



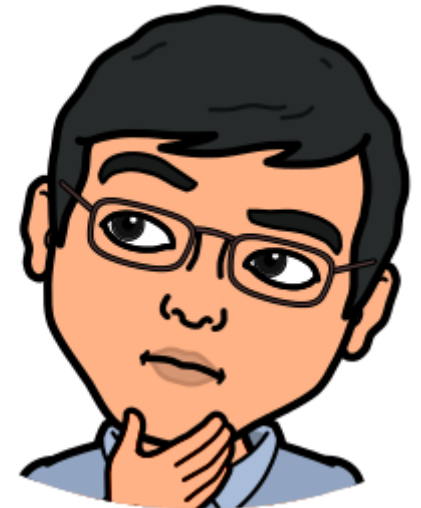
臺北醫學大學  
TAIPEI MEDICAL UNIVERSITY

# International Ph.D. and Master Program for Translational Science

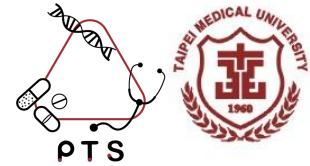
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Taipei Medical University, Taiwan

# ***Why Translational Science ?***



# Cross Death Valley

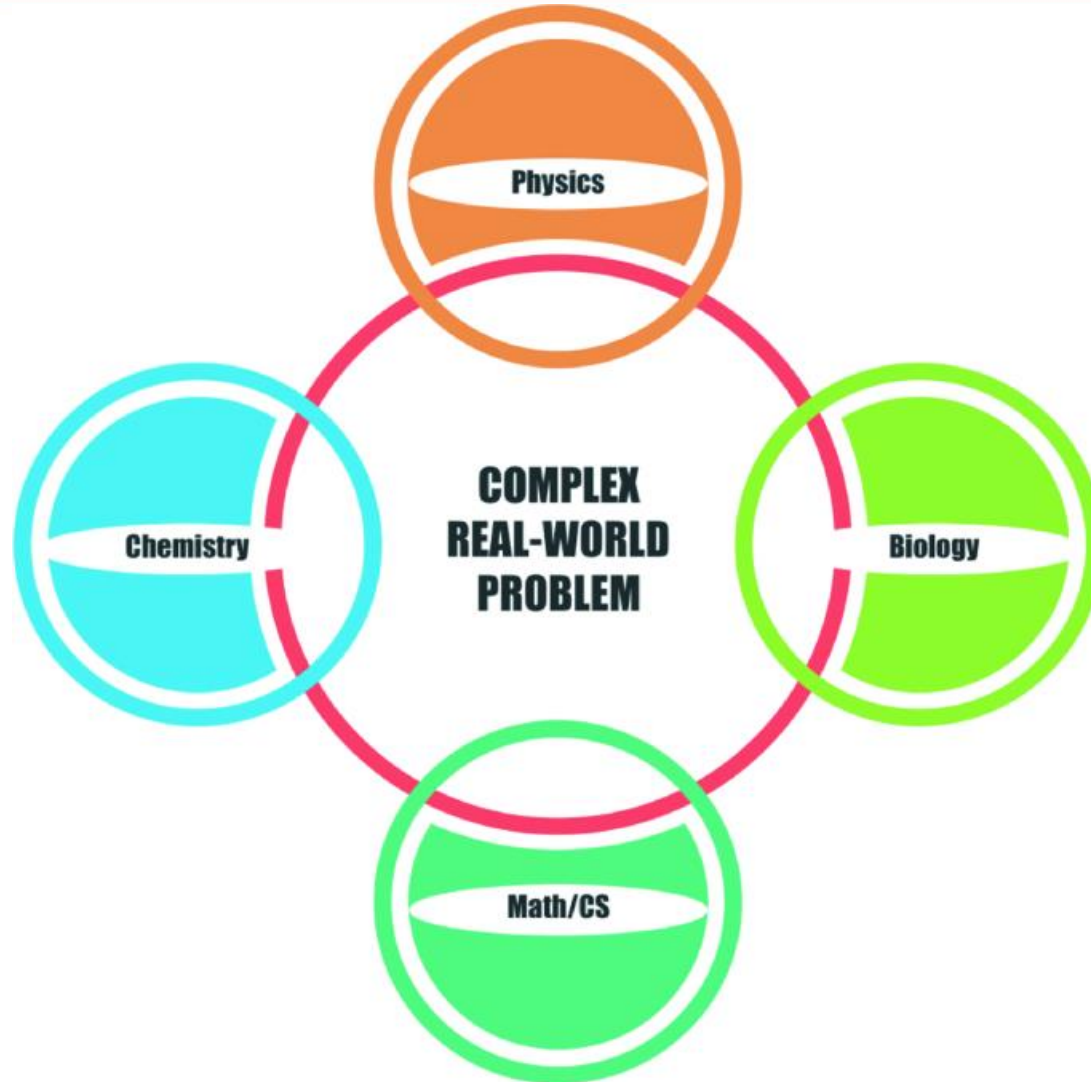
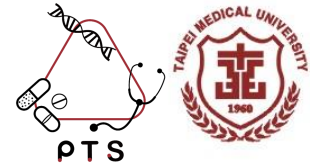


