medical field and help healthcare businesses better utilize IT.

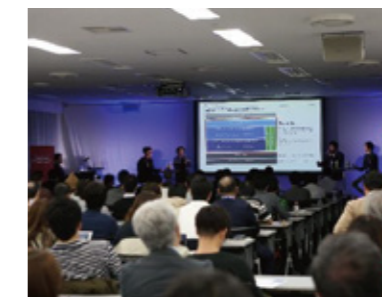


IoT Acceleration Sapporo city Lab

Established in August 2016 based on government-industry-academia collaboration. This consortium aims to create new business models using advanced technologies in Sapporo. It established an affiliate, Sapporo AI Lab, in June 2017 to implement initiatives focused on AI.

Focusing on AI among advanced technologies

This organization contributes to the promotion of AI in Sapporo through its activities including programs intended to deal with shortages of engineers and business partners who can use AI systems and coordination services for industry-academia collaboration to develop new AI projects.



Creative conventions based on government-industry-academia collaboration

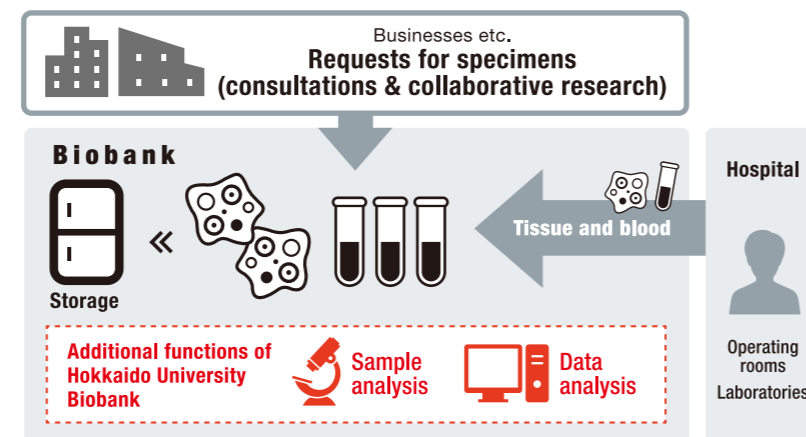
NoMaps is held under the theme of "Paving the way to the future with creative ideas and technologies" in central Sapporo and centered on five major programs: conference, exhibition, event, meet-up, and experiment. A variety of events are held during NoMaps, including exhibitions and experiential programs featuring advanced technologies, seminars, and workshops, as well as a film festival and live performances.



Hokkaido University Hospital



Vigorous promotion of clinical research with an on-demand type biobank where biospecimens are collected, stored and analyzed upon demand from researchers and businesses

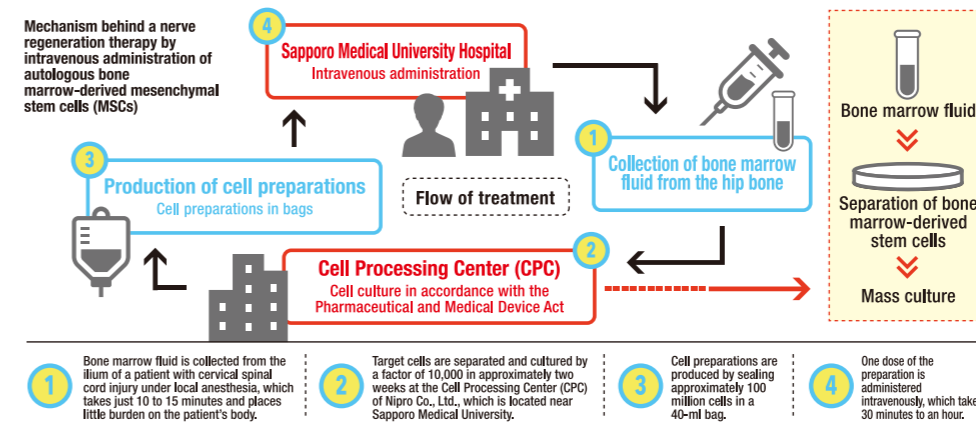


Distinctive on-demand type biobank

Hokkaido University Hospital's Clinical Research and Medical Innovation Center has a biospecimen repository (a.k.a. biobank) that does more than just collect and store biospecimens such as pathological tissue, blood, and body fluids. In fact, its primary purpose is to use such specimens and provide high value-added research materials. The biobank also performs genetic and molecular analyses using next-generation sequencers and other instruments, thus actively supporting and promoting clinical research.

Sapporo Medical University

Department of Neural Regenerative Medicine in the Research Institute for Frontier Medicine, affiliated with the School of Medicine



Note: This intravenous therapy has been found effective for patients with cerebral injury and those with spinal cord injury, and even if time has passed since their injury.

