

# IPMB NEWSLETTER

Institute of Plant and Microbial Biology, Academia Sinica

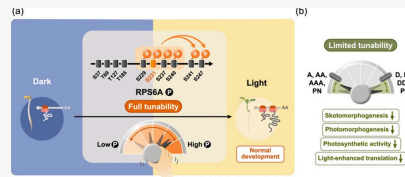


## In this Issue 本期導覽

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## Research Highlights 本期研究亮點

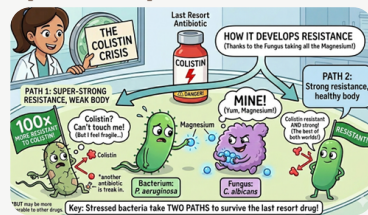
### 1 [Shu-Hsing Wu] Tunable Phosphorylation of RPS6A Refines Light-Driven Seedling Development



This study reveals that light-regulated phosphorylation of ribosomal protein S6A (RPS6A) acts as a tunable module, rather than a simple on/off switch, to control translation during early seedling development. Dynamic changes in RPS6A phosphorylation enable efficient cotyledon opening, enhance protein synthesis, and support the transition from dark to light growth in *Arabidopsis*. These findings highlight a new layer of translational regulation by light, showing how flexible ribosomal modification helps seedlings adapt to changing environmental conditions.

Cho et al., *Plant, Cell & Environment* **49**(5): 2783-2794 (2026). <https://doi.org/10.1111/pce.70426>.

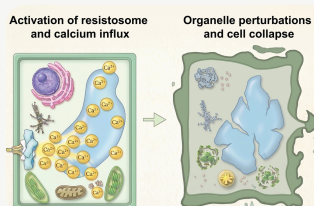
### 2 [Phoebe Yu-Ying Hsieh] Magnesium Wars: How Microbial Competition Sparks Super-Resistant Bacteria



This study shows that the fungus *Candida albicans* can indirectly promote extreme colistin resistance in *Pseudomonas aeruginosa* through competition for magnesium. Magnesium depletion drives bacteria into a low-magnesium state, triggering evolutionary adaptations that alter the outer membrane and reduce colistin binding. The bacteria can follow different evolutionary paths, with varying trade-offs. These findings highlight that microbial interactions, not just antibiotic exposure, can drive resistance, offering new insights into how super-resistant pathogens emerge in complex infections. This study was recently highlighted in *Nature Reviews Microbiology*.

Hsieh et al., *PLoS Biology* **24**(3):e3003673 (2026). <https://doi.org/10.1371/journal.pbio.3003673>.

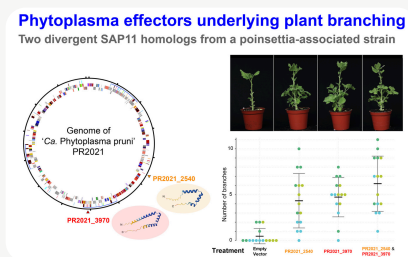
### 3 [Chih-Hang Wu] Decoding the execution of plant hypersensitive cell death: from calcium signaling to cellular collapse



When plants encounter pathogen invasion, NLR receptors assemble into resistosomes to trigger defense responses, yet how this leads to hypersensitive cell death remains unclear. Using high-resolution live-cell imaging, we mapped a spatiotemporal cascade following resistosome activation, including calcium influx, organelle disruption, cytoskeletal disassembly, nuclear shrinkage, and vacuolar collapse, revealing how immune signals are coordinated across space and time to drive irreversible cell death.

Chen, Lin et al., *PNAS* **123**(12):e2523470123 (2026). <https://doi.org/10.1073/pnas.2523470123>.

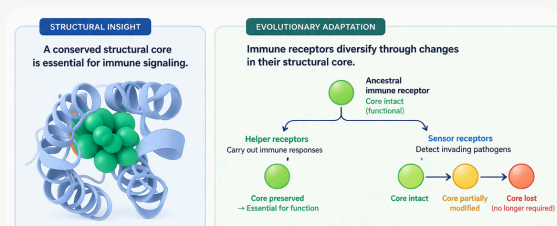
#### 4 [Chih-Horng Kuo] Genomic insights into phytoplasma effectors underlying branching in poinsettia



Phytoplasmas alter plant development via effector proteins, inducing branching that is desirable in poinsettia but remains poorly understood. Through genomic investigation, this study identified two SAP11 homologs with distinct evolutionary origins. Both independently induce plant branching, providing direct evidence linking specific effectors to this trait and offering insights into effector function and evolution.

Pei et al., *Microbial Genomics* **12(3)** (2026). <https://doi.org/10.1099/mgen.0.001675>.

#### 5 [Chih-Hang Wu] Uncovering the key structural mechanism of plant resistosomes



Plants rely on NLR receptors to activate immune responses against pathogen attack, with NRC proteins acting as helper NLRs to trigger hypersensitive cell death. In this study, we identified seven key residues in the NRC4 coiled-coil domain, including a conserved hydrophobic core essential for cell death signaling, oligomerization, and phospholipid association. This feature is conserved in NRCs

and some NLRs but degenerated in NRC-dependent sensor NLRs, revealing evolutionary specialization and providing new insights into resistosome formation and plant immune mechanisms.

