

Sapporo Biocluster "Bio-S"



Hokkaido Area (with Sapporo as the core)

The development and commercialization of functional foods based on cutting-edge analysis and leading scientific research

Cluster Vision

Hokkaido's major industries are agriculture, livestock, and fisheries. Therefore, medical analysis and evaluation of these foods is crucial. Projects in the knowledge cluster (Bio-S) are supposed to provide scientifically verified functional foods, cosmetics, and medical ingredients from Hokkaido's products and eventually build and promote Hokkaido's brand in foods and ingredients.

- All-Hokkaido Government-Academia-Industry Cooperative Platforms
- Platform for Discovery and Commercialization of Food Materials and Components
- Platform for Study of Preventive Medicine with Functional Food Factors
- Platform for Analysis and Evaluation of Clinical Relevance
- Platform for Development of Foods Based on Scientific/Clinical Evidence
- Effective Cooperation with Other Geographical and Scientific Areas

Project Overview

The Sapporo biocluster will develop original biological & medical sciences (including biomarker) and technologies that help us and partners (companies) to discover verified functional foods and ingredients. This process will be done through cooperative studies by several groups.

1. Immunological Function Group(4 Studies)

Chief Scientist Prof. IGARASHI, Y. Hokkaido Univ

- Evaluation of enteric innate immunity and development of functional foods to augment that immunity
- Evaluation of the Th1 and Th2 balance and development of functional foods to modulate that balance
- Evaluation of allergy and inflammatory response and development of functional foods
 - 1 sphingolipid (ceramide)-related products for functional foods and medicine
 - 2 glycoprotein related products for functional foods and medicine

CEO of BiO-S(Project Director)
Fumio Suzuki



Fumio Suzuki Ph.D. was President of Kyowa America Inc. in NYC from 2005 to 2006. From 2001 to 2005, Dr. Suzuki was Senior Executive Managing Officer at Kyowa Hakko Kogyo Co. Ltd (strategic planning, licensing, business development, and budget management in the pharmaceutical division). From 1999 to 2001, Dr. Suzuki was Executive Managing Officer and Head of Discovery Research. He was previously (1995-1998) Director of the Drug Discovery Research laboratories.

Creating the Sapporo Bio-cluster

Hokkaido is a very unique area in the narrow country of Japan since it has rich natural resources and a vast area. Everybody thinks that we should thoroughly study the rich potential of agricultural, livestock and marine products from Hokkaido and that we can improve our lives as a result of this study and subsequent businesses. Although innovative sciences and technologies in biological and agricultural subjects have emanated from its universities, institutes, and industries, Hokkaido has failed to capitalize on them and further enrich itself. Why have we failed to achieve great wealth from our research investments? If we hope to pursue science based on our strengths and acquire intellectual property for future business, we must select and focus on several subjects and introduce portfolio management in all areas. This applies not only to R&D but also to supporting divisions such as offices.

In an age of globalization, we cannot survive with limited natural resources and we must shake off our continued reliance on subsidies. In order to create and maintain a rich society, we should develop sciences and technologies that can contend with global competition and quickly commercialize their technologies and products. The Sapporo Biocluster, located in a resort area with a nice climate, started in July 2007. I will do my best to serve as a catalyst for these major changes as I draw strength from the environment in Hokkaido.

Cluster Headquarters

- President.....Harumi Takahashi (Governor of Hokkaido)
- Vice President.....Fumio Ueda (Mayor of Sapporo)
- Project Director.....Fumio Suzuki, PhD
- Chief Scientist.....Prof. Yasuyuki Igarashi
- Deputy Chief Scientist.....Mitsuhiro Tada, MD, PhD
- Intellectual Property manager...Jun Utsumi, DVM, PhD
- Science and Technology Coordinators...Naoyuki Honma, PhD, Masao Horimoto, DVM, PhD

Core Organization

Northern Advancement Center for Science & Technology (NOASTEC)

Participating Research Organizations (Bold: Core Research Organization)

- Industry...Amino Up Chemical Company, Primary Cell Co., Ltd, Hokkaido System Science, BIO MATECH JAPAN CORP, Maruha Group Inc. Central Research Institute, SHIONOGI & Co., LTD., MITSUBISHI CHEMICAL MEDIENCE, NISSUI, Atto Corporation, Immuno-Biological Laboratories Co., Ltd, Sapporo Immuno Diagnostic Laboratory, Meiji Dairies Corporation, NIHON SHOKUHIN KAKO CO., LTD, ADEKA Corporation, Hokkaido Sugar Co., Ltd, TSUNO Food Industrial CO., LTD, Marine Tec Kamaishi Inc., Sunny Health Co. Ltd., DENKA SEIKEN CO., LTD, Watanabe Oyster Laboratory Co., Ltd, ASAHIKAWA DENKIKIDOU Co., Ltd, SAPPORO BREWERIES LTD, NIHON PHARMACEUTICAL Co.,Ltd, EIKEN CHEMICAL Co.,Ltd, Shibayagi Co. Ltd., BIOMATICS, Inc., Irukamama, Inc., HuBit genomics, Inc., Radical Research Inc., i-Ware Corporation,
- Academia...**Hokkaido University**, Sapporo Medical University, Asahikawa Medical College, Muroran Institute of Technology, Hokkaido Information University, Hokkaido University of Education, Hirosaki University, Teikyo University, Yamaguchi University, Health Sciences University of Hokkaido, University of Washington,
- Government...National Hospital Organization Tokyo Medical Center

2. Cognitive Function Group (3 Studies)

Chief Scientist Prof. INAGAKI, F. (Hokkaido Univ)

- Screening of biomarkers for dementia diagnosis and evaluation of materials with an inhibitory effect on nerve degeneration
- Screening of biomarkers using animal models for dementia and development of functional foods to prevent dementia
- Development of functional foods to prevent age-related ophthalmopathy using animal models

3. Metabolic Function Group(3 Studies)

Chief Scientist Prof. WAKAMIYA, N. (Asahikawa Med Col)

- Development of functional foods to improve carbohydrate metabolism
- Development of functional foods to improve lipid metabolism
- Development of functional foods with anti-oxidative effects

4. Technical Modality Group (2 Studies)

Chief Scientist Prof. UTSUMI, J. (Hokkaido Univ)

- Establishment of a platform for high-accuracy analysis of bio-components
- Establishment of a platform for bioinformatics analysis
- On-Business Investigation
 - Assay System of Oxidative Stress Scavenger
- Chief Scientist Prof. FUJII, H. (Sapporo Med Univ.)
- Development of an ESR system for measurement of anti-oxidative activity

Strategy of intellectual property

- Pursuing basic life sciences patents to offer business opportunities
- Activity in business development
- Virtual one-stop center for IP management in this cluster
- Sustainable stimulation of the regional economy based on IP

human resource development

- Improvement of research capabilities in academia
- Introduction of the principle of fair competition in the cluster & collaboration management to help scientists to pursue further innovation.
- Nurturing coordinators
- Successful experience in managing basic research and practical development will nurture coordinators into leading project managers.

