2025 NPUST
Ph.D. Research Assistantship
Advisors' brochure

Office of International Affairs
National Pingtung University of
Science and Technology

Taiwan, R.O.C.

Table of Content

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I. **About the Research Assistantship scholarship**

NPUST Ph.D. Assistantship scholarship

International students enrolled in Ph.D. programs that start on September 2025 focusing on the following research topics describe in page 5 to page 33.

1. Program starting date: September 1, 2025

2. NPUST website: https://oia2.npust.edu.tw/

3. English requirements:
   TOFEL iBT 71, IELTS 5.5, TOEIC 785, or BULATS ALTE Level 3; with the advisor's permission, requirements may be fulfilled by the end of first year of study.

4. Assistantship scholarship covers:
   - **Tuition fee waiver**
   - **Stipend of at least NTD 14,000 per month (NTD 8,000 from school; NTD 6,000 from advisor)**
   - **Once awarded, the assistantship is valid for up to 4 years**

5. Important Dates

Date	Remarks
Mar. 31, 2025	Deadline of Application (through email)
Jun. 30, 2025	Notification of result and issue of Acceptance Letter
September 2025	Registration/Enrollment at NPUST

6. Application documents
   Send (a)-(f) to eric1967@mail.npust.edu.tw by Mar. 31st, 2025
   (a) Application form (download from https://reurl.cc/Q5ebgo)
   (b) Research proposal
   (c) Master diploma and transcript (if it's not Chinese or English version, please also provide an English translation)
   (d) A copy of English proficiency certificate within past two years
   (e) Two recommendation letters
   (f) A copy of passport

7. Responsibilities of Assistantship Recipient
   Assistantship recipients shall maintain excellent academic performances and meet the requirements necessary for assistantship continuation in the following years.
   I. First Academic Year
   1. Have an academic grade point average from the previous year which is 85 or

higher and a conduct grade of 80 or higher;

2. Have taken at least one course in Chinese language in the previous year
3. Have taken part in at least two NPUST Office of International Affairs events or International Cultural activities.

II. Second Academic Year

1. Have an academic grade point average from the previous year which is 85 or higher and a conduct grade of 80 or higher;
2. Have taken part in at least one domestic academic conference with publication (including poster session) as the leading student author; or publish an SCI or similar level article as the leading student author;
3. Shall have taken part in a Test of Chinese Proficiency at any level
4. Cumulatively, from the beginning of the first academic year, have taken part in at least three NPUST Office of International Affairs events or International Cultural activities.

III. Third Academic Year

1. Have an academic grade point average from the previous year which is 85 or higher and a conduct grade of 80 or higher;
2. Have passed the PhD qualification exam;
3. Have published an SCI or similar article as the leading student author
4. Cumulatively, from the beginning of the first academic year, have taken part in at least four NPUST Office of International Affairs or International Cultural activities.

National Pingtung University of Science and Technology

2025 Announcement

International Ph.D. Assistantship

Reference number: 202501

Information about Research Assistantship	
Research Title (Tentative)	Animal vaccines and adjuvant
Abstract/ Description	1. Basic background in molecular biotechnology and immunology. 2. Extensive practical experience with molecular and cell biological techniques. 3. Good communication skills and good command of spoken and written English. 4. Motivation and interest in animal vaccine research. 5. Independent and creative thinker, team player.
Assistantship	1. Monthly stipend: NTD 6,000 2. Tuition-waiver 3. Duration of assistantship: 4 years
Qualifying Test for Assistantship	Will be interviewed by the advisor
Advisor's General Information	
Name	Chun-Yen Chu
Title	Professor
Department	Graduate Institute of Animal Vaccine Technology
Expertise	1. Cell culture system - Bioreactor production process - Mass production of viral antigens 2. Expression system - Fermentation - High yield production technology 3. Adjuvant - Slow release technology - Biologic adjuvant - Plasmid CpG 4. Development of live, inactivated, subunit, and DNA vaccines for duck, porcine, and bovine diseases. Worked for Vaccine industry company for 25 years
Awards	2022- 2025 Distinguished Professor
Laboratory Name	Vaccine Engineering Laboratory
Info about Lab	Industrial application of developed technologies is an important target for the