Wang et al., *New Phytologist* **250(5)**:3247-3263 (2026). <https://doi.org/10.1111/nph.71120>.

## IPMB Calendar 重要行事曆

### JUNE

**2026/06/15**

Distinguished Lecture: Dr. Sheng Yang He

**2026/06/18**

IPMB PhD Student Symposium

### JULY

**2026/07/03**

Symposium of Newly Elected Academicians: Dr. Chang-Hsien Yang

### SEPTEMBER

**2026/09/01-02**

MAGIC Retreat

**2026/09/22**

Distinguished Lecture: Dr. Jane Langdale

### NOVEMBER

**2026/11/05-06**

Early Career Symposium

## New Members 新血報到

### 1 Phyu Phyu Win 文菲菲 (Chih-Hang Wu Lab)



Hello, my name is Phyu Phyu Win. I am a new research assistant in Dr. Chih-Hang Wu's lab. Originally from Myanmar, I hold a Master's degree in Agriscience and Technology (Postharvest) from King Mongkut's University of Technology Thonburi in Thailand. While my previous studies focused on postharvest technology, I am deeply

interested in plant immunology and genetics. I am currently working on *Agrobacterium*-mediated transient expression in various vegetable crops. Our research aims to bypass traditional model plants by identifying strains that can be directly applied to vital agricultural crops. Outside of the lab, I enjoy going for walks, running, and doing home workouts. I also love sightseeing in the mountains and spending time at the beach.

### 2 Mayanda Heerlie Devita 李珊珊 (Chuan Ku Lab)



Hi, I'm Devita from Indonesia! I am an IEEB Master's student at NTU in the Ku Lab. I actually completed my undergraduate internship and thesis in this same lab, so I am very excited to continue my journey here. My research focuses on environmental data analysis, specifically using bioinformatics

to study giant virus diversity and their functional roles. When I am not working with genomic data, I love spending time outdoors and doing nature activities. I also enjoy drawing, especially sketching the plants and animals that I capture on my phone.

### 3 Hsiang-Yu Yang 楊翔宇 (Ka-Wai Ma Lab)



I am Hsiang-Yu Yang. I have been working as a research assistant in Dr. Ka-Wai Ma's lab since May. I earned my Master's degree at National Taiwan University under Dr. Nai-Chun Lin, specializing in soil microbiota. I have a strong interest in microbiology and plant-microbe interactions.

I aim to make full use of my knowledge and expertise to further explore the mechanisms and functional dynamics of plant-associated microbes.

### 4 Edoardo Andrea Cutolo 邱德羅 (Ooi-Kock Teh Lab)



Edoardo Andrea Cutolo is a Plant Biologist. He studied Biology and Plant Biotechnology in Italy and at Ghent University, Belgium. He obtained a PhD in Molecular Plant Physiology from the University of Bonn, Germany, studying the mechanisms of photosynthetic acclimation based on post-translational

protein modifications. He continued his research activity as post-doc in the Laboratory of Photosynthesis and Bioenergy in Verona, Italy, focussing on developing sustainable genetic engineering strategies to produce high value heterologous molecules in the chloroplast of microalgae, and to enhance their photosynthetic performance.

### 5 Jessica Joyce Julan Henry 潔絲佳 (Paul Verslues Lab)



Hi everyone! I'm Jessica Henry, a 4th-year student from Malaysia, currently doing my undergraduate internship at IPMB. My research journey is all about plant resilience. It connects my final year project work on analyzing gene promoters and designing guide RNA in bananas with what I'm doing here on plant stress

responses and cell signaling trafficking. Outside the lab, I love exploring new places, trying new foods, and learning about different lifestyles and cultures. I really enjoy meeting new people, so please feel free to say hi and share your favorite food recommendations! Looking forward to learning from everyone.

### 6 Zhi Wei Ong 王芷薇 (Ting-Ying Wu Lab)



Hi everyone! I am Zhi Wei from Malaysia, and I am excited to join IPMB as an intern in R425. My research interests are in plant molecular biology, and I have brief experience with bioinformatics approaches in transcriptomic analysis. Outside of the lab, I enjoy reading, exploring new places, and cycling around the city. I look

forward to learning new skills and gaining hands-on research experience during my time here. I am also happy to be part of the IPMB community and meet new people.

## 7 Shivani Malik 馬詩妮 (Chih-Hang Wu Lab)



I joined as a Postdoctoral Scientist this April, and I am investigating subcellular functional dynamics underlying NLR-mediated cell death, extending the group's resistosome-driven signalling discoveries. I earned my DPhil from the University of Oxford under Professor Renier van der Hoorn, focusing on Receptor-Like

Proteins and cysteine protease'-mediated extracellular effector perception. I am broadly interested in leveraging plant immune mechanisms and their genetic diversity for climate-resilient agriculture. Believing science-to-policy translation is crucial, I have actively pursued outreach, including presenting my work to policymakers on parliamentary committees, and the British Royal family. I have also served in representative roles for Oxford student bodies and the Biochemical Society UK.

