

Student Science Training Program 2021

12-23 July 2021

Day 1 (Monday, 12 July 2021)

- 08:30 – 09:00 Welcome and introduction
Prof. Dr. Duncan R. Smith
- 09:00 – 10:30 Lecture on “Overview: Polymerase Chain Reaction (PCR) & Fluorescent Protein Technology”
Dr. Chalongrat Noree
- 10:30–11:30 Laboratory session on “Basic Pipetting Technique and PCR”
*Dr. Chalongrat Noree, Dr. Supajit Sraphet, Dr. Nattaya Srisawad,
Dr. Phattarunda Jaree, Ms Naraporn Sirinonthanawech
Mr Htut Htoo and team*
- 11:30–12:30 **Lunch**
- 12:30–13:30 Lecture and demonstration on “How lab safety is a friend in need during the COVID-19 pandemic”
Dr. Sirirat Kumarn
- 13:30–15:30 Laboratory session on “Agarose Gel Electrophoresis”
Dr. Chalongrat Noree and team
Laboratory session on “PCR Purification”
Dr. Chalongrat Noree and team
Laboratory session on “Preparation of O/N Yeast Culture”
Dr. Chalongrat Noree and team
- 15:30–16:30 Computer Laboratory on “Computational Primer Design”
Dr. Chalongrat Noree and team

Day 2 (Tuesday, 13 July 2021)

- 09:00–09:30 Laboratory session on “Preparation of Log-Phase Yeast Culture”
Dr. Chalongrat Noree and team
- 09:30–11:30 Discussion “PCR-Based Engineering of Yeast Genome”
Dr. Chalongrat Noree and team
- 11:30–12:30 Lunch
- 12:30–15:30 Laboratory session on “Preparation of Yeast Competent Cells”
Laboratory session on “Yeast Transformation”
Dr. Chalongrat Noree and team

Day 3 (Wednesday, 14 July 2021)

- 09:00–09:30 Laboratory session on “Replica Plating”
Dr. Chalongrat Noree and team

- 09:30-12:00 Laboratory session on “Screening Transformants using Fluorescence Microscope”
Dr. Chalongrat Noree and team
- 12:00-13:00 **Lunch**
- 13:00-15:00 Recap
Dr. Chalongrat Noree and team

Day 4 (Thursday, 15 July 2021)

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

Day 5 (Friday, 16 July 2021)

- 09:00 – 10:00 Lecture on “Protein Expression and Purification”
Assoc. Prof. Dr. Chartchai Krittanai
- 10:00 – 12:00 Laboratory session on “Protein Expression and Purification”
(Bacterial culture, protein expression, protein preparation)
*Dr. Chonticha Saisawang, Dr. Phattara-orn Havanapan,
Dr. Duangnapa Kovanich and Dr. Arpaporn Sutipatanasomboon*
- 12:00 – 13:00 **Lunch**
- 13:00 – 16:00 Laboratory session on “Protein Expression and Purification” (cont.)
*Dr. Chonticha Saisawang, Dr. Phattara-orn Havanapan,
Dr. Duangnapa Kovanich and Dr. Arpaporn Sutipatanasomboon*

Day 6 (Monday, 19 July 2021)

- 09:00 – 12:00 Laboratory session on “Protein Expression and Purification” (cont.)
*Dr. Chonticha Saisawang, Dr. Phattara-orn Havanapan,
Dr. Duangnapa Kovanich and Dr. Arpaporn Sutipatanasomboon*
- 12:00 – 13:00 **Lunch**
- 13:00 – 14:00 Lecture on “Animal Cell culture”
Dr. Chutima Thepparit
- 14:00 – 16:00 Laboratory session on “Animal Cell culture”
Dr. Chutima Thepparit and team

Day 7 (Tuesday, 20 July 2021)

- 09:00 – 10:00 Laboratory session on “Animal Cell culture”
Dr. Chutima Thepparit and team
- 10:00 – 11:00 Lecture on “Genome editing”
Asst. Prof. Dr. Alisa Tubsuwan
- 11:00 – 12:00 Laboratory session on “Genome editing using CRISPR/Cas9”
Asst. Prof. Dr. Alisa Tubsuwan and team
- 12:00 – 13:00 **Lunch**
- 13:00 – 16:00 Laboratory session on “Genome editing using CRISPR/Cas9”
Asst. Prof. Dr. Alisa Tubsuwan and team

Day 8 (Wednesday, 21 July 2021)

