

HIROSHIMA

Biotechnology Cluster in Central Hiroshima

Outline of the Project

On the basis of biotechnology and cell technology method accumulated in Hiroshima University and so on, we will establish the technically innovative bio cluster in cooperation with several Industry-University-Government by using infrastructures of Hiroshima central science park etc., as well as by focusing objects to the industrial fields of supporting medical treatment and medical product development.

Members of the Headquarters

- Project Director..... TAKAHASHI Shohachiro
- Deputy Project Director SHIOZAWA Takayuki
- Science and Technology Coordinator..... MATSUOKA Yukio
MIYAKE Tetsuo
UEHARA Tadakuni

Central Project Organization Hiroshima Industrial Promotion Organization

Core Institute(s) Hiroshima Prefectural Institute of Industrial Science and Technology

Participants

Industry...Koken Co.,Ltd, Maruzen Pharmaceuticals Co.,Ltd,
Chugai technos Co.,Ltd, SC BioSciences Corporation,
Wakunaga Pharmaceutical Co.,Ltd,
Nippon Laser & Electronics Lab, Nishikawa Rubber Co.,Ltd,
Shimizu Chemical Corporation, etc.

Institute...Hiroshima Univ. Graduate School of Science,
of Biosphere Science, of Biomedical Science, etc.

Government...Hiroshima Prefectural Institute of Industrial Science and Technology,
National Institute of Agrobiological Sciences, etc.

Main Researchers

YOSHIZATO Katsutoshi (Prof. Graduate School of Science, Hiroshima Univ.)
MATSUDA Haruo (Prof. Graduate School of Biosphere Sciences, Hiroshima Univ.)
HIDE Michihiro (Prof. Graduate School of Biomedical Sciences, Hiroshima Univ.)

Outline of Researches

●Development of a Recombinant Human Collagen-producing System

This project aims to make humanized collagen, applicable to medical regeneration materials etc., in the cocoon of silkworm.

[Hiroshima Prefectural Institute of Industrial Science and Technology, Koken Co.,Ltd, Maruzen Pharmaceuticals Co.,Ltd, National Institute of Agrobiological Sciences, etc.]

●Creation of Bio-industry Using Human Hepatocytes Propagated in Mouse Body

This project aims to make chimera mouse, the liver of which is replaced by human hepatocyte, and develop evaluation method to apply the metabolism test for medical products development.

[Hiroshima Prefectural Institute of Industrial Science and Technology, Chugai technos Co.,Ltd, SC BioSciences Corporation, etc.]

●Development of New Application Used Transgenic Technology in Chicken Eggs

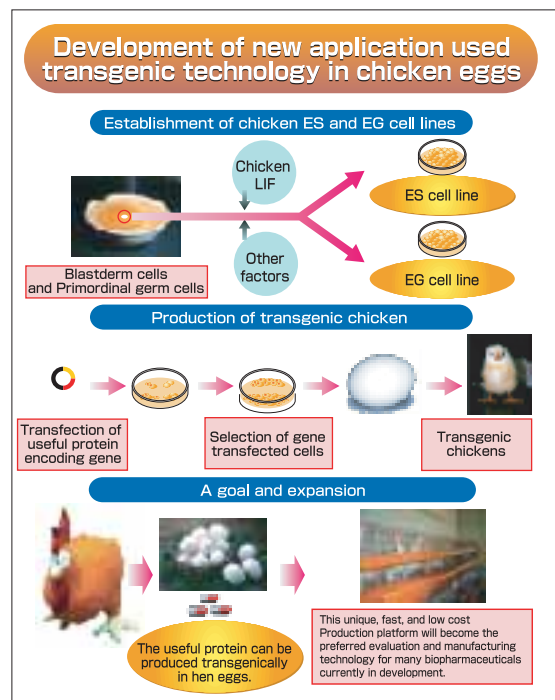
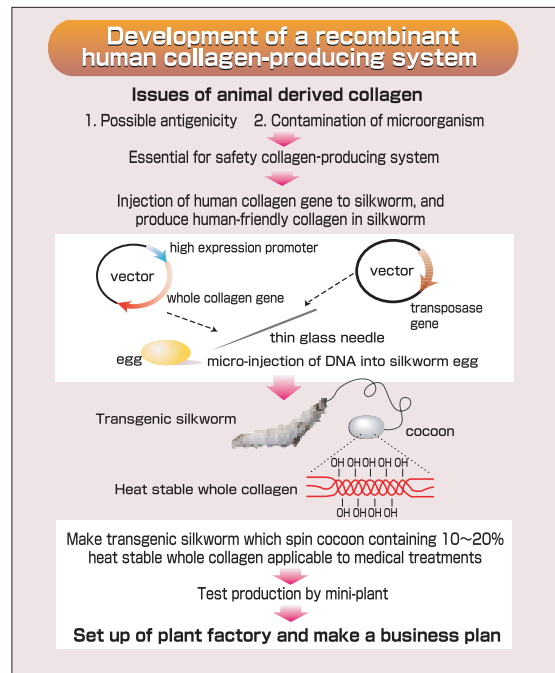
This project aims to produce hen with a good layer, the egg of which includes a lot of substances useful for medical products.

[Hiroshima Univ., Hiroshima Prefectural Institute of Industrial Science and Technology, Wakunaga Pharmaceutical Co.,Ltd, etc.]

●Development of Skin Care Technology for Allergy and Hair Loss

This project aims to develop drug related products reducing allergy through analytical research of allergy inducing substances included in sweat.

[Hiroshima Univ., Wakunaga Pharmaceutical Co.,Ltd, Nippon Laser & Electronics Lab, Nishikawa Rubber Co.,Ltd, Shimizu Chemical Corporation, etc.]



Expected Results

- Production of human-friendly collagen (various types/excellent function) by using silkworm
- Realization of toxicity test/metabolism test by using Japanese human hepatocyte for the development of medical product
- Cost effective mass production of physiologically active substance by using hen
- Development of drug related products to reduce skin allergy and to attain rich hair