## 8 Ting-Feng Lu 盧廷峰 (Chih-Hong Kuo Lab)



Hi! I'm Ting-Feng Lu, and I am half Taiwanese and half Filipino. I graduated with a degree in Biology from the University of the Philippines Visayas, specializing in microbiology and marine biology. Currently, I work as a Research Assistant in Dr. Kuo's lab, where our research focuses on bacterial taxonomy.

My academic interests include biodiversity, evolution, genetics, and bioinformatics, and I am interested in exploring these fields through joint research and scientific exchange. In my leisure time, I maintain an active lifestyle through sports like basketball, badminton, and chess. I also have a passion for nature hiking and discovering various cuisines as these activities help me stay curious, adventurous, and while having the opportunity to connect with people from different backgrounds.

## 9 Siilen Munkhkhuyag 孟思蘭 (Chih-Hong Kuo Lab)



My name is Siilen (Seline), a Research Assistant in Dr. Kuo's lab, where I support plant transformation using *Agrobacterium*. My research background includes plant tissue culture and applied ecological work with beneficial microorganisms.

These experiences sparked my growing interest in shifting from application-driven research toward understanding the fundamental biology of how these microbes function. I'm excited to explore the mechanisms behind plant-microbe interactions at a deeper level. I'm looking forward to gaining new research skills and learning from the team (and hopefully make a few new friends along the way).

## 10 Sacha Cheng-Marcout 鄭直 (Paul Verslues Lab)



Hello, my name is Sacha Cheng-Marcout or 鄭直, I'm currently an intern in the Paul Verslues Lab, and I am studying for my Masters (Plant Integrative Biology and Physiology) in France's Université Paris Cité. I am interested in plant abiotic stress response, and this internship has shown me how riveting molecular biology can be.

I can't wait to learn and hear more during my time here! Ultimately, my goal is to pursue a career in research. Outside of the lab, I enjoy doing indoor climbing and making food. It's really nice to meet you all!

## 11 Manidar Lumban Gaol Jusni 李美月 (Tien-Shin Yu Lab)



Hello Everyone. I am Jusni from Indonesia. I am so glad and lucky to join Academia Sinica as a postdoctoral researcher in the lab A425 under the supervision of Dr. Yu. I hold a PhD in Applied Science and Technology from the National Taiwan University of Science and Technology.

My previous research focused on photocatalytic CO<sub>2</sub> decomposition through nanoparticle-coated with biomass. I am so enthusiastic learn and eager to gain new insight also experience in here. I look forward to know you all and contributing to our research institute. Thank you.

## 12 Claudio Augusto Castañón-Suárez 高蘭迪 (Tien-Shin Yu Lab)



My name is Claudio Augusto Castañón-Suárez and I am a Mexican postdoctoral researcher at the Institute of Plant and Microbial Biology, Academia Sinica in Dr. Tien-Shin Yu's lab. My fascination with plants began in childhood. At the age of six, I planted a red corn seed in my garden and was amazed at how quickly it grew, initiating a lifelong passion for understanding plant growth and development.

By my teenage years, I had developed a collection of more than 40 species of carnivorous and exotic plants, and I also wanted to propagate some of these hard-to-grow plants by traditional techniques and *in vitro* culture. This early curiosity led me to study Biology at university, where my undergraduate thesis focused on the *in vitro* germination and micropropagation of *Pinguicula moctezumae*, an endemic Mexican carnivorous plant. For my Master's degree in Plant Biochemistry, I expanded my expertise into molecular biology and biochemistry. I investigated the expression of the barley Endoprotease B enzyme, identifying natural variation in enzyme accumulation among different Mexican barley cultivars and its potential as a molecular marker for brewing quality. For my Ph.D., I explored the transcriptional regulation of root development and environmental stress responses in *Arabidopsis thaliana*, with a particular emphasis on MADS-box transcription factors and their roles in regulating gene expression under abiotic stress conditions. My current research focuses on the molecular mechanisms underlying mRNA transport in plant tissues.



## Resources to Share 實用資訊分享

RECOMMENDED BY THE LIFE SCIENCE LIBRARY

### Introducing the Global Plants Database

A worldwide resource  
for botanical research

Global Plants is the world's largest database of digitized plant type specimens and related materials—featuring nearly three million high-resolution images and reference works from more than 300 herbaria in over 70 countries.





Get involved






**Global Plants** is the world's largest database of plant type specimens and botanical reference materials, featuring over **2 million** high-resolution specimen images contributed by hundreds of herbaria worldwide.

It is an essential resource for research and teaching in botany, ecology, and conservation.