- 09:00 – 10:30 Lecture on “Plant Tissue Culture and Application”
Dr. Panitch Boonsongcheep
- 10:30 – 12:00 Laboratory session on “Plant Tissue Culture”
*Assoc. Prof. Dr. Kanokporn Triwitayakorn, Dr. Supajit Sraphet
Dr. Panitch Boonsongcheep Dr. Arpaporn Sutipatanasomboon
Dr. Nattaya Srisawad Ms Vadee Rumruay and team*
- 12:00 – 13:00 **Lunch**
- 13:00 – 16:00 Laboratory session on “Plant Tissue Culture”
*Assoc. Prof. Dr. Kanokporn Triwitayakorn, Dr. Supajit Sraphet
Dr. Panitch Boonsongcheep Dr. Arpaporn Sutipatanasomboon
Dr. Nattaya Srisawad Ms Vadee Rumruay and team*

Day 9 (Thursday, 22 July 2021)

- 09:00 – 10:00 Lecture on “What you need to know about COVID-19 vaccines”
Dr. Alita Kongchanagul
- 10:00 – 11:00 Lecture on “COVID-19 and Animal: What we need to know?”
Assoc. Prof. Dr. Panat Anuracpreeda
- 11:00 – 12:00 Campus Tour
*Ms Kaewkhawn Banjong, Ms Yada Uasmith, Mr Ritkakit Poonsri
and Mr Yarnyong Kongmahaphuk*
- 12:00 – 13:00 **Lunch**
- 13:00 – 14:00 Lecture on “Molecular Visualization”
Asst. Prof. Dr. Duangrudee Tanramluk
- 14:00 – 15:00 Laboratory session on “Structural Exploration of Coronavirus-
Drug Targets”
Asst. Prof. Dr. Duangrudee Tanramluk and team
- 15:00 – 16:00 Lecture on “Real-world applications of molecular biosciences”

Dr. Poochit Nonejuie

Day 10 (Friday, 23 July 2021)

- 09:00 – 10:00 Lecture on “How does COVID-19 affect the brain?”
Dr. Jiraporn Panmanee
- 10:00 – 12:00 Laboratory session on “Brain anatomy and function”
*Asst.Prof.Dr. Sujira Mukda, Dr. Chutikorn Nopparat and
Dr. Jiraporn Panmanee*
- 12:00 – 13:00 **Lunch**
- 13:00 – 14:00 Lecture on “Animal behavior studies in vaccines development-
related to covid 19 vaccines”
Asst. Prof. Dr. Sukonthar Ngampramuan
- 14:00 – 16:00 Laboratory session on “The demonstration of animal behaviour study”
Asst. Prof. Dr. Sukonthar Ngampramuan
- 16:00 – 16:30 Closing ceremony
Dr. Alita Kongchanagul

**Student Science Training Program 2021
26 July –6 August 2021**

Day 1 (Monday, 26 July 2021)

- 08:30 – 09:00 Welcome and introduction
Prof. Dr. Duncan R. Smith
- 09:00 – 10:30 Lecture on “Overview: Polymerase Chain Reaction (PCR) & Fluorescent
Protein Technology”
Dr. Chalongrat Noree
- 10:30–11:30 Laboratory session on “Basic Pipetting Technique and PCR”
*Dr. Chalongrat Noree, Dr. Supajit Sraphet, Dr. Nattaya Srisawad,
Dr. Phattarunda Jaree, Ms Naraporn Sirinonthanawech
Mr Htut Htoo and team*
- 11:30–12:30 **Lunch**
- 12:30–13:30 Lecture and demonstration on “How lab safety is a friend in need during-
the COVID-19 pandemic”
Dr. Sirirat Kumarn
- 13:30–15:30 Laboratory session on “Agarose Gel Electrophoresis”
Dr. Chalongrat Noree and team
Laboratory session on “PCR Purification”
Dr. Chalongrat Noree and team
Laboratory session on “Preparation of O/N Yeast Culture”
Dr. Chalongrat Noree and team
- 15:30–16:30 Computer Laboratory on “Computational Primer Design”

Dr. Chalongrat Noree and team

Day 2 (Tuesday, 27 July 2021)

- 09:00-09:30 Laboratory session on “Preparation of Log-Phase Yeast Culture”
Dr. Chalongrat Noree and team
- 09:30-11:30 Discussion “PCR-Based Engineering of Yeast Genome”
Dr. Chalongrat Noree and team
- 11:30-12:30 Lunch
- 12:30-15:30 Laboratory session on “Preparation of Yeast Competent Cells”
Laboratory session on “Yeast Transformation”
Dr. Chalongrat Noree and team

Day 3 (Wednesday, 28 July 2021)

- 09:00-09:30 Laboratory session on “Replica Plating”
Dr. Chalongrat Noree and team
- 09:30-12:00 Laboratory session on “Screening Transformants using Fluorescence Microscope”
Dr. Chalongrat Noree and team
- 12:00-13:00 **Lunch**
- 13:00-15:00 Recap
Dr. Chalongrat Noree and team

Day 4 (Thursday, 29 July 2021)

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

Day 5 (Friday, 30 July 2021)

- 09:00 – 10:00 Lecture on “Protein Expression and Purification”
Assoc. Prof. Dr. Chartchai Krittanai
- 10:00 – 12:00 Laboratory session on “Protein Expression and Purification”
(Bacterial culture, protein expression, protein preparation)
Dr. Chonticha Saisawang, Dr. Phattara-orn Havanapan,

Dr. Duangnapa Kovanich and Dr. Arpaporn Sutipatanasomboon

12:00 – 13:00

Lunch

13:00 – 16:00

Laboratory session on “Protein Expression and Purification” (cont.)

