



## Report

Course Title: Comprehensive research reviews and cross-sectional training

Prof. Dr. Arinthip Thamchaipenet

Prof. Dr. Chart Chiemchaisri

Assoc. Prof. Dr. Rangrong Yoksan

Assoc. Prof. Dr. Suvimol Charoensiddhi

Assoc. Prof. Dr. Kannika Duangmal

Assoc. Prof. Dr. Pairaya Choeisai

Asist. Prof. Dr. Chanita Boonmak

Asist. Prof. Dr. Metha Meetam

Asist. Prof. Dr. Peerapat Roongsattham

Asist. Prof. Dr. Witcha Imaram

Dr. Weerasin Sonjaroon

9-13 July 2025

Knowledge Co-Creation Program (Country Focus) under JICA Technical Cooperation Project Science and Technology Research Partnership for Sustainable Development (SATREPS) entitled “The Project for Development of the Duckweed Holobiont Resource Values towards Thailand BCG Economy (Be-HoBiD)”

Trainee Report  
in Japan 9-13 July 2025

Knowledge Co-Creation Program (Country Focus) under JICA Technical Cooperation Project Science and Technology Research Partnership for Sustainable Development (SATREPS) entitled “The Project for Development of the Duckweed Holobiont Resource Values towards Thailand BCG Economy (Be-HobiD)”

**Course Title: Comprehensive research reviews and cross-sectional training**

This report summarizes the key activities and outcomes of the research exchange program conducted in Japan, focusing on duckweed holobiont research and biotechnology applications.

**Activity 1: Advanced research learning at Hokkaido University laboratories**

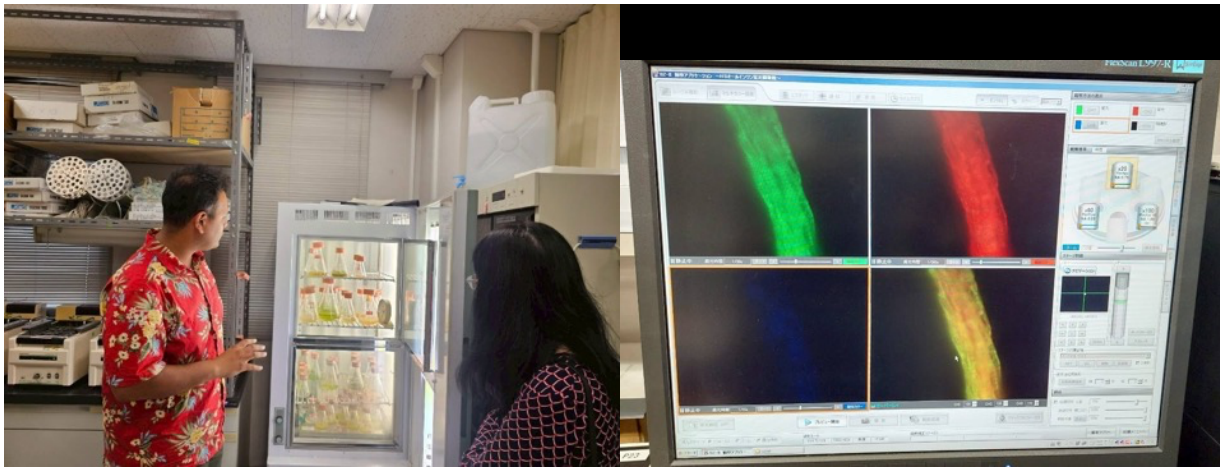
*Objective:* To learn the latest and advanced research at Laboratory of Environmental Molecular Biology and Laboratory of Biosynthetic Chemistry

*Activities and Outcomes:*

The research team gained valuable knowledge from Prof. Ken-ichiro Matsumoto at the Laboratory of Biosynthetic Chemistry, who presented cutting-edge research on bioplastic production from duckweed biomass. The laboratory tour provided insights into bioplastic synthesis processes, showcasing innovative approaches to sustainable material development.

Then, we visited the Laboratory of Environmental Molecular Biology under the guidance of Prof. Masaaki Morikawa. This experience included demonstration of duckweed cultivation techniques and observation of bacterial and plant cell staining procedures, which will significantly enhance our research capabilities.



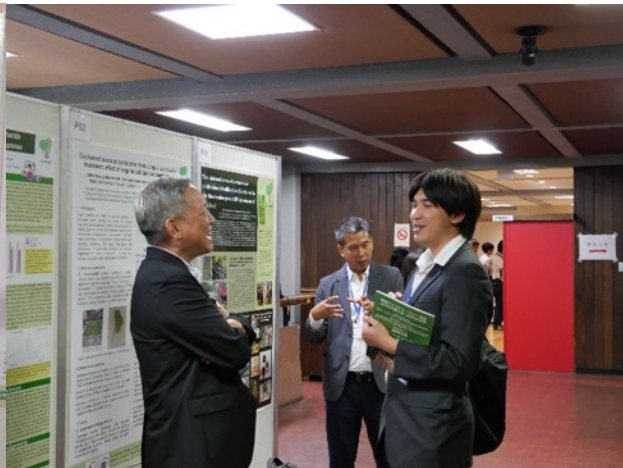
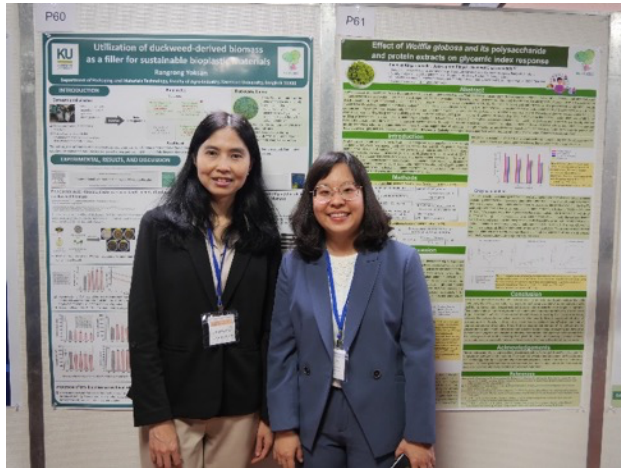


## **Activity 2: Research presentation at the annual meeting of Japan Society for Environmental Biotechnology (JSEB)**

*Objective:* To present duckweed research achievements at annual meeting of Japan Society for Environmental Biotechnology and get comments and advice for future activities

### *Activities and Outcomes:*

In the Be-HoBiD Symposium 2025 which was held in at annual meeting of Japan Society for Environmental Biotechnology, all researchers successfully presented their research findings through both oral presentations and poster sessions. We also presented the Be-HoBiD's activities and outcomes. This opportunity provided us with meaningful discussions with international researchers and fellow Be-HoBiD project collaborators, creating valuable networking opportunities. The feedback received from researchers in this meeting provided crucial guidance for advancing our research methodologies and exploring new research directions. These exchanges strengthened collaborative relationships in duckweed holobiont research. Thank you very much for this opportunity.





### Activity 3: Natural duckweed habitat field survey in Hokkaido

*Objective:* Field survey of duckweed habitat in Hokkaido

*Activities and Outcomes:*

We surveyed natural duckweed populations throughout Hokkaido during the summer season. The surveys revealed abundant duckweed populations in various natural water bodies, providing valuable ecological insights into species distribution and environmental adaptation patterns. These experiences will significantly contribute to promoting activities at the Duckweed Holobiont Research and Resource Center (DHbRC, KU) in Thailand.