- Mechanism: Neuroprotection mediated by neurotrophic factors, Reduction of inflammation, Nerve regeneration (differentiation into nerve cells and the activation of host neural stem cells)

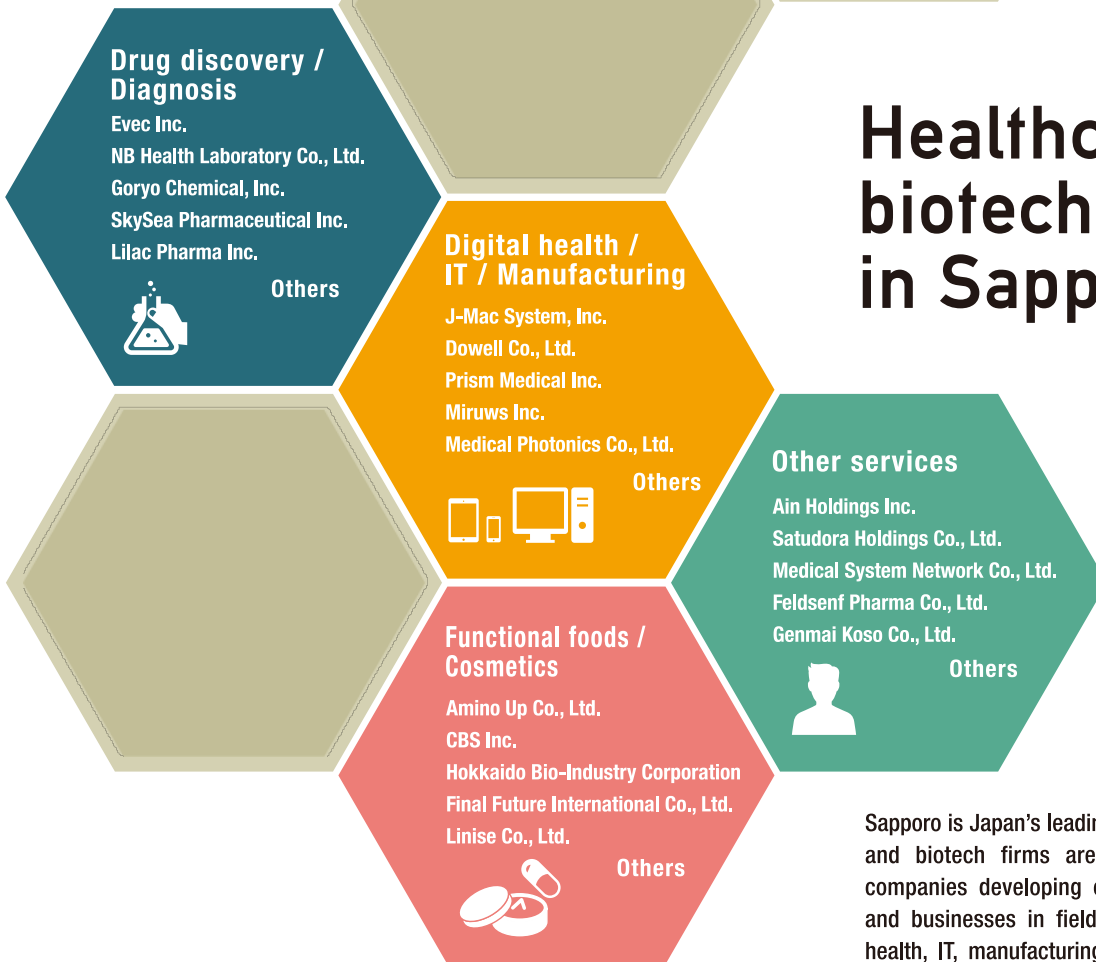
Development of a new therapy for nerve injury

Sapporo Medical University has contributed to the development of community medicine in Hokkaido and has also been engaged in cutting-edge medical research and development. The university has worked with Nipro Co., Ltd. to develop a therapy for patients with nerve injuries, including spinal cord injury,

for which no effective therapies were available, and the jointly developed nerve regeneration therapy using autologous bone marrow-derived mesenchymal stem cells (MSCs) was approved by the government in December 28, 2018, carving out a new path in the medical field.



Healthcare and biotech firms in Sapporo

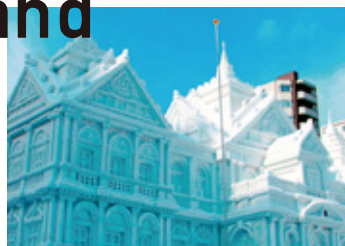


Sapporo is Japan's leading city where a variety of healthcare and biotech firms are concentrated, including venture companies developing cutting-edge medical technologies and businesses in fields involving drug discovery, digital health, IT, manufacturing, functional foods, cosmetics, and other services.

Sapporo is a city that is attractive to residents and visitors alike. As proof of this, in surveys conducted by the City of Sapporo for more than 36 consecutive years, over 90% of its residents responded that they like Sapporo, and the city was chosen as the most appealing city in Japanese nationwide surveys. What's more, in TripAdvisor's "Travelers' Choice Urban Destinations on the Rise 2013," Sapporo ranked second in Asia and seventh in the world. Despite being home to 1.97 million people, Sapporo is nestled in a beautiful natural setting—so beautiful that distinctive seasonal views may be the best part of living here. The average temperature on pleasantly dry summer days is above 20 degrees Celsius, and many events are held as the seasons change.



The Appeal of Sapporo An international city where people and nature are intertwined



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