

2024 Taiwan Experience Education Program

1. Program host: National Pingtung University of Science and Technology (NPUST)

2. Program sponsor: Ministry of Education, Taiwan

3. Program description:

This program offers the opportunity for international students to attend an education and training program in Taiwan in the field of Fundamental and Translational Research in Plant Pathology, The Relationships of Plant Ecophysiology and Plant Diversity, Animal Vaccine and Adjuvant Development, or Animal Nutrition and Waste Management.

4. Program education/training duration in NPUST: 5–6 months

5. Program education training dates: April 1 – September 30, 2024

6. Subsidy:

Each student will be subsidized 12,000 NTD/month for 5-6 months. All expenses are to be paid for by each trainee student.

7. Applicable candidate:

Currently enrolled bachelor's students or who with a bachelor's degree (or higher). Candidate enrolled or graduated from an academic institution in Taiwan is not applicable.

8. Application deadline: February 29, 2024

9. Online application: <https://forms.gle/m3s2UYErsQKa7bmb9>

10. Contact: Ms. Tsai (idpiavt201@mail.npust.edu.tw)

11. The information on the participating NPUST faculty hosts:

Number	Name / Title	Department	Research Topic	Email
1	Dr. Yuh Tzean Assistant Professor	Department of Plant Medicine	Fundamental and Translational Research in Plant Pathology (Appendix 1)	miketzean@gmail.com
2	Dr. I-Ling Lai Associate Professor	Graduate Institute of Bioresources	Plant Ecophysiology and Plant Diversity (Appendix 2)	ilai@mail.npust.edu.tw
3	Dr. Hsing-Chieh Wu Associate Professor	International Degree Program in Animal Vaccine Technology	Animal Vaccine and Adjuvant Development (Appendix 3)	hcwu@mail.npust.edu.com
4	Dr. Jai-Wei Lee Professor	Department of Tropical Agriculture and International Cooperation	Animal Nutrition and Waste Management	joylee@mail.npust.edu.com

Appendix 1 (Dr. Yuh Tzean's research topic)

Microbial phytopathogens are a major limiting factor affecting plant growth and crop production. In the face of diseases caused by microbial phytopathogens, how fundamental knowledge in phytopathology can be translated for practical applications in plant protection needs to be addressed. In pursuit of this goal, we seek to conduct translational studies for the development of strategies to detect and/or control important phytopathogens including nematodes, fungi, and viruses.

The Relationships of Plant Ecophysiology and Plant Diversity

Assoc. Prof. I-Ling Lai

The Relationships of Plant Ecophysiology and Vegetation Distribution

My researches aimed to understand the underlying mechanism of plants adapted to the environmental factors, and the influences of their distribution and competition by survey of forest permanent plots.

The results could be important for species conservation, forest management and predicting vegetation shift under the circumstance of climatic change.



The vegetation shifted from tropical to temperate type



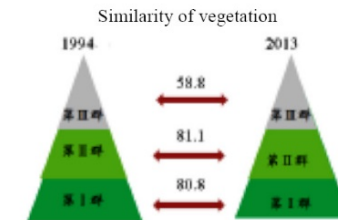
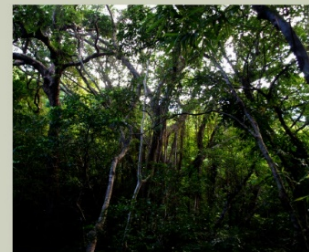
The vegetation change during lake succession



The influences of fog and light on cypress species

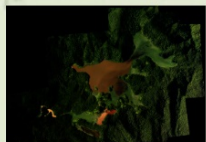
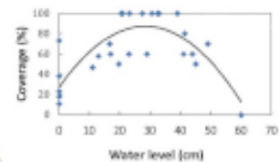
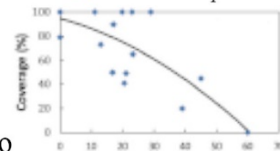
Mt. Nanren: 19-year changes of dominants

Mt. Nanren compressed of tropics originated tree species in foothill and temperate originated in top. The 19-year change of vegetation show only difference of dominance but not the migration. It's speculated by influence of Northeast Monsoon.



Nanren Lake: the succession of wetland plants and management of ecosystem

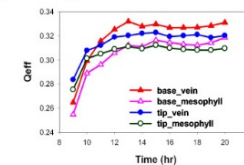
Invasive *Panicum repens* caused decline of native *Leersia hexandra* and the reduction of lake area and biodiversity. The ecophysiological characters of each species were studied in situ and nursery to pursue the policy of sustainable management.



Applying Chlorophyll Fluorescence and Gas Analysis Techniques in Observing Dynamics of Leaf Photosynthesis

Applications

- Fast screening of healthy individuals with high photosynthetic performance
- Detection of leaf wound and infection before the morphological characters appeared.



Acquiring fluorescence image sequences

Growth: 0-5 % hr⁻¹ Qeff: 0.4 - 4.3

Qeff: photosynthetic efficiency

Appendix 3 (Dr. Hsing-Chieh Wu's research topic)



Chun-Yen Chu
Professor & Director



Hsing-Chieh Wu
Associate Professor



Doan Thi Thu Dung
Assistant Professor



RESEARCH ACHIEVEMENTS

Number of publications : 30 papers since 2011.

Number of funded projects : 43 projects since 2011.

Total amount of funded projects : NT 53,887,700 since 2011.

Number of patents : 16 patents since 2011



Get In Touch

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International Degree Program in Animal Vaccine Technology

RESEARCH PLATFORMS

Cell culture system

- ✓ Mass production for viral Ag
- ✓ Bioreactor
- ✓ Modified medium
- ✓ Genetic cell line

Expression system

- ✓ Virus like particle
- ✓ High yield baculovirus
- ✓ Insect cell mass production

Diagnostic kit and Vaccine

- ✓ Swine disease: PED, PRRS, PCV2, CSF, S. suis, APP, Er, PmT...
- ✓ Avian disease: Ra, Parvovirus
- ✓ Bovine disease: Mh, Sta, E. coli

Adjuvants

- ✓ Carrier
- ✓ Bacterial
- ✓ Bacterial toxin