<table>
<tr><td></td><td colspan="3">institute. The transfer of technology from the laboratories to the production line ultimately validates the research efforts invested and helps improve the competitiveness of the animal vaccine industry. The aim of this laboratory is to develop live, inactivated, subunit and DNA vaccines for duck, porcine, and bovine diseases. Various novel adjuvants are also subjects of research interest.</td></tr>
<tr><td>Web site</td><td colspan="3">https://iavt.npust.edu.tw/blog/teacher/chun-yen-chu/
https://avt.npust.edu.tw/teacher/%e6%9c%b1%e7%b4%94%e7%87%95/
https://fps.npust.edu.tw/teacher/cychu/biblio/</td></tr>
<tr><td>Telephone</td><td>+886-8-770-3202 ext.5331</td><td>Telephone</td><td>+886-8-770-3202 ext.5331</td></tr>
<tr><td colspan="4">Advisor’s Academic Achievements</td></tr>
<tr><td>Statistical Data</td><td colspan="3">● Number of publications: 23 papers in 10 years.
● Number of funded projects: 37 projects in 10 years.
● Total amount of funded projects: NT 42,007,700 in 10 years.
● Number of patents: 5 patents in 10 years.</td></tr>
<tr><td>Some of the most cited publications (no more than 5)</td><td colspan="3">1. Stella Pranoto, Hsing-Chieh Wu, and Chun-Yen Chu*. Porcine Circovirus Type 3: Diagnostics, Genotyping, Challenge in Vaccine Development. Transboundary and Emerging Diseases. Vol. 2023, Article ID 8858447, 9 pages, 2023. (SCI)
2. Hsian-Yu Wang, Wan-Chen Chang, Min-Chia Wu, Jiahorng Liaw, Ai-Li Shiau, Chun-Yen Chu*. Oral DNA vaccine adjuvanted with cyclic peptide nanotubes induced a virus-specific antibody response in ducklings against goose parvovirus. Veterinary Quarterly. 2023, 43, 1: 1-9. (SCI)
3. Min-Chia Wu, Hsing-Chieh Wu, Jai-Wei Lee, Wan-Chen Chang and Chun-Yen Chu*. A protein-based subunit vaccine with biological adjuvants provides effective protection against Pasteurella multocida in pigs. Veterinary Research. 2023, 54:17. (SCI)
4. Min-Chia Wu, Thu-Dung Doan, Jai-Wei Lee, Yi-Ting Lo, Hsing-Chieh Wu, Chun-Yen Chu*. Recombinant suilysin of Streptococcus suis enhances the protective efficacy of an engineered Pasteurella multocida toxin protein. Research in Veterinary Science. 2022, 151:175-183. (SCI).
5. Yi-Ting Lo, Fiona Tulloch, Hsing-Chieh Wu, Garry A. Luke, Martin D. Ryan, Chun-Yen Chu*. 2021. Expression and Immunogenicity of Secreted Forms of Bovine Ephemeral Fever Virus Glycoproteins Applied to Subunit Vaccine Development. Journal of Applied Microbiology. 2021, 131, 1123--1135. (SCI)</td></tr>
<tr><td>Recent referred journal publications (past 3-5 years)</td><td colspan="3">1. Stella Pranoto, Hsing-Chieh Wu, and Chun-Yen Chu*. Porcine Circovirus Type 3: Diagnostics, Genotyping, Challenge in Vaccine Development. Transboundary and Emerging Diseases. Vol. 2023, Article ID 8858447, 9 pages, 2023. (SCI)
2. Hsian-Yu Wang, Wan-Chen Chang, Min-Chia Wu, Jiahorng Liaw, Ai-Li Shiau,</td></tr>
</table>

(no more than 10)	Chun-Yen Chu*. Oral DNA vaccine adjuvanted with cyclic peptide nanotubes induced a virus-specific antibody response in ducklings against goose parvovirus. Veterinary Quarterly. 2023, 43, 1: 1-9. (SCI) 3. Min-Chia Wu, Hsing-Chieh Wu, Jai-Wei Lee, Wan-Chen Chang and Chun-Yen Chu*. A protein-based subunit vaccine with biological adjuvants provides effective protection against Pasteurella multocida in pigs. Veterinary Research. 2023, 54:17. (SCI) 4. Uudamsaikhan Gundegmaa, Odbileg Raadan, Hsing-Chieh Wu, Hsian-Yu Wang, Min-Chia Wu, Chun-Yen Chu*. Recombinant hexon protein as a new bovine adenovirus type 3 subunit vaccine candidate. Journal of Veterinary Research. 2023, 67:23-31. (SCI) 5. Li-Ting Cheng , Chun-Yen Chu, Hung Vu-Khac, and Thu-Dung Doan. Signal sequence contributes to the immunogenicity of Pasteurella multocida lipoprotein E. Poultry Science. 2023, 102:102200. (SCI) 6. Min-Chia Wu, Thu-Dung Doan, Jai-Wei Lee, Yi-Ting Lo, Hsing-Chieh Wu, Chun-Yen Chu. Recombinant suilysin of Streptococcus suis enhances the protective efficacy of an engineered Pasteurella multocida toxin protein. Research in Veterinary Science. 2022, 151:175-183. (SCI). 7. Kamonpun Chuekwon, Chun-Yen Chu and Li-Ting Cheng. N-terminus of flagellin enhances vaccine efficacy against Actinobacillus pleuropneumoniae. BMC Veterinary Research. 2022, 18:279. (SCI) 8. Yu-Jing Zeng, Min-Kung Hsu, Chiao-An Tsai, Chun-Yen Chu, Hsing-Chieh Wu, Hsian-Yu Wang. A Senescence-Like Cellular Response Inhibits Bovine Ephemeral Fever Virus Proliferation. Vaccines 2021, 9(6), 601; (SCI) 9. Yi-Ting Lo, Fiona Tulloch, Hsing-Chieh Wu, Garry A. Luke, Martin D. Ryan, Chun-Yen Chu*. 2021. Expression and Immunogenicity of Secreted Forms of Bovine Ephemeral Fever Virus Glycoproteins Applied to