#### Through Global Plants, users can:

-  Explore plant specimens and biodiversity records
-  Access verified taxonomic information
-  Support teaching and research activities
-  Discover historical and global herbarium collections

#### RELATED LINKS

-  **Global Plants**  
<https://plants.jstor.org/>
-  **User Guide**  
[https://lsl.sinica.edu.tw/EResources/db/files/201962\\_5.pdf](https://lsl.sinica.edu.tw/EResources/db/files/201962_5.pdf)
-  **Video Tutorial**  
<https://www.youtube.com/watch?v=rkLL1c0m08k>

## Administrative Staff Introduction 行政團隊介紹

### 1 Academic Affairs 學術事務 / Yu-Fen Chuang 莊毓芬



Hi! 我是毓芬 Maureen。在所內，我主要負責英文秘書、學程及年輕學者委員會及學術演講三大核心業務。國際學術交流與人才培育是本所長期的發展重點，因此我常透過 Email 與各位同仁聯繫，並承辦相關業務之比賽或活動，以協助推動所方各項事務。

忙碌之餘，我熱衷於探索大自然、深度文化旅行與美食；最近正嘗試用短影音記錄生活中的電影與動漫點滴。期待在處理公務之餘，也能與大家交流生活中的美好趣事！

Hi! I'm Maureen (Yu-Fen). At IPMB, I mainly handle three core areas: English secretary, academic programs and Young Investigator Association (YIA), as well as academic seminars. Since international academic exchange and talent cultivation are long-term priorities of the institute, I often communicate with colleagues via email and help organize related events and competitions to support various institute activities.

Outside of work, I enjoy exploring nature, immersive cultural travel, and discovering good food. Recently, I've also started recording moments from movies and anime through short videos. I look forward to not only working with everyone, but also sharing the small joys of everyday life!

### 2 Personnel and Talent Incubation 人事與人才培育 / Su-Hui Chen 陳素慧



大家好，我在所內統籌辦理人事業務。對我而言，「人事」不只是冷冰冰的法規與流程，更是關於「人」的溫度。無論您的身份，不論是職場上的疑難雜症或生活中的點滴，只要是與「人」相關的事，都歡迎來聊聊。此外，我也負責所務會議與行政會議的安排，如您對所內的行政運作有任何建議或想法，也都歡迎提出討論，讓行政能成為研究團隊最有力的後盾。

工作之餘我喜愛有氧運動，享受汗水帶來的舒壓。也曾登頂臺灣第一高峰—玉山主峰，能用雙腳探索自己所在的土地，是一件很感動的事。因此也鼓勵大家在埋首研究之餘，別忘了抬頭看看窗外的風景，感受臺灣的美麗。

Hello, I oversee personnel affairs at the institute. To me, HR is not just about rules and procedures—it is about people. Whether you have questions at work or in daily life, feel free to reach out. I also coordinate faculty and administrative meetings, and welcome any suggestions to improve our operations and better support our research teams.

Outside of work, I enjoy aerobic exercise and once reached the summit of Yushan, Taiwan's highest peak. Exploring the land on foot is deeply rewarding. I encourage everyone to take a moment from research to appreciate the beauty around you.

### 3 Accounting and Cashier 會計出納 / Yi-Shan Lee 李宜珊



大家好，我是負責把「數字的來龍去脈」說清楚的人。日常工作圍繞在薪資、獎金、津貼與各類補助的造冊與發放，確保大家的努力都能準時、安全地進到口袋；同時也肩負專戶帳戶的控管，當數字出現些微差額時，我的任務就是抽絲剝繭，讓每一筆金流都有合理解釋，讓報表不再神祕難懂。離職儲金的提撥、提領與發放，則像是陪伴同仁在人生不同階段的轉換與銜接，讓制度與保障順利延續。簡單來說，我的工作就是讓每一筆錢都有去向、每一張表都有邏輯，讓大家可以安心專心在自己的專業上，而我則在背後默默把帳顧好。平時的休閒是重訓，讓自己維持體力，也替忙碌的工作找到一個平衡點。

Hello, I am responsible for making sense of the stories behind the numbers. My work focuses on payroll, bonuses, allowances, and various subsidies, ensuring that everyone's efforts are accurately recorded and delivered on time. I also manage designated accounts, tracing discrepancies and ensuring every transaction is clear and accountable.

In addition, I handle retirement fund contributions and payouts, supporting colleagues through different stages of their careers. Simply put, my role is to keep every number meaningful and every report transparent, so others can focus on their work with peace of mind. Outside of work, I enjoy strength training as a way to stay balanced.

