

Hiroshima

 (Fiscal Year 2002-2006)

Hiroshima Biocluster : Supporting your healthy life

Core Organization Hiroshima Industrial Promotion Organization

Participating Research Organizations (Bold: Core Research Organization)

Industry: Koken Co., Ltd., NEOSILK Co., Ltd., Meiji Seika Kaisha, Ltd., PhoenixBio Co., Ltd., ProPhoenix Co., Ltd., Sekisui Medical Co., Ltd., Wakunaga Pharmaceutical Co., Ltd., Pharma Foods International Co., Shionogi & Co., Ltd., Shiseido Co., Ltd., Tsumura & Co., Nishikawa Rubber Co., Ltd., Shimizu Chemical Corporation, Tanglewood Co., Ltd., Toyo Advanced Technologies Co., Ltd., Aohata Corp., Andersen Service Co., Ltd., Nomura-milk Co., Ltd., Nekoshima Syouten Co., Ltd., Domoto Co., Ltd., Bussan NanoTech Research Institute, Inc., Two Cell Co., Ltd., etc.

Academia: **Hiroshima Univ.**: Graduate School of Science, Graduate School of Biosphere Science, Graduate School of Biomedical Science, Graduate School of Advanced Science of Matter, Graduate School of Engineering, Technology Research and Development Office, Faculty of Engineering, Hiroshima Institute of Technology

Government: **Hiroshima Prefectural Institute of Industrial Science and Technology**, Nagasaki Medical Center

Project Overview

We conducted joint research programs with people from industry, academia, and government to develop new medical treatments and pharmaceutical products as well as new health care products using existing traditional local specialties by utilizing the seeds invented in academia including Hiroshima University. These programs promoted the spin-off of venture companies and launch of new commercial products.

1. Activities of the Cluster Headquarters

As a core organization of the Hiroshima Biocluster, the headquarters has conducted various activities including discovering new technology seeds of universities, compiling regional needs, improving developed technologies, and establishing the regional industry-academia-government collaboration organization.

2. Joint Research Programs

We have conducted joint research programs to invent new technology seeds in 4 regions (see the scheme at the bottom of the next page) including the "Development of recombinant protein production systems for bio pharmaceuticals using transgenic silkworm."

3. Result Incubation Programs

We have also conducted result incubation programs to apply those results derived from universities to patents and accelerate commercialization in 5 regions including "Development of an automated culture apparatus for mesenchymal stem cells."

4. Collaboration Project with Concerned Ministries

We have promoted the development of bio-related equipment by exploiting existing manufacturing technologies, one of Hiroshima's strengths, in close connection with the Industrial Cluster Project.

5. Unique Program in Hiroshima

We have offered a wide variety of technology promotion programs such as subsidies from the Hiroshima Prefectural Government.



Silkworms emitting red fluorescence from their eyes and spinning silk with green fluorescence.



chimeric mice with liver repopulated by human hepatocytes



Transgenic chicken

Main Results

1. Establishment of new ventures

As fruits of the joint research programs, several venture companies have been established. (Neosilk Co., Ltd: a bio venture that uses silkworms for the mass-production of recombinant proteins as a contracted service. Hiroshima Bio-Medical Co., Ltd: a venture that uses chickens to produce a broad variety of low-cost, beneficial, and useful materials for medical purposes.) In addition, the "Hiroshima Bio Venture Network" was organized in December 2005 to promote collaboration among bio venture companies. The activities of this network are expected to establish the Hiroshima BioCluster and contribute to the development of regional industries.

2. Launch of new commercial products

Many regional companies have successfully commercialized new products through the combination of modern biotechnology, e.g. plant-derived Lactobacillus and regional specialties like sake, sake lees, pickles, citrus fruits etc.

We have created our own trademark "Bio Univ Hiroshima" for several healthcare products produced at Hiroshima University.



Logo Mark for Healthcare Products from Hiroshima University