

主辦單位  
同步輻射蛋白質  
結晶學核心設施

# 2025 蛋白質結晶 學訓練課程

2025 Protein Crystallography Training Course

第一梯次：2025/8/18 ~ 8/22

第二梯次：2025/8/25 ~ 8/29

上課地點：國家同步輻射研究中心



# Overview

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  - 課程表 Schedule
  - 團隊成員 Team
  - 參與學員 Participants
  - 活動花絮 Photos
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# Introduction

The Protein Crystallography Training Course series provides lecture programs and hands-on training. The goal of this training course is to disseminate experimental techniques of macromolecular crystallography to researchers or graduate student with an interest in using this specific method to further the scope of their research. This course covers broad spectrum of topics on synchrotron-based protein crystallography, ranging from crystallization of proteins, data collection strategy, phasing techniques, radiation damage on protein crystals, to structure determination of proteins.



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# 課程表

Schedule

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# 課程表 Schedule

| Day 1 Registration 10:00~10:30  | Day 2 Breakfast 08:00~09:00   | Day 3 Breakfast 08:00~09:00   |
|---|---|---|
| <ul style="list-style-type: none"> <li>• The Importance and Historical Review of PX</li> <li>• Introduction of Protein Crystallization</li> </ul> | <ul style="list-style-type: none"> <li>• Data Collection Strategy in Rotation Geometry</li> </ul>   | <ul style="list-style-type: none"> <li>• Phase Problem and Phasing Methods</li> <li>• Comparison of MAD, MIR and SAD Phasing</li> </ul> |
| Lunch 12:00~13:00   | Lunch 12:00~13:00   | Lunch 12:00~13:00   |
| <ul style="list-style-type: none"> <li>• Introduction of Crystal Symmetry</li> <li>• Basic of X-ray Diffraction</li> </ul>                        | <ul style="list-style-type: none"> <li>• Step-by-Step Practice of Data Processing</li> </ul>  | <ul style="list-style-type: none"> <li>• Step-by-Step Practice of Structure Determination by SAD Phasing with CCP4</li> </ul>           |
| Dinner 18:00~19:00  | Dinner 18:00~19:00  | Dinner 18:00~19:00  |
| <ul style="list-style-type: none"> <li>• Basic of X-ray Diffraction</li> </ul>  | <ul style="list-style-type: none"> <li>• Individual Practice of Data Processing</li> </ul>  | <ul style="list-style-type: none"> <li>• Individual Practice of SAD Phasing</li> </ul>  |
| Day 4 Breakfast 08:00~09:00   | Day 5 Breakfast 08:00~09:00   |   |
| <ul style="list-style-type: none"> <li>• Se-MAD/SAD and S-SAD Data Collection Strategy</li> <li>• Introduction of MR Phasing</li> </ul>           | <ul style="list-style-type: none"> <li>• Radiation Damage on Cryo-cooled Protein Crystals</li> <li>• Cryo-Technique in Protein Crystallography</li> </ul> |   |
| <ul style="list-style-type: none"> <li>• Step-by-Step Practice of Ligand Search by MR with CCP4</li> </ul>  | <ul style="list-style-type: none"> <li>• Group Photos and Farewell</li> </ul>   |   |
| Lunch 12:00~13:00   | Lunch 12:00~13:00   |   |
| <ul style="list-style-type: none"> <li>• Optical Screening, Cryo-sample preparation, Mounting and Centering</li> </ul>                            |   |   |
| <ul style="list-style-type: none"> <li>• Individual Practice of Ligand Search by MR with CCP4</li> <li>• Experimental Station Tour</li> </ul>     |   |   |
| Dinner 18:00~19:00  |   |   |
| <ul style="list-style-type: none"> <li>• Individual Practice</li> </ul>   |   |   |



# 團隊

Team



# Team

## 主辦人員

黃怡珍

## 講師

課程：周重光、姜政宏、陳懿慧、曾建璋、黃駿翔、趙俊雄

實習：李宜靜、柯金伶、周重光、曾建璋、黃駿翔

## 實習助教

李宜靜、姜政宏、陳怡蓉、陳懿慧、黃婉婷、葉嬋嬋

## 行政人員

黃楨盈、陳慧珊、邱采綺

# 報名洽詢

黃怡珍小姐

連絡電話：03-5780281#7346

E-mail：jane.huang@nsrrc.org.tw