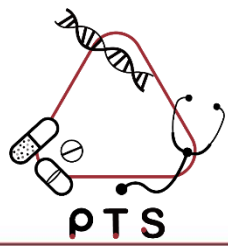
**Bench**

**Bedside**



# Interdisciplinary Science





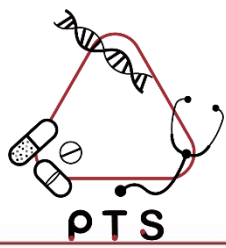
# Introduction



The **International Ph.D. and Master Program for Translational Science** in TMU (Taipei Medical University) provides comprehensive training programs **for clinical and translational researches**.

- ◆ Expertise from various fields including molecular biology, cancer biology, animal model, aging, proteomic and structural biology
- ◆ Establish platforms for **translational research and clinical biomarker discovery** for oncology, neuroscience, reproductive medicine, stem cell and regenerative medicine.





# Core Competencies



- To gain both knowledge and training in biological science and integrate basic and clinical research at advanced level
- To develop the ability for translating basic research to applications
- To develop the ability to analyze the developing trends of biomedical industry and medical needs with an international perspective
- To gain legal literacy related to biomedical industry and develop managerial expertise





Who We Are

# Biophysics, Biochemistry and Biologics



**Pioneer of  
Structural biology**

**Z-form DNA**

**Dr. Andrew HJ Wang**  
Academician, Chair professor