Dr. Chonticha Saisawang, Dr. Phattara-orn Havanapan,

Dr. Duangnapa Kovanich and Dr. Arpaporn Sutipatanasomboon

Day 6 (Monday, 2 August 2021)

09:00 – 12:00

Laboratory session on “Protein Expression and Purification” (cont.)

Dr. Chonticha Saisawang, Dr. Phattara-orn Havanapan,

Dr. Duangnapa Kovanich and Dr. Arpaporn Sutipatanasomboon

12:00 – 13:00

Lunch

13:00 – 14:00

Lecture on “Animal Cell culture”

Dr. Chutima Thepparit

14:00 – 16:00

Laboratory session on “Animal Cell culture”

Dr. Chutima Thepparit and team

Day 7 (Tuesday, 3 August 2021)

09:00 – 10:00

Laboratory session on “Animal Cell culture”

Dr. Chutima Thepparit and team

10:00 – 11:00

Lecture on “Genome editing”

Asst. Prof. Dr. Alisa Tubsuwan

11:00 – 12:00

Laboratory session on “Genome editing using CRISPR/Cas9”

Asst. Prof. Dr. Alisa Tubsuwan and team

12:00 – 13:00

Lunch

13:00 – 16:00

Laboratory session on “Genome editing using CRISPR/Cas9”

Asst. Prof. Dr. Alisa Tubsuwan and team

Day 8 (Wednesday, 4 August 2021)

09:00 – 10:30

Lecture on “Plant Tissue Culture and Application”

Dr. Panitch Boonsongcheep

10:30 – 12:00

Laboratory session on “Plant Tissue Culture”

Assoc. Prof. Dr. Kanokporn Triwitayakorn, Dr. Supajit Sraphet

Dr. Panitch Boonsongcheep, Dr. Arpaporn Sutipatanasomboon

Dr. Nattaya Srisawad, Ms Vadee Rumruay and team

12:00 – 13:00

Lunch

13:00 – 16:00

Laboratory session on “Plant Tissue Culture”

Assoc. Prof. Dr. Kanokporn Triwitayakorn, Dr. Supajit Sraphet

Dr. Panitch Boonsongcheep Dr. Arpaporn Sutipatanasomboon

Dr. Nattaya Srisawad, Ms Vadee Rumruay and team

Day 9 (Thursday, 5 August 2021)

- 09:00 – 10:00 Lecture on “What you need to know about COVID-19 vaccines”
Dr. Alita Kongchanagul
- 10:00 – 11:00 Lecture on “COVID-19 and Animal: What we need to know?”
Assoc. Prof. Dr. Panat Anuracpreeda
- 11:00 – 12:00 Campus Tour
*Ms Kaewkhawn Banjong ,Ms Yada Uasmith, Mr Ritkakrit Poonsri
and Mr Yarnyong Kongmahaphuk*
- 12:00 – 13:00 **Lunch**
- 13:00 – 15:00 Lecture on “Structural Exploration of Coronavirus Drug Targets”
Asst. Prof. Dr. Duangrudee Tanramluk
- 15:00 – 16:00 Lecture on “Real-world applications of molecular biosciences”
Dr. Poochit Nonejuie

Day 10 (Friday, 6 August 2021)

- 09:00 – 10:00 Lecture on “How does COVID-19 affect the brain?”
Dr. Jiraporn Panmanee
- 10:00 – 12:00 Laboratory session on “Brain anatomy and function”
*Asst. Prof. Dr. Sujira Mukda, Dr. Chutikorn Nopparat and
Dr. Jiraporn Panmanee*
- 12:00 – 13:00 **Lunch**
- 13:00 – 14:00 Lecture on “Animal behavior studies in vaccines development-
related to covid 19 vaccines”
Asst. Prof. Dr. Sukonthar Ngampramuan
- 14:00 – 16:00 Laboratory session on “The demonstration of animal behaviour study”
Asst. Prof. Dr. Sukonthar Ngampramuan
- 16:00 – 16:30 Closing ceremony
Dr. Alita Kongchanagul