#### 4 Comprehensive Affairs 總務採購 / Liang-Ming Hung 洪良銘



大家好，我是洪良銘，在所內服務已經廿多年，最早是在實驗室擔任研究助理，後來因緣際會下才轉任行政工作。目前在所內負責財產登錄管理、公共儀器維護以及總務行政支援。行政工作對我而言，就像是實驗室與辦公室順暢運作的「隱形推手」。我的日常工作是確保全所的財產帳物清楚，並維護常用的公共儀器，讓每一位同仁在需要使用設備時，都能維持在最穩定的狀態。行政庶務雖然瑣碎，但可享受將繁雜事務梳理得井然有序的過程。除了財產管理，也協助各項總務交辦事務，無論大小事，都會以積極且負責的態度，為大家提供最即時的支援。雖然我主要負責的是後勤與管理，但我也非常樂於與各單位溝通。大家以後在財產申報或儀器使用上有任何疑問，或是總務事務需要幫忙，都歡迎隨時找我，我會盡力協助大家解決問題。由於擔任公共儀器的管理工作，所以希望各位同仁在使用各種儀器前都能先了解功能及使用方法，使用前後都能確實登記，讓大家的實驗都可以順利獲得最佳的數據。

Hello, I am Liang-Ming Hung and have been with the institute for over 20 years. I began my career as a research assistant in the lab before transitioning into administrative work. I am currently responsible for asset management, maintenance of shared instruments, and general administrative support.

To me, administration is the invisible force that keeps labs and offices running smoothly. My work ensures that assets are properly tracked and that shared equipment remains reliable for daily use. While administrative tasks can be detailed, I take pride in organizing complex matters into clear and efficient systems.

I also support various general affairs and am always happy to communicate with colleagues. If you have any questions about equipment use or administrative processes, feel free to reach out.

#### 5 Information Technology 資訊科技 / Zheng-Zhong Huang 黃正忠



大家好，我是黃正忠，來植微所服務已逾七年，主要負責本所網站更新與維護、資訊系統開發與維護、伺服器維運及資訊安全相關業務。剛入職時，便負責本所網站改版、儀器與會議室預約系統重新開發、伺服器虛擬化架構建置；後續也依行政需求開發與維護大學生培育計畫報名系統及「中央研究院高中生命科學研究人才培育計畫」報名系統、人員清冊、PI 研究員應聘收件系統等，近期則開發研討會投稿平台。另架設 Mattermost 行政人員社群溝通平台，並維護所內 DokuWiki 等內部系統，協助行政流程數位化，提升作業效率與管理便利性。平時也配合院方資安政策進行弱點掃描與修補，並曾協助其他實驗室處理 Linux 系統問題。雖然我以電動輪椅代步，但不影響我對工作的投入。我相信科技能突破限制，也期許自己持續精進，提供穩定可靠的資訊服務。

工作之餘，我喜歡觀看動漫與影集、關注資訊新知，也喜歡與貓咪互動，偶爾和朋友玩遊戲、品嚐美食。很高興能與大家共事，也期待未來持續提供協助與服務。

Hello, I am Zheng-Zhong Huang and have been with IPMB for over seven years. I am responsible for website maintenance, system development, server management, and information security. Since joining, I have led the institute's website redesign, rebuilt reservation systems for instruments and meeting rooms, and developed platforms for various programs, personnel records, PI recruitment, and seminar submissions. I also maintain internal systems, support administrative digitalization, and help ensure system stability and security in alignment with institutional policies.

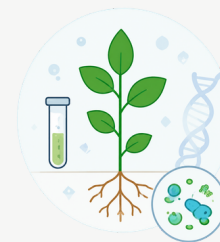
Although I use a powered wheelchair, it does not limit my commitment to my work. I believe technology can overcome barriers and continuously strive to provide reliable and efficient IT services.

In my free time, I enjoy anime, TV series, following tech trends, gaming, and spending time with cats.

## Unboxing the Core Lab 開箱核心實驗室

### Genomic Technology Core (G-TeC)

#### Microarray and Sequencing Division






### 1 From Nucleic Acid Samples to A/T/C/G Sequences: Reading the Genomic Blueprint

- ✓ If proteomics reveals what cells are currently doing, genomics decodes the biological code controlling these behaviors.
- ✓ Living things carry essential genetic information within their nucleic acids, but it must first go through extraction, quality control, and library preparation to be transformed into readable signals.
- ✓ Our team acts as the bridge for this workflow: we turn your raw nucleic acid samples into highly accurate, high-throughput sequencing data, letting genomic signals directly answer your scientific questions.

### 2 Focus on Your Research Goals

Research projects typically begin with specific scientific questions, which often include:

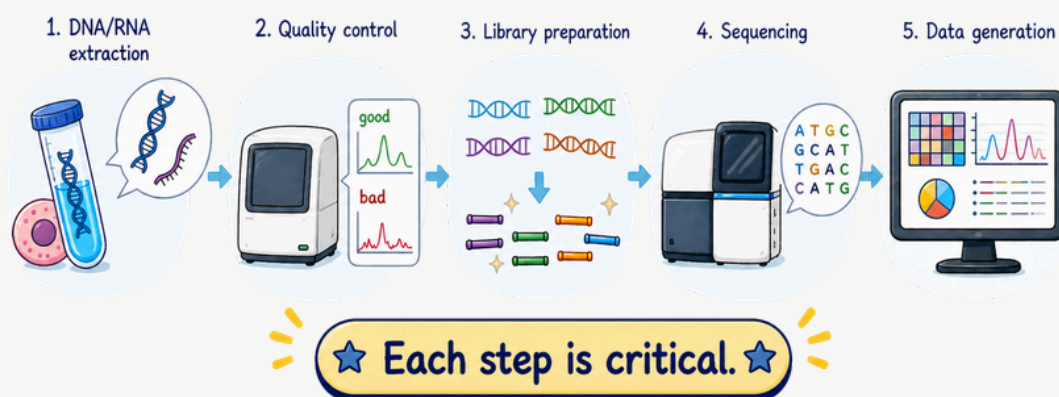
-  **Which genes drive key biological phenotypes?**
-  **Are there specific sequence alterations or copy number variations within the genome?**
-  **How is gene expression controlled and regulated?**

