

# Student Science Training Program 2025

## Round 3 : 28 July – 8 August 2025

### Day 1 (Monday, 28 July 2025) *H.M. King Maha Vajiralongkorn Phra Vajiraklaochaoyuhua's Birthday*

- 08:30–09:00 Welcome and Introduction  
*Prof. Dr. Banthit Chetsawang*
- 09:00–10:00 Lecture and Demonstration: Laboratory Safety Practices  
*Asst. Prof. Dr. Sirirat Kumarn*
- 10:00–11:00 Overview Lecture: Polymerase Chain Reaction (PCR) and Fluorescent Protein Technology  
*Assoc. Prof. Dr. Chalongrat Noree*
- 11:00–12:00 Laboratory session on Basic Pipetting Technique  
Laboratory session on DNA Cassette Preparation by PCR  
*Assoc. Prof. Dr. Chalongrat Noree, Dr. Phattarunda Jaree, Dr. Wannapa Sornjai, Dr. Nattaya Srisawad, Dr. Supajit Sraphet, Dr. Chonticha Saisawang, Ms. Naraporn Sirinonthanawech and team*
- 12:00–13:00 Lunch
- 13:00–16:00 Laboratory session on Agarose Gel Electrophoresis for Checking the Amplified DNA Cassette  
Laboratory session on PCR Purification  
Laboratory session on Preparation of Overnight Yeast Culture  
*Assoc. Prof. Dr. Chalongrat Noree and team*

### Day 2 (Tuesday, 29 July 2025)

- 09:00–09:30 Laboratory session on Preparation of Log-Phase Yeast Culture  
*Assoc. Prof. Dr. Chalongrat Noree and team*
- 09:30–11:00 Overview Lecture: PCR-Based Yeast Genome Engineering  
*Assoc. Prof. Dr. Chalongrat Noree*
- 11:00–12:00 Computer Lab: Plasmid Construction and Primer Design  
*Assoc. Prof. Dr. Chalongrat Noree and team*
- 12:00–13:00 Lunch
- 13:00–16:00 Laboratory session on Preparation of Competent Yeast Cells and Yeast Transformation  
*Assoc. Prof. Dr. Chalongrat Noree and team*

### Day 3 (Wednesday, 30 July 2025)

- 09:00–09:30 Laboratory session on Replica Plating for Selecting Yeast Transformants  
*Assoc. Prof. Dr. Chalongrat Noree and team*
- 09:30–12:00 Laboratory session on Colocalization Assay (Confocal Imaging of Yeast Samples)  
*Assoc. Prof. Dr. Chalongrat Noree and team*

- 12:00–13:00 Lunch
- 13:00–14:30 Recap and Discussion  
*Assoc. Prof. Dr. Chalongrat Noree and team*
- 14:30 – 16:00 Campus Tour  
*Ms. Panutchanat Khamtonwong, Ms. Pinjutha Ratchatamethawin and Mr. Yarnyong Kongmahaphuk*

#### **Day 4 (Thursday, 31 July 2025)**

- 09:00 – 10:00 Lecture on “Animal Cell culture”  
*Dr. Chutima Thepparit*
- 10:00 – 12:00 Laboratory session on “Animal Cell culture”  
*Dr. Chutima Thepparit, Ms. Sanjira Juntarapornchai, Ms. Sasiporn Ruangdechsuwan, Ms. Kunjimas Ketsuwan, Mr. Iyacoob khunsri and Ms. Phissinee Jakaew*
- 12:00 – 13:00 Lunch
- 13:00 – 16:00 Laboratory session on “Animal Cell culture”  
*Dr. Chutima Thepparit and team*

#### **Day 5 (Friday, 1 August 2025)**

- 09:00 – 10:00 Lecture on “Genome editing”  
*Asst. Prof. Dr. Alisa Tubsuwan*
- 10:00 – 12:00 Laboratory session on “Genome editing using CRISPR/Cas9”  
*Asst. Prof. Dr. Alisa Tubsuwan, Mr. Pirut Thongngam and team*
- 12:00 – 13:00 Lunch
- 13:00 – 16:00 Laboratory session on “Genome editing using CRISPR/Cas9”  
*Asst. Prof. Dr. Alisa Tubsuwan, Mr. Pirut Thongngam and team*