**Structural biology**

**X-ray  
Crystallography**

**Antibody drug**

**Dr. Cheng-Chung Lee**



**Antibody-  
drug  
conjugate**

**Dr. Ming-Heng Wu**



**Structural  
biology**

**X-ray  
Crystallography**

**DNA mimic  
protein**

**Dr. Hao-Ching Wang**



**Peptide drug**

**Antibody drug**

**Nanomedicine**

**Dr. Tsai-Mu Cheng**



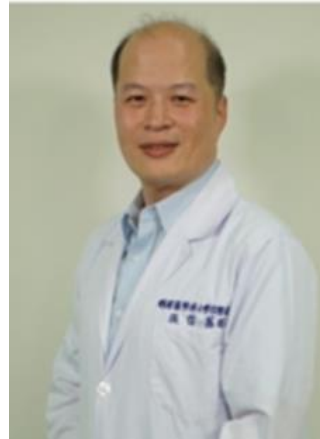
# Molecular and Cellular Biology



**Glyco-  
biology**

**Target-  
therapy**

**Dr. Ming-Heng Wu**



**Post-  
translational  
modification**

**Dr. Che-Chang Chang**



**3D-culture  
Neuro-  
muscular  
junctions**

**Dr. Yu-Lung Lin**



**Cellular protein  
interactions**

**Tumor micro-  
environment**

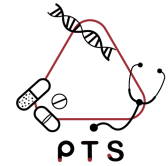
**Dr. Shian-Ying Sung**



**Immune  
modulation**

**Dr. Shu-Chun Chang**

# Pre-clinical animal models



**Dr. Yi-Fan Chen**

**Genetically modified  
mouse models**

**Geroscience &  
Geriatrics**



**Dr. Che-Chang Chang**

**PDX (patient-derived  
xenograft) mouse  
models**

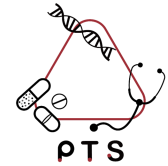


**Dr. Alexander Wu**

**Cancer stem cell  
tumor models**

**Medical Images**

# Omic studies

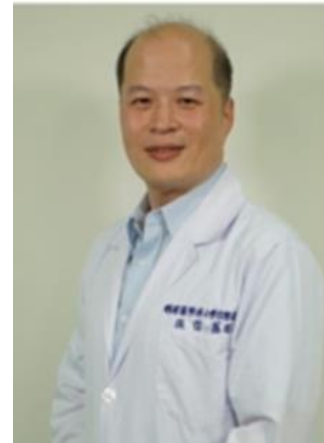


