Activity report

2025.12

11

CiRA Foundation

Launching new research projects (from left):
Professor Shin Kaneko, CiRA; Masayoshi Tsukahara, Head of R&D Center, CiRA Foundation; Professor Megumu Saito, CiRA.

CiRA Foundation x CiRA: Launch of Three New iPS Cell Research Projects

On October 15, 2025, the CiRA Foundation announced the launch of three new research projects aimed at leveraging iPS cell technology for cancer treatment. These initiatives are made possible through a generous donation by Stephen A. Schwarzman, Chairman, CEO, and Co-Founder of Blackstone Inc. Mr. Schwarzman has pledged approximately ¥380 million (USD 2.5 million) for the period from FY2025 to FY2027, with additional contributions expected beyond FY2028, contingent upon project progress.

CiRA Foundation's Initiatives

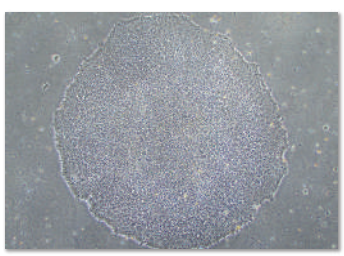
Development of a New Genome-Edited iPS Cell Stock

Joint Research with CiRA*1 (Prof. Shin Kaneko's Laboratory)

Development of solid cancer therapies using T cells derived from "my iPS® cells*2".

Joint Research with CiRA (Prof. Megumu Saito's Laboratory)

Development of pediatric cancer therapies using macrophages derived from "my iPS cells."



*1 CiRA: Center for iPS Cell Research and Application, Kyoto University

*2 my iPS cells": Autologous iPS cells manufactured using a closed-system automated device

Career Support for Students: “Uehiro Future Scientists Program”

Starting in April 2025, the CiRA Foundation launched the “Uehiro Future Scientists Program” with generous support from the Uehiro Foundation on Ethics and Education. This program is designed to support career development for undergraduate and graduate students. As part of the initiative, participants are offered training opportunities at our Research and Development Center, focusing on the establishment and automated manufacturing of iPS cells for up to two months. This year, three students joined the program. The CiRA Foundation will continue to provide career development support for undergraduate and graduate students through this program.

Yuka Nakamura

Second-year doctoral student, Department of Biological Sciences, Graduate School of Science, The University of Tokyo

“The reagents required for iPS cell establishment are extremely expensive, so having the chance to use them in actual experiments was a rare and valuable experience. In my graduate research, I aim to challenge myself by creating differentiated cells from iPS cells and applying this knowledge to my studies.”

Hiromu Watanabe

Second-year student, School of Pharmacy, Tokyo University of Pharmacy and Life Sciences

“I learned the importance of identifying research questions and designing experiments independently. This experience was invaluable. Starting in September, I will continue my studies at University College London and look forward to additional research opportunities.”

Kareena Joseph

Biology Major, Sophomore, University of California, Riverside

“My goal is to become a clinical research physician who conducts medical research while treating patients. Initially, I was nervous about asking basic questions due to my limited research experience, but everyone answered kindly. I learned that every experimental procedure has a purpose and scientific rationale.”

Execution of Basic Agreement on Support for Development and Deployment of Material Kits for Closed-System Automated Manufacturing Equipment

As part of the “my iPS® Project,” which aims to reduce the cost of iPS cell manufacturing, the CiRA Foundation is conducting research and development using closed systems with automated manufacturing equipment. On April 24, 2025, the CiRA Foundation and ITOCHU Corporation signed a basic agreement through which ITOCHU will provide ongoing support for the development and licensing of reagent and material kits (my iPS Kits) designed to connect with commercially available closed-system automated manufacturing equipment. This collaboration is part of the “my iPS Project” and involves multiple companies working with the CiRA Foundation.

