

Sakura Science Exchange Program

Implementation report (FY2024) for Course A: Science and Technology Experience Course

Study at Nagasaki University! - The history of pharmaceutical sciences and advanced drug discovery research originating in Nagasaki -

A total of eight invitees, six undergraduate and graduate students and two accompanying faculty members, from the Faculty of Pharmacy of Chulalongkorn University and Chiang Mai University in the Kingdom of Thailand visited Nagasaki from January 26th to February 1st, 2025. The two universities and Nagasaki University have signed memorandum of understandings and have a long history of exchange, including sending students for short-term training. The activities carried out in this program included a tour of the Faculty of Pharmaceutical Sciences facilities, lectures on advanced drug discovery, laboratory experiments and student exchanges, a tour of pharmaceutical companies etc., and a final debriefing meeting including student discussions.

On the first day, the invitees visited the museum on the site of Koshima Yojosho, the first modern Western-style hospital in Japan, and the remains of Bunseki Kyurisho, the predecessor of Faculty of Pharmaceutical Sciences, Nagasaki University, to learn about their historical value and the achievements of Pompe, known as the ‘father of modern Western-style medical education in Japan’.

On the second day, the invitees were given a tour of facilities in the faculty, and in the Medicinal Plants Garden, they were introduced to some of Japanese unique medicinal plants and asked many questions. At the Dr. Osamu Shimomura Memorial Honoring Museum, the invitees observed the research achievements of Dr Shimomura, which led to him being awarded the Nobel Prize in Chemistry, as well as exhibits related to him, and showed intense interest in the many valuable materials.



The first day's tour of the museum on the site of Koshima Yojosho (left), the second day's tour of the Medicinal Plants Garden (center) and Dr. Osamu Shimomura Memorial Honoring Museum (right).

On the third day, there were lectures on drug delivery systems and diagnostic drug development as a medical lecture related to advanced drug discovery, a lecture on advanced analytical chemistry as a physical lecture, and a lecture on Nagasaki University and Nagasaki's history. After the lectures, the

invitees visited laboratories related to the lectures, and were introduced to their research, experienced experiments and interacted with the students. In the evening, a welcome party was held with the faculty members, and the participants had a great time talking about Nagasaki's local cuisine and Japanese food culture. On the fourth day, there were a lecture on neurodegenerative diseases as a biological lecture and a lecture on peptide synthesis for drug discovery as an organic lecture, followed by laboratory experiments and student exchanges.



Experimental demonstrations after lectures on the third and fourth days (top left), introduction of research in the laboratory (top center), experimental experiences in the laboratories (top right and bottom left), and talking at the welcome party (bottom center and right).

On the fifth day, the invitees visited the Nakatomi Memorial Museum of Pharmaceuticals in Tosu and the Japanese Red Cross Kyushu Block Blood Center in Kurume. They listened intently to explanations of herbal medicine specimens, industrial culture related to ‘pharmaceuticals’, blood product manufacturing sites and blood testing operations. They also visited the Tosu Plant of Hisamitsu Pharmaceutical Co. and the company's new research center, the SAGA Global Research Center, and observed the pharmaceutical production process and research and development.

On the sixth day, a debriefing meeting was held with the faculty members and students of Nagasaki University. Using slides prepared by the student invitees, each gave an impassioned presentation. They reported on their impressive lectures and experimental experiences, their impressions of the program and their hopes for the future, including studying in Japan, and had lively discussions with the students from Nagasaki University. At the end of the meeting, Professor Koyo Nishida, the Dean of the Faculty of Pharmaceutical Sciences, handed a certificate of completion to each student.

Finally, we would like to thank the Sakura Science Exchange Program for its generous support and the faculty members and students of Nagasaki University for their cooperation in the implementation of this program.



Invitees giving presentations at the debriefing session on the sixth day (top left); a student asking a question about the invitees' presentation (top center); certificate presentation by Professor Koyo Nishida, the Dean of the Faculty of Pharmaceutical Sciences (top right); group photo after the ceremony (bottom).