**GWAS**

**Statistical genetics**

**Genetic epidemiology**

**Prof. Wen-Chang Wang**



**Proteomics**

**Serum Biomarker**

**Gastric and brain cancer**

**Dr. Che-Chang Chang**



**Proteomics**

**Biomarker discovery**

**Endometriosis**

**Prof. Wei-Chung Yang**



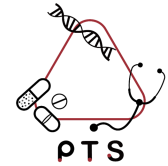
**Circulating cancer cells**

**Genomics**

**Proteomics**

**Dr. Shian-Ying Sung**

# PhD & Master Students

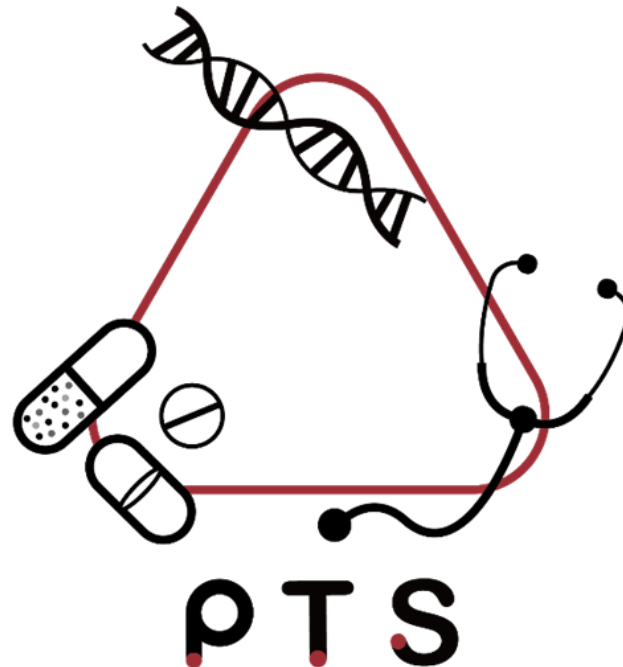


**WHAT  
WE DO ?**

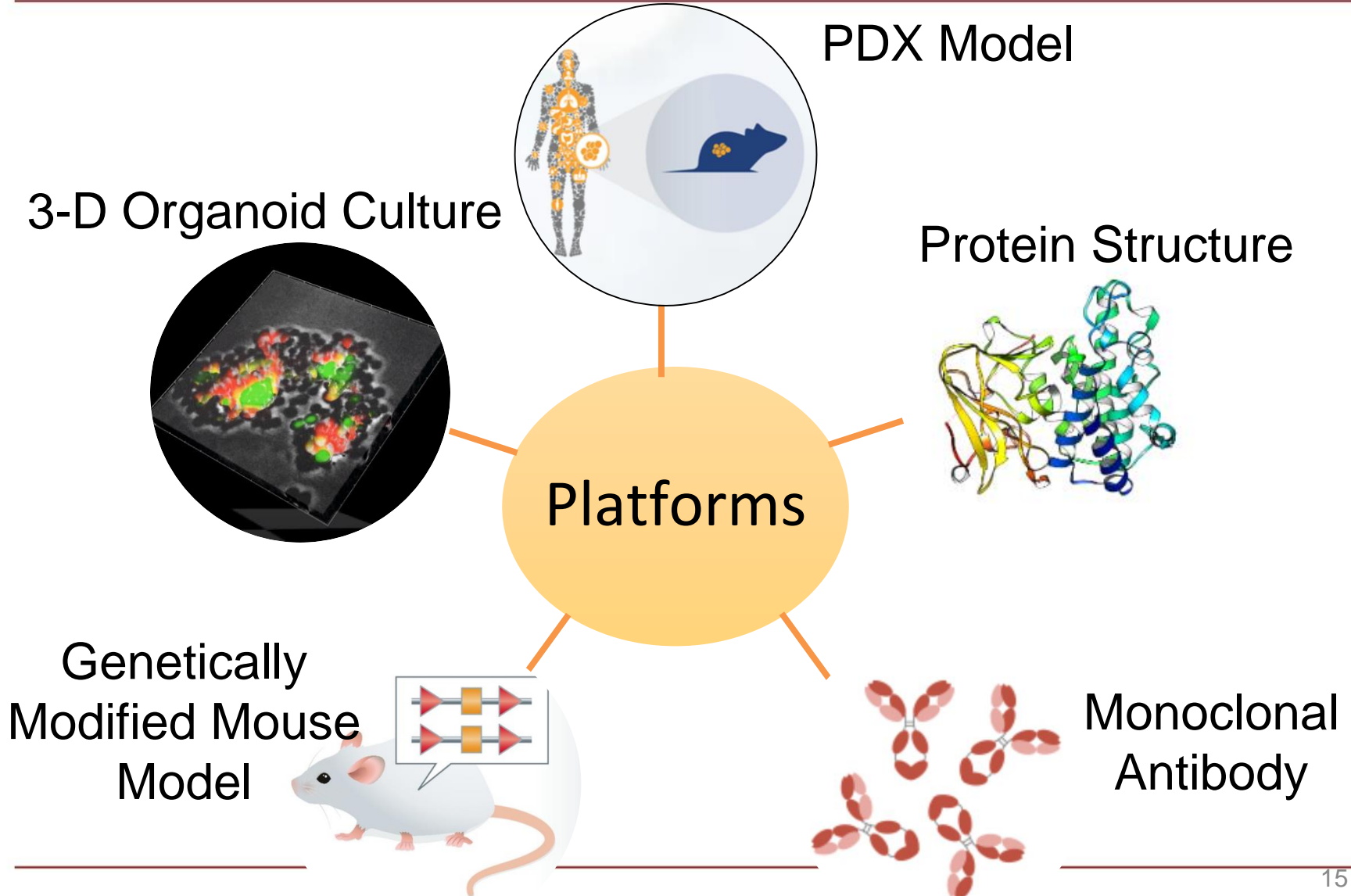


# Goal



To create the platform of translational research for clinical applications



# The platform of Translational Research




# Invited talks




## SPECIAL LECTURE

### WHY DNA VIRUSES POSE UNIQUE THERAPEUTIC CHALLENGES: A LOOK AT HEPATITIS B VIRUS



Language: English



Professor Lily Hui-Ching Wang

30 May, 2023  
14:00-15:30  
Meeting room, 12F, First Medical Building,  
Shuang Ho Hospital



## Dr. Hung-Yuan (Peter) Chi

NATIONAL TAIWAN UNIVERSITY  
DISTINGUISHED PROFESSOR OF  
BIOCHEMICAL SCIENCES

### DNA Repair in Precision Medicine

19th July 2023 (WED)  
14:00-15:30  
8F Fan-shaped conference room,  
Education & Research Building,  
Shuang-Ho Campus



## 3D Whole Tissue Imaging

### Application Workshop

2023/08/08 11:00-12:00

Classroom 9702, 7 Floor,  
Biomedical Technology Building,  
Shuang-Ho Campus, TMU (雙和院區)  
02 77523723 #200