From left:
Ishibashi, Senior Executive Officer, Itochu Corporation;
Takasu, Senior Executive Director, CiRA Foundation

Toward Automated iPS Cell Manufacturing
Development of the “my iPS Kit”

To improve manufacturing efficiency and reduce costs, the CiRA Foundation is pursuing the “my iPS® Project” by utilizing closed automated manufacturing systems for iPS cells. As part of this initiative, we interviewed Mr. Ichiro Sakai, Unit Leader at the Research and Development Center, who is responsible for developing the reagents and materials for these devices, collectively known as the “my iPS Kit.”

In charge of developing reagents and materials for the device: “my iPS Kit”
Ichiro Sakai, Unit Leader, Research and Development Center”

INTERVIEW ICHIRO SAKAI

Q1 What is the “my iPS Kit”?

A. The “my iPS Kit” is a set of reagents and materials specifically adjusted for immediate use with commercially available closed automated manufacturing systems for iPS cells. By using tubing to connect kit components to the device, the necessary reagents can be introduced into the system without exposure to outside air.

Q2 Why is preventing exposure to outside air important?

A. Currently, the CiRA Foundation manufactures clinical-grade iPS cells manually, which requires multiple clean rooms to maintain sterile conditions—at enormous cost. Otherwise, these cells can be damaged or destroyed if they come into contact with bacteria or viruses. A closed system enables automated manufacturing without exposing cells to outside air, thus allowing us to maintain cleanliness within the device itself, eliminating the need for large-scale clean rooms and significantly reducing production costs.

Q3 Are the materials connected to the device also critical?

A. Absolutely. To minimize the risk of contamination inside the device, we not only focus on the device itself but also design optimal raw materials, shapes, manufacturing methods, and sterilization techniques for the bags and tubes used for connections. These materials are developed specifically to work with closed automated manufacturing systems.

Prototype of materials for the device (my iPS Kit)

Q4 What is the current development status of the kit?

A. We are continuously refining each material by testing its integration with the device. In October 2025, we registered a patent for the concept of a reagent and material kit for these devices. Within fiscal year 2025, we plan to begin practical validation within the CiRA Foundation and ultimately aim to provide a kit that external researchers and medical professionals can use with confidence.

Q5 What are the main challenges in creating the kit?

A. It takes considerable time to evaluate and improve the bags and tubes that hold culture media and reagents. We are developing materials that meet international quality standards and can be used across different devices.

Q6 What is your vision for the future?

A. When automated cell culture systems become widespread, we want the reagents and materials we have developed to be trusted and widely used. Our goal is to deliver a safe and reliable kit that contributes to patient treatment and provides foundational support for regenerative medicine.

NEWS 2025

July

Patent Registration for Genome-Edited Cell Line Manufacturing Method

A patent related to the manufacturing process of the “HLA Genome-Edited iPS Cell Stock,” which is provided as part of our iPS cell stock, was officially registered on July 18, 2025.

August

Patent Registration for Human iPS Cell Production Using a Closed System Device

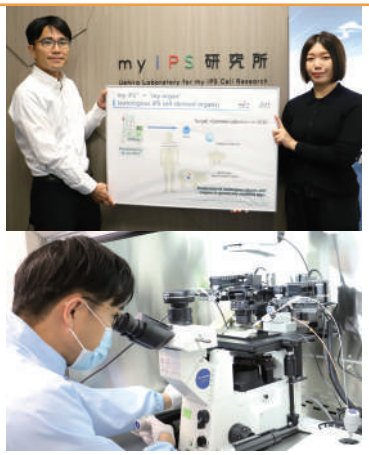
A patent for a method of producing human iPS cells from blood using a closed-system centrifugation device was registered on August 1, 2025.

Letters patent

August

Commencement of Research on Creation of Specified Embryos (Animal Aggregation Embryos)

On July 4, 2025, we submitted a “Notification for the Creation of Specified Embryos” to the Minister of Education, Culture, Sports, Science and Technology. Following official notification on August 8, 2025, we began research to create such specified embryos as part of the “my iPS Project.”



Research team

October

5th my iPS Networking Meeting

As part of the “my iPS Project,” we promote open innovation through networking activities to enhance co-creation among companies. The 5th my iPS Networking Meeting was held on October 16, with participation from more than 35 companies and universities.

Scene from the 5th my iPS Networking Meeting

CiRA Foundation

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