NEWS RELEASE

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KOSÉ to Send Researcher to U.S. Gladstone Institutes' Yamanaka Lab and Promote Research into Rejuvenation

KOSÉ Corporation (Headquarters: Chuo-ku, Tokyo; President: Kazutoshi Kobayashi) has reached an agreement to send a researcher to the Yamanaka Lab, led by Shinya Yamanaka MD, PhD, Senior Investigator at Gladstone Institutes (San Francisco, California, USA), which is known for its world-class medical research, to jointly promote research into rejuvenation with the laboratory. Dr. Yamanaka is also Professor and Director Emeritus of the Center for iPS Cell Research and Application (CiRA) at Kyoto University.

Aim of agreement

By sending a researcher to the world-class laboratory led by Shinya Yamanaka MD, PhD, Senior Investigator at Gladstone Institutes, KOSÉ will acquire cutting-edge research approaches and improve the basic research capabilities of its own research facilities. Additionally, while KOSÉ has conducted aging research to date using iPS cells[*1] and aging model cells derived from a single donor[*2], which is a rare approach worldwide, by further incorporating the findings of the rejuvenation research at the Yamanaka Lab, KOSÉ will promote the development of industry-leading new cosmetics and services.

Notes 1, 2: See "Keywords" below

Comment from Dr. Shinya Yamanaka, Senior Investigator

"We are pleased to welcome a researcher from Japan's KOSÉ to Gladstone Institutes, and we look forward to promoting research exchange between the U.S. and Japan."

About Gladstone Institutes

Gladstone Institutes focuses on conditions with profound medical, economic, and social impact—unsolved diseases. Gladstone Institutes is an independent, nonprofit life science research organization that uses visionary science and technology to overcome disease. Gladstone Institutes located in San Francisco, California, USA, was established in 1979 and is a world-class medical research institute and has partnerships with leading academic institutions in the Bay Area, including UC San Francisco, Stanford, and Berkeley. Professor Shinya Yamanaka has been a Senior Investigator at the Gladstone Institutes since 2007, where he leads the laboratory.

Future outlook

It is hoped that the collaborative research by Gladstone Institutes' Yamanaka Lab and KOSÉ using aging model cells derived from a single donor and other methods will lead to new discoveries and understanding of aging mechanisms. By unraveling new mechanisms of aging, KOSÉ will accumulate new knowledge on aging and apply it to the development of cosmetics and services that better meet the needs of its customers.

Keywords

***1 iPS cells**

iPS cells (induced pluripotent stem cells) are a type of stem cell produced by Professor Shinya Yamanaka and his colleagues at Kyoto University. iPS cells can proliferate almost indefinitely and differentiate into any type of cell in the human body's various tissues and organs. It is hoped that research into iPS cells can be utilized in the elucidation of the cause of diseases, development of new drugs, and in regenerative medicine such as cell transplantation therapy.

***2 Aging model cells derived from a single donor**

Cell lines collected from the skin of a single donor over a period of more than 30 years at the ages of 36, 47, 56, 62, and 67. Because they are from a single donor, the cells reflect only the factor of "aging," eliminating the impact of differences between individuals. As such, these extremely rare cell lines can be used to accurately examine the various changes and mechanisms that accompany aging.

Reference: KOSÉ's aging research that is highly relevant to iPS cells

As part of its rejuvenation research, KOSÉ has been analyzing and evaluating dermal fibroblasts collected from a single donor from the ages of 36 to 67, as well as iPS cells generated from these cells, to study skin aging. KOSÉ has reported that initialization of differentiated cells into undifferentiated iPS cells restores the length of telomeres (the terminal portion of chromosomes that shortens with each cell division) in all aged cells[*3]. In another approach, KOSÉ has succeeded in inducing dermal fibroblasts to differentiate into new dermal fibroblasts via iPS cells, and reported that the quality of mitochondria was restored in dermal fibroblasts induced from these iPS cells when compared with the original cells[*4].

*3 News release issued on October 15, 2014:
https://www.kose.co.jp/global/en/pdf/20141015.pdf

*4 News release issued on May 30, 2018:
https://www.kose.co.jp/company/ja/content/uploads/2018/05/20180530.pdf