Co-organizer



Presenter Billy Huang  
Nebulum Technologies

臺北醫學大學  
轉譯醫學博士學位學程  
The Ph.D Program for Translational Medicine, TMU

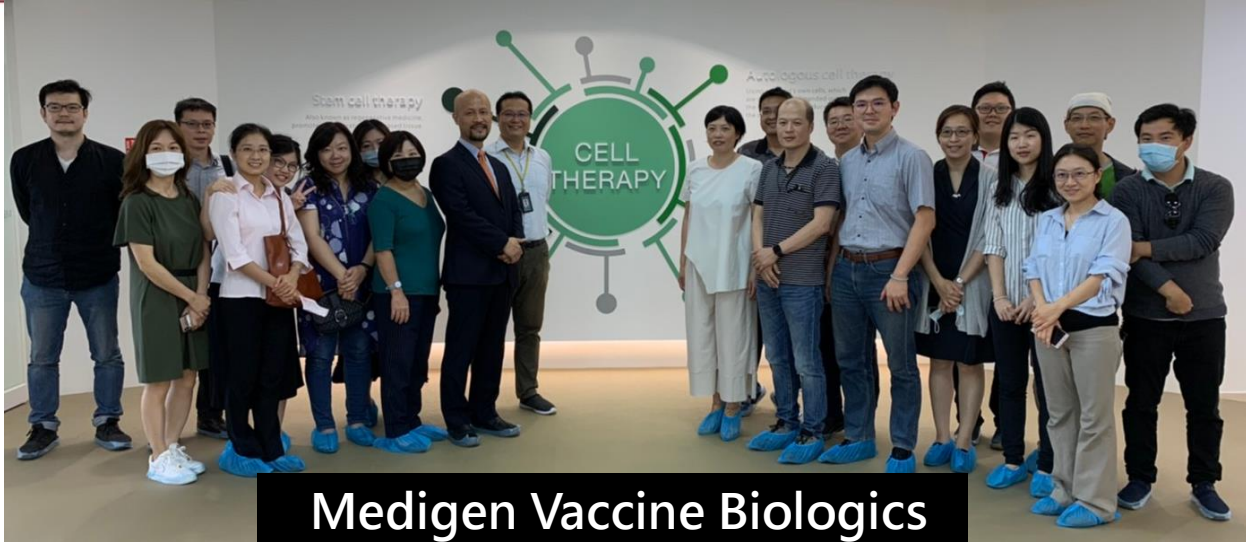
Pioneering Bioimaging Solutions  
to Advance Drug Discovery and  
Clinical Diagnosis

Registration Link





# Link with Industry



Medigen Vaccine Biologics



The Development Center for Biotechnology



# International Collaborations





# Monthly Happy Hour

New ideas comes from freely talking

Parties for special events

Share research experiences



**What we have  
achieved ?**

# Spin-off Startup Company



- **Founder: Prof. Wei-Chung Yang**
- **Capital amount: NT\$ 200 million**
- **Paid-in capital: NT\$110 million**
- **Clinical application field: Women's health**
- **Product: Endometriosis diagnosis kit**