Answering these questions requires far more than merely processing a nucleic acid sample through an instrument. A successful and effective NGS experiment relies on several core pillars: **precise experimental design, rigorous sample and library preparation, the right choice of sequencing platform, and in-depth bioinformatics analysis.**

These stages are interconnected—every single one is indispensable.

### 3 The Journey from Sample to Genomic Data

As illustrated in the workflow, turning a raw sample into high-quality data is a rigorous, stepwise process. Every single stage is critical—even minor inconsistencies early in the workflow can snowball, significantly compromising your downstream results.



## Genomic Technology Core (G-TeC)

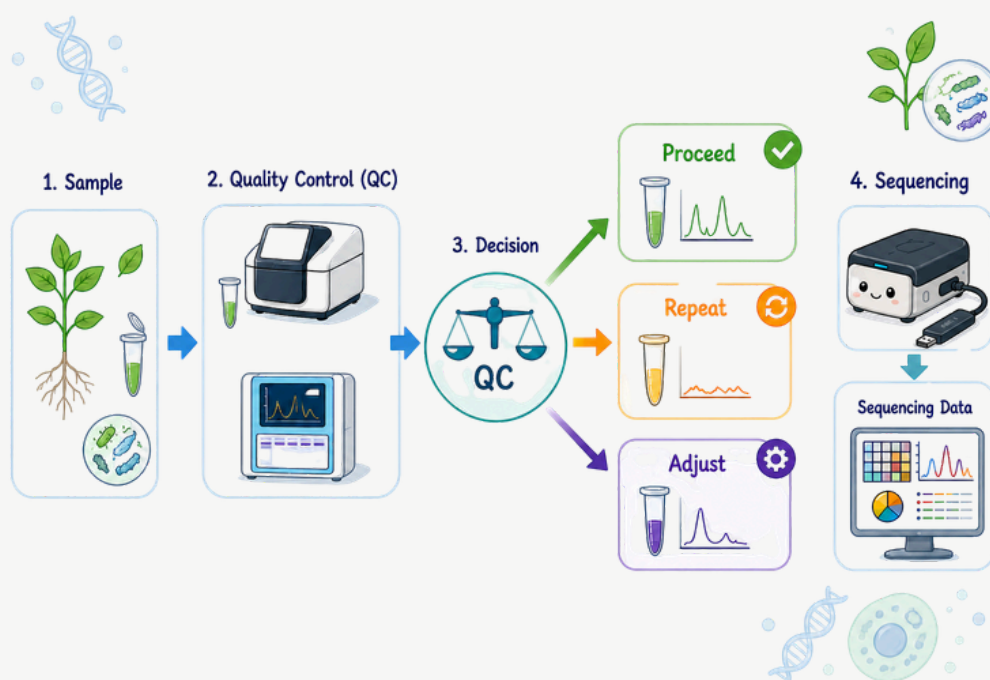
### Microarray and Sequencing Division

#### 4 Our Core Approach: Excellence Beyond Standard Approaches

In addition to our established standard workflows, our expert team designs advanced library preparation and sequencing strategies tailored to the uniqueness of your research question—especially when dealing with complex, degraded, or low-input nucleic acid samples. As your collaborative partner, we support you from the very first step of experimental design, providing technical consultation, expert troubleshooting, and critical decision-making throughout the process.

#### 5 QC Is Not a Checkpoint—It Is a Decision Point

One of the most critical stages in our workflow is nucleic acid Quality Control (QC). While many view QC as just a routine box to check, in practice, it is the most vital decision-making point in your experiment.



Consider these realities:

- ✓ **Purity ≠ Integrity:** A sample can have high purity but still suffer from poor nucleic acid integrity. Both metrics are indispensable.
- ✓ **The Danger of Degradation:** Proceeding with degraded samples doesn't just lower yield; it introduces significant bias into your final genomic data.
- ✓ **The Crossroads:** QC results dictate our next move. They tell us whether it is safe to proceed, necessary to repeat the extraction, or time to adjust the experimental parameters.

# Genomic Technology Core (G-TeC)

## Microarray and Sequencing Division

### 6 Preparing the Illumina Sequencing Library

Before high-throughput sequencing, nucleic acid samples must be prepared into a sequencing library. In this process, RNA molecules are converted into cDNA, double-stranded DNA is ligated with adapters, and the library fragments are then amplified. This ensures that the sequencing platform can successfully process the samples and output reliable data.