#### **Day 6 (Monday, 4 August 2025)**

- 09:00 – 10:00 Lecture on “Protein Expression and Purification”  
*Assoc. Prof. Dr. Chartchai Krittanai*
- 10:00 – 12:00 Laboratory session on “Protein World: protein isolation and visualization”  
(Bacterial culture, protein expression, protein preparation)  
*Dr. Phattara-orn Havanapan, Assoc. Prof. Dr. Chartchai Krittanai, Dr. Duangnapa Kovanich, Dr. Phattarunda Jaree, Dr. Ittipat Meewan, Mr. Pannaphan Makarathut, Ms. Nuanwan Pongtanom and Ms. Somsri Sakdee*
- 12:00 – 13:00 Lunch
- 13:00 – 16:00 Laboratory session on “Protein World: protein isolation and visualization” (cont.)  
*Dr. Phattara-orn Havanapan and team*

### Day 7 (Tuesday, 5 August 2025)

- 09:00 – 10:00 Lecture on “Thalassemia”  
*Dr. Kittiphong Paiboonsukwong*
- 10:00 – 12:00 Laboratory session on “DNA Analysis for Alpha-Thalassemia”  
*Dr. Thongperm Munkongdee, Dr. Kittiphong Paiboonsukwong, Asst. Prof. Dr. Natee Jearawiriyapaisarn, Asst. Prof. Dr. Phatchariya Phannasil, Dr. Benjaporn Kiatpakdee, Ms Nattrika Buasuwan, Ms. Usa Nuttapolwat and team*
- 12:00 – 13:00 Lunch
- 13:00 – 16:00 Laboratory session on “DNA Analysis for Alpha-Thalassemia” (cont.)  
*Dr. Thongperm Munkongdee and team*

### Day 8 (Wednesday, 6 August 2025)

- 09:00 – 10:00 Lecture on “Immunoassay”  
*Asst. Prof. Dr. Alita Kongchanagul*
- 10:00 – 12:00 Laboratory session on Antibody diagnosis  
*Asst. Prof. Dr. Alita Kongchanagul, Ms. Kunjimas Ketsuwan, Mr. Iyacoob khunsri, Dr. Ekkarat Rodpai, Ms. Phissinee Jakaew and Ms. Surat Punyahathaikul*
- 12:00 – 13:00 Lunch
- 13:00 – 14:00 Lecture on “Real-world applications of molecular biosciences”  
*Asst. Prof. Dr. Poochit Nonejuie*
- 14:00 – 15:00 Lecture on “Structural Exploration of Coronavirus Drug Targets”  
*Asst. Prof. Dr. Duangrudee Tanramluk*
- 15:00 – 16:00 Laboratory session on “Structural Exploration of Coronavirus Drug Targets”  
*Asst. Prof. Dr. Duangrudee Tanramluk Theptharin Charuraksa and Miss Siraprapha Duangchai-ngoen*

### Day 9 (Thursday, 7 August 2025)

- 09:00 – 10:30 Lecture on “Plant Tissue Culture and Application”  
*Dr. Panitch Boonsnongcheep*
- 10:30 – 12:00 Laboratory session on “Plant Tissue Culture”  
*Dr. Panitch Boonsnongcheep, Assoc. Prof. Dr. Kanokporn Triwitayakorn, Dr. Supajit Sraphet, Dr. Nattaya Srisawad, Dr. Piengtawan Tappiban, Ms.Nuanwan Pongtanom, Ms.Somsri Sakdee, and Ms.Nawarat Suksee*
- 12:00 – 13:00 Lunch
- 13:00 – 16:00 Laboratory session on “Plant Tissue Culture”  
*Dr. Panitch Boonsnongcheep, and team*

**Day 10 (Friday, 8 August 2025)**

- 09:00 – 10:00    Lecture on Brain and memory  
*Asst. Prof. Dr. Jiraporn Panmane*
- 10:00 – 12:00    Laboratory session on “Brain anatomy and function”  
*Assoc. Prof. Dr. Sujira Mukda, Asst. Prof. Dr. Jiraporn Panmane,  
Assoc. Prof. Dr. Vorasith Siripompanich, Ms. Kanda Putthaphongphuek and team*
- 12:00 – 13:00    Lunch
- 13:00 – 14:00    Lecture on “Behavioral studies in animal research”  
*Asst. Prof. Dr. Sukonthar Ngampramuan*
- 14:00 – 16:00    Laboratory session on “The demonstration of animal studies”  
*Asst. Prof. Dr. Sukonthar Ngampramuan, Dr. Kakanang Buranaamnuay ,  
Ms. Chinarat Changsangfa, Ms. Dungdol Narasirilrk, Ms. Sukanya Ruschadaariyachat and  
Mrs. Kanda Putthaphongphuek and team*
- 16:00 – 16:30    Closing ceremony