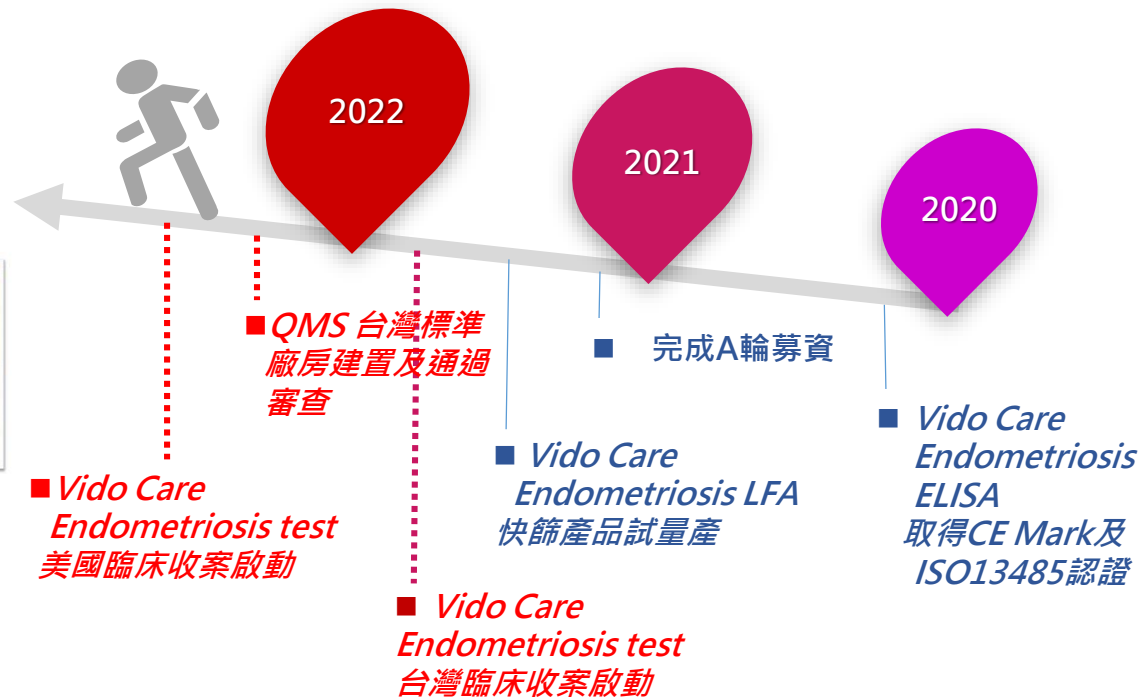
Vido Care® Endometriosis test



ELISA



LFA



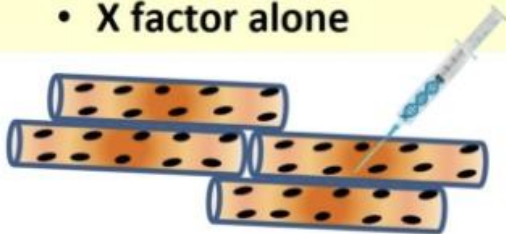
# Research Highlight



Ribonucleotide reductase M2B in the myofibers modulates stem cell fate in skeletal muscle. *npj Regenerative Medicine* (2022) **IF: 14.4**

## Effective factors in the niche: X factor

- Cell therapy (MuSC + X factor)
- X factor alone



**Dr. Yi-Fan Chen**

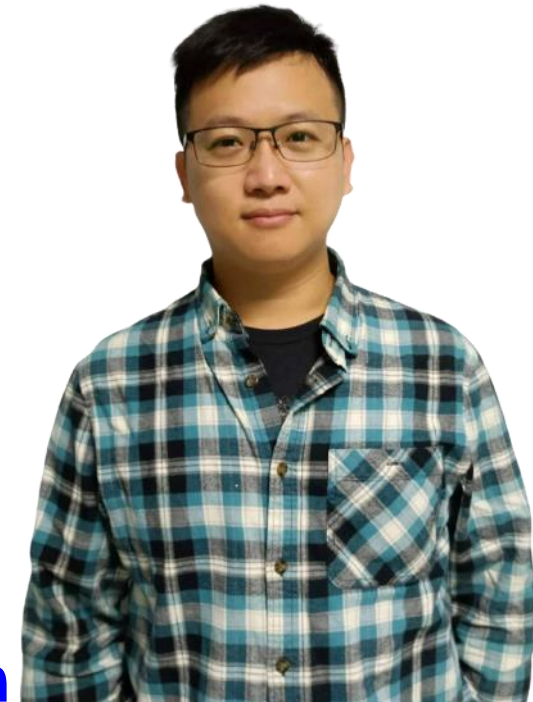
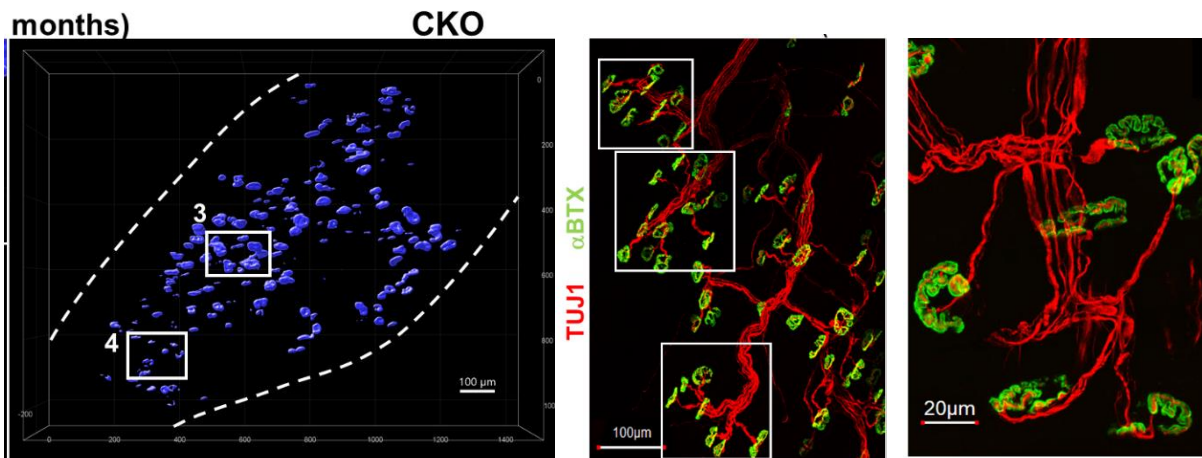


