

Kyoto University On-site Laboratory: iPS Cell Research Center at Gladstone Institutes



General Information

- ◆ Approved as KU On-site Laboratory in FY 2019
- ◆ Established by the Center for iPS Cell Research and Application (CiRA) in September 2019.
- ◆ Partner institution: Gladstone Institutes, USA
- ◆ Purposes: Further development of world-leading iPS cell research and fostering globally competent early-career researchers
- ◆ Location: Gladstone Institutes, San Francisco, USA (outbound)
- ◆ Functions: Advanced research on iPS cells, training of early-career researchers, and recruitment of international students

Positive ripple effects to the university's activities

- Advancement in activities of researchers and students through participation in cutting-edge research
- Exploration of new programs beyond the departmental level, including international collaborative research between KU and UCSF

【FY 2025】

- Create opportunities to offer internship education to students from neighboring universities.
- Develop research collaborations with other laboratories and partner institutions and deepen the understanding for the functions of pluripotent stem cells.
- Promote further applications of iPS cell technologies to industries and academia.

Activity Overview



Shinya Yamanaka (PI)



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**GLADSTONE
INSTITUTES**

VISION:

- Development of global human resources and acceleration of cross-border innovation

OUTLINE:

- Collaborative research on the mechanisms of protein translation regulation in the proliferation and differentiation of pluripotent stem cells.
- International exchange of researchers and students
- International exchange programs (symposiums, postdoc training programs)

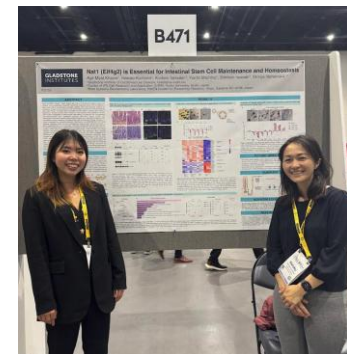
MANAGEMENT STRUCTURE:

- Associate professor employed by CiRA stationed at the on-site laboratory through a cross-appointment
- Researchers employed by CiRA stationed at the on-site laboratory

Main Activities in FY 2024

① Presentation at Cell Bio 2024

- A. Khaine*, H. Kunitomi*, K. Tomoda* and S. Yamanaka*/** (*: J. David Gladstone Institutes, **: CiRA) made a poster presentation at Cell Bio 2024 (San Diego Convention Center, California, U.S.A) co-hosted by The American Society for Cell Biology (ASCB) and European Molecular Biology Organization (EMBO) on December 14-18, 2024.



【Poster Number】P2155/B471 <https://www.ascb.org/cellbio2024/>

【Title】NAT1 is Essential for Intestinal Stem Cell Maintenance and Homeostasis.

② Further Improvement of Research & Educational Environment

- The OSL has expanded its research team and laboratory staff to enhance its research efforts, including a young Ph.D. exchange researcher from CiRA.
- The OSL welcomed three local high school students as summer interns. One of them continued her research at the OSL to earn credits in bioscience after enrolling at the University of California, Berkeley.
- Dr. Shinya Yamanaka and the research team at the OSL discovered the vital role of the oocyte-specific linker histone H1FOO in improving reprogramming efficiency and consistency to primed and naïve pluripotent states. These findings were published in Stem Cell Reports.

【Title】

H1FOO-DD promotes efficiency and uniformity in reprogramming to naïve pluripotency

<https://doi.org/10.1016/j.stemcr.2024.04.005>

【Press Release】

<https://www.cira.kyoto-u.ac.jp/e/pressrelease/news/240508-110000.html>