### 7 Two Technologies, Two Perspectives: Tailoring Your Strategy


To match your specific research goals, our facility provides expert guidance across two major platforms: **Illumina short-read sequencing for higher accuracy**, and **Oxford Nanopore long-read sequencing for comprehensive genomic coverage**.

By offering both options—including a hybrid approach—each technology provides a unique perspective on the genome, giving you the ultimate flexibility to choose the best strategy for your project.


#### Illumina NGS







-  Short reads
-  Accurate
-  High throughput


 Ideal for expression & variants

#### Oxford Nanopore (ONT)



-  Long reads
-  Real-time
-  Direct DNA or RNA

 Ideal for full-length & structure



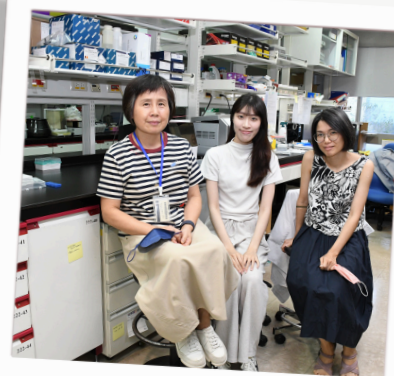
Different tools, different perspectives. Choose based on your research question!

## Genomic Technology Core (G-TeC)

### Microarray and Sequencing Division



#### Ask the Core Team: Questions We Hear All the Time



G-TeC Team

#### Q1 How do I choose between different sequencing platforms (e.g., short-read vs. long-read) for my project?

Think of it as picking the right tool.

- **Short-read (NGS):** Your go-to, budget-friendly option. Highly accurate and perfect for counting gene expression or finding small mutations.
- **Long-read (Third-Gen):** Best for assembling new genomes (*de novo*), finding large structural changes, or reading full-length transcripts.

**Complex project? We can help you plan a hybrid workflow that combines both!**

#### Q2 Why did my high-throughput sequencing data not match my expectations?

Biology is complex, but the issue usually comes from early sample preparation, not the sequencer itself.

Common **reasons** include: hidden sample degradation, suboptimal collection methods, or incorrect sampling time points. Don't panic—bring us your experimental design, and we will help you troubleshoot for your next run.

#### Q3 When is the best time to consult the core facility?

**Pro Tip:** Before you extract your very first sample!

Talking to us during your planning phase is the best way to save time and money. We can help optimize your sample collection methods, ensure correct replicates, and prevent expensive mistakes before it is too late. Let's get it right from the start!

### Conclusion: Your Collaborative Partner in Genomics

Moving beyond standard library preparation, we partner with you through expert consultation to tailor your experimental design. From strict nucleic acid QC to high-fidelity data production, we maintain the highest standards of sensitivity and specificity, fully supporting you in transforming precious nucleic acid samples into precise, reliable, and reproducible research outcomes.



## Good News & Achievements 植微人的好消息

1

### EMBO Workshop: Best Poster Award



Congratulations to Wei-Han Fang on receiving the Best Poster Award at the EMBO Workshop.



2

### Academia Sinica Postdoctoral Scholarship



**Academia Sinica Postdoctoral Scholar**  
Shan-Chi Hsieh



**Regular Postdoctoral Scholar**  
Yuta Horiuchi

Congratulations to Shan-Chi Hsieh and Yuta Horiuchi on receiving the postdoctoral scholarship from Academia Sinica.



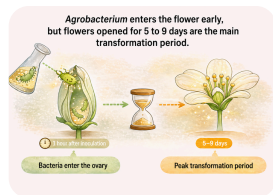
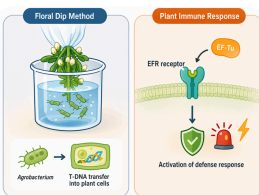
## Editor's Picks 本期精選

### POPULAR SCIENCE

#### When Genetic Engineering Meets the Plant Immune System

Featuring research by Drs. Erh-Min Lai, Chih-Horng Kuo and Chih-Hang Wu

<https://reurl.cc/GavkOx>



### PREVIOUS ISSUES

Missed our **previous newsletters?**

Catch up on highlights, stories, and events from earlier issues.

#### Issue 01



<https://ipmb.sini.ca.edu.tw/newsletter/202512.pdf>

#### Issue 02



<https://ipmb.sini.ca.edu.tw/newsletter/202603.pdf>

## YIA Spotlight 年輕學者委員會

# Young Investigator Association

Stay connected with YIA

1. IPMB Email [YIA] Activity!
2. Contact Your YIA Lab Representative!
3. Access Website Below!

YIA Official Website (Travel Grant/Job Opportunities): <https://ipmb.sinica.edu.tw/en/about/youngCommittee>

YIA Facebook Group (Activities Information): <https://www.facebook.com/groups/504629419562063>



YIA core member group photo

## Past Events 活動回顧

### [May 15, 2026] Indonesian Cultural Cooking Night



The Indonesian Cultural Cooking Night brought people together to cook, share, and enjoy Indonesian food in a fun and relaxed atmosphere. Participants prepared traditional dishes, learned about Indonesian culture, and spent the evening enjoying good food and great company together.