# Research Highlight



CRABP1-CaMKII-Agrn regulates the maintenance of neuromuscular junction in spinal motor neuron. *Cell Death & Differentiation* (2022) **IF:12.067**

## Advanced Assessment of Neuromuscular junction (NMJ)



Dr. Yu-Lung Lin



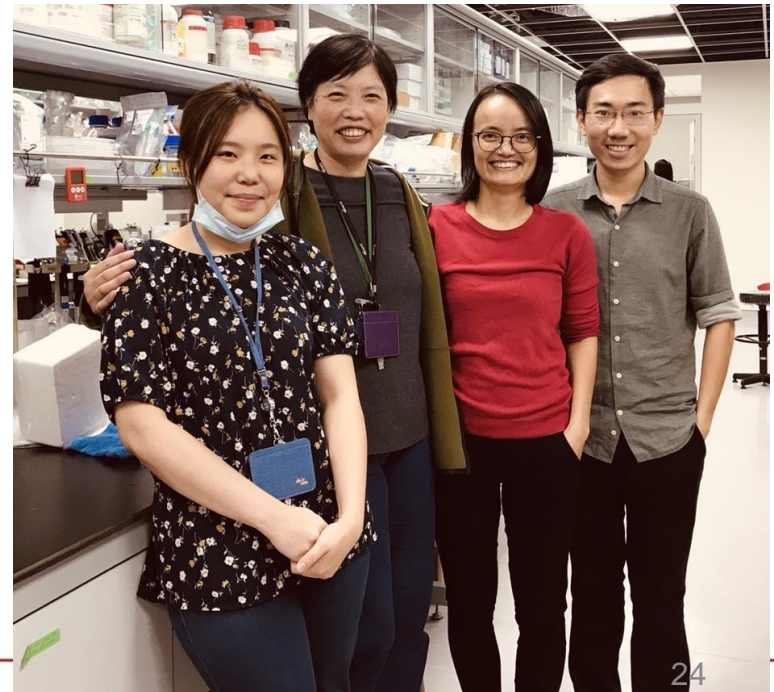
# Outstanding Alumni

## *Dr. Le Thi Huynh Trang*



The ADAM9/UBN2/AKR1C3 axis promotes resistance to androgen-deprivation in prostate cancer. *American Journal of Cancer Research.*

