(Fiscal Year 2009-2013)

Kurume Cutting-edge Medical Research Cluster

Life Sciences IT Environment Nanotech/Materials

Kurume region

Formation of a world-leading, cutting-edge medical research center focusing on peptide vaccines for cancer therapy

Cluster Vision

Based on the concept of the Fukuoka BioValley Project - the core project to make the Kurume region a global center for research, we are promoting the Kurume Cutting-edge Medical Research Cluster by implementing three major strategies: research and development of peptide vaccines for cancer treatment, the biggest achievement from our past research; raising of biotech talents at Kurume Bio College; and exchanges and collaboration with cutting-edge research clusters overseas. We study cutting-edge medical care mainly for cancer, the most common cause of death and a serious national problem in Japan.

Project Overview

< Three Major Strategies >

○To promote cutting-edge research and development focusing on cancer

Based on the successful research results for peptide vaccine cancer therapy developed by Kurume University, we will research and develop new drugs and biotech tools for innovative medical care intended for lung cancer, the deadliest of all cancers, focusing on the fields of treatment (pharmaceutical development) and diagnosis (chip, tool, reagent).

○To develop world-class researchers to engage in cutting-edge biotechnology research and clinical studies

We will establish an inter-university and inter-industry system in which instructors from universities such as Kurume University and Kyushu University, as well as pharmaceutical companies, will give lectures to researchers and engineers so that they can acquire a basic knowledge of biotechnology and bio-statistics, as well as developing clinical study experts.

○To strengthen global competitiveness

To achieve the three specific goals, with the help of an overseas-based coordinator for globalization and business support, we will implement extensive exchange and joint research with cutting-edge medical centers, including the MD Anderson Cancer Center in Houston, Texas, a premier cancer center and home to what has been called a cutting-edge cancer hospital in the US. We will also pursue the creation of an advanced medical city in an effort to strengthen our global competitiveness.

< Industry-Academia-Government Collaboration System >

The strategic headquarter of The Knowledge Cluster Initiative is set up in the Core Organization to allow discussion and decisions regarding project policies. Through the project promotion committee (which comprises five subcommittees handling progress reports, intellectual property strategies, the promotion of technology transfers and practical use, globalization, and raising talents) and through a third-party evaluation committee, the Headquarters will closely cooperate with industrial, academic and governmental organizations to actively promote this project.

Creation of a community attractive to companies, researchers, patients, and residents

We have achieved many research results such as the concentration of biotech companies in the Kurume region through the Fukuoka BioValley Project, based on industry-academia-government collaboration and the six-year City Area Program.
With this advantage, we aim to develop innovative cancer therapy and related biotechnology by using the Knowledge Cluster Initiative (Innovative Stage) and the Kurume cutting-edge Medical Research Cluster.
By using Kurume University's world-leading technology of peptide vaccines for cancer therapy, we promote cancer therapy, cancer diagnosis research and cancer research tools under the three strategies of research and development, talent raising, and globalization. The promotion system of Kurume Research Park Co. Ltd., provides universities with experts on science & technology, inviting companies and intellectual property rights to strongly support their research. These comprehensive activities will facilitate the creation of cutting-edge medical care city and promote the concentration of related companies and promising talents; helping establish a foothold for world-class cancer research and therapy.
According to the recent questionnaire nationwide about the cutting-edge researches made by cabinet office, there were many opinions and expectations about cancer therapy. To meet such nation's expectation, we strengthen the cooperation with industry, academia and government, and promote our project.

Project Director
Hiroshi Gushima

He served as director of Yamanouchi Pharmaceuticals Co., Ltd. and as an auditor at the National Institute of Biomedical Innovation before assuming his current position.
He doubles as Bio project producer for the Fukuoka BioValley Project.

Cluster Headquarters

○President……Wataru Aso
○Vice President……Morikuni Eto
○Project Director……Hiroshi Gushima
○Chief Scientist (CS)……Kyogo Ito
○Sub-Project Director……Akinobu Ohuchida (Doubles as Science and Technology Coordinator responsible for pharmaceutical development safety)
○Vice-Chief Scientist……Yoshifumi Ikeda (Doubles as Science and Technology Coordinator responsible for pharmaceutical development)
○Human Resources Development Coordinator…Yuko Kato
(Globalization Coordinator, Clinical Science and Technology Coordinator Assistant, etc.— three people.)

Core Organization

Kurume Research Park Co., Ltd.

Participating Research Organizations (Bold: Core Research Organization)

Industry…GreenPeptide Co., Ltd., Cell Innovator, International Science Technology Co.,LTd.,, ASTEC Co.,LTD., Nipro Corporation, Dojindo Molecular Technologies, Inc.
Academia…**Kurume University, Kyushu University, Kyushu Sangyo University, Kyoto University,** Kumamoto University, Kitasato University, Kinki University, Hokkaido University, Hirosaki University, Teikyo University, The Jikei University School of Medicine, and Tohoku University
Government…**The Biotechnology and Food Research Institute (BFRI) and Chemical and Textile Industry Research Institute (CTRI) of Fukuoka Industrial Technology Center (FITC), Advanced Industrial Science and Technology (AIST),** and Sendai Kousei Hospital

< Research and Development Themes >

Placing cancer treatment, cancer diagnosis, and cancer research tools as the three factors essential for overcoming cancer, the following joint research projects are being conducted, by optimally exploiting the platforms constructed in past research, including the City Area Program:

○Research theme 1: Clinical research of tailor-made peptide vaccines in lung, liver and bladder cancer patients for practical use
○Research theme 2: Research and development of diagnostic kits to predict cancer vaccine efficacies and side effects based on cancer vaccine genomics
○Research theme 3: Development of a novel biotechnology tool for cancer research and diagnosis

Three major strategies to form cluster

Strategic research and development	Raising talents	Promoting globalization
World-class cutting-edge research and development with peptide vaccines	Raising talents for cutting-edge therapy and clinical research at Kurume Bio College	Collaboration and joint research with world-class cutting-edge cancer centers

Project Scheme&Targets