# Young Investigator Association

## [April 28–May 18 2026] Call for IPMB T-shirt Design

**IPMB T-SHIRT DESIGN 募集中!!!**  
CALL FOR LOGO DESIGNS  
YOUR ART. OUR IDENTITY.

**FRONT DESIGN**  
FRONT

**BACK DESIGN**  
BACK

**SMALL LEFT CHEST:**  
Representing our core VALUES we always live in mind and heart.

**LARGE BACK:**  
Representing the TOTAL ASSEMBLAGE of IPMB

**DEADLINE: MONDAY, MAY 18**  
DON'T HIDE YOUR TALENT!  
LET US SEE YOUR PRECIOUS GIFTS!

Scan me to send your works!!!  
We know you are talented!!  
Show us your hidden gifts!!  
(note: need email/sign to upload)

The Young Investigator Association of IPMB

YIA invites the IPMB community to design a unique T-shirt that represents the spirit and identity of the institute. Participants are encouraged to express their creativity through original front and back logo designs inspired by research.

## [May 28, 2026] QE Workshop

**Qualifying Examination Workshop 2026**

DATE: 28<sup>th</sup> May | VENUE: R106 | TIME: 13:30 – 15:30 PM

WORKSHOP HIGHLIGHTS

- QE Overview Preparation Guide
- QE Experience Sharing
- Interactive QA with Seniors
- Faculty Perspectives on QE Success
- QE Hypothesis Showcase

**JOIN US**

Students and research assistants are invited to learn about QE, exchange experiences, and strengthen preparation.

Faculty members, Post-docs and PhD seniors are warmly invited to share guidance and expertise.

The QE Workshop provided guidance and experience sharing for students preparing for their Qualifying Examination. The workshop created a supportive platform to strengthen preparation and build confidence for this important academic milestone.

## [June 1, 2026] IPMB Cross-Disciplinary Mixers

**IPMB CROSS-DISCIPLINARY MIXERS**

JOIN THE SERIES & REGISTER NOW

**TIMELINE: A SERIES OF 7 MIXERS**  
FIRST MIXER: JUNE 1 (MON), 12:00-13:30 @ A324.  
ALL OTHER DATES: TBD.

**ORGANISERS**  
Organised by: The Young Investigator Association (YIA)

**PROPOSED THEMES**

- JUNE 1 (MON), 12:00-13:30 @ A324: PLANT BIOLOGY / MICROBIOLOGY / SYMBIOSIS
- TBD: CROP SCIENCE / PLANT IMMUNITY / DEVELOPMENTAL BIOLOGY
- TBD: CELL BIOLOGY / MICROBIAL COMMUNITY / MARINE BIOLOGY
- TBD: ALL IPMB TOPICS OPEN MIXER
- EXPERIMENTAL FAILURES: SHARED STORIES
- FAILURES MAKE US STRONGER: SHARED GROWTH
- UNEXPECTED SUCCESS: AHA! MOMENTS

**PURPOSE**

- FACILITATE CASUAL SCIENTIFIC EXCHANGE
- LOWER INTERDISCIPLINARY BARRIERS
- INCREASE EXPOSURE TO NEW ADVANCES
- LUNCH WILL BE PROVIDED

NARRATIVE STYLE, NO SLIDES REQUIRED, VERBAL SHARING OR SHOWING A SLIDE

**OPEN TO ALL IPMB MEMBERS**

The IPMB Cross-Disciplinary Mixers brought together members of the IPMB community from different fields to exchange ideas, explore potential collaborations, and strengthen connections across the institute.

**Featured Events 學術活動精選**



**Shu-Chen Chen Lectureship**

2026  
03/25



**Hsien-Wen Li Memorial Lectures**

2026  
04/15



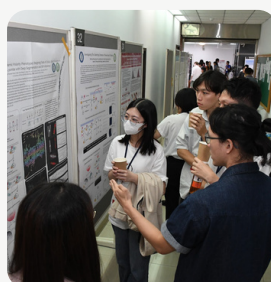
**EMBO Workshop**

2026  
04/24  
|  
04/27



**Quantitative Microbiology Symposium**

2026  
05/18  
|  
05/19



**AS-KAIST Bilateral Symposium**

2026  
05/29



Life at IPMB 所內活動側寫



Makoto's Lab Warming Party

2026  
03/06



Phoebe's Lab Warming Party

2026  
03/20



Spring Tea Party

2026  
03/27



Rice Planting Experience (Pilot Event)

2026  
03/28



AS Spring Softball Tournament

2026  
04/18



For any comments or suggestions about this newsletter, please contact Ms. Pei-Ling Wu (lilian541@gate.sinica.edu.tw).