**IF:5.942**

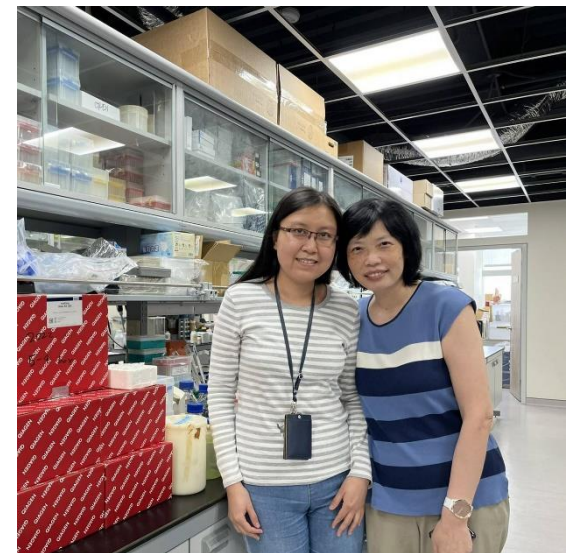
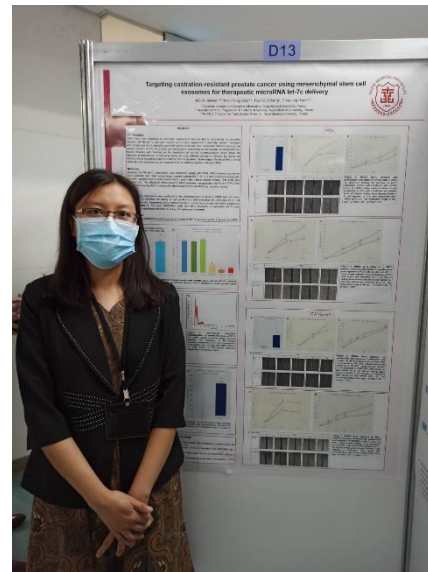


# Outstanding Alumni

## *Ida Kurniawati*



Target Castration-Resistant Prostate Cancer Using Mesenchymal Stem Cell Exosomes for Therapeutic MicroRNA-let-7c Delivery. ***Frontiers in Bioscience Landmark***



# **2024 TMU Spring Admissions**

Application Deadline (Taiwan time):  
2023-09-10 23:59

# Requirements

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- An **Master** degree (for PhD Program)
- A **Bachelor** degree (for Master Program)
- A diploma of **M.D. degree** and received at least **two years of documented clinical training with publications** equivalent to a master's thesis. (for PhD Program)

# Requirements



## English proficiency

All applicants must demonstrate a minimum level of English language proficiency for admission.

You will need to satisfy the required competence level for your intended program.

	Master's Applicant	Ph.D. Applicant
Minimum score required	CEFR B1 (Threshold) or above	CEFR B2 (Threshold) or above

## Financial statement

Applicants shall provide a financial statement, obtained within the last three months, reflecting at least USD 4,000.



# Scholarship

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- **University (for two years)**
  - Type A scholarship (PhD, NT\$16000/month)
  - Type B scholarship (Master, NT\$12000/month)
- **Program (for two years)**
  - NT\$2000-8000/month for students who get the type A scholarship
- **Advisors or Professors**
  - At least NT\$8000/month for two years
  - Advisors will be responsible for the scholarship after the 3<sup>rd</sup> year (PhD)

# Government Scholarship

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- **Taiwan Scholarship**
- **NSTC Scholarship**
- **MOE Scholarship for Lecturers**
  - Three~four years, NT\$25,000/month

# Admission Regulations

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- Please visit the website for details:

<https://ogeadmission.tmu.edu.tw/foreign/index/index/applyForeignSn/86>

# Contact Person

- **Director**

Dr. Ming-Heng Wu

E-mail: [mhwu1015@tmu.edu.tw](mailto:mhwu1015@tmu.edu.tw)



- **Administrative teacher**

Dr. Yi-Fan Chen

E-mail: [evan.yifan@tmu.edu.tw](mailto:evan.yifan@tmu.edu.tw)



Dr. Yu-Lung Lin

E-mail: [yllin4671@tmu.edu.tw](mailto:yllin4671@tmu.edu.tw)



# Contact Person

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- **Secretary**

Ms. Karen Lin

E-mail: [peisyuan@tmu.edu.tw](mailto:peisyuan@tmu.edu.tw)



# Website

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- International PhD and Master Program for Translational Science. website [Link](#)
- 2024 admission website [Link](#)



# International PhD and Master Program for Translational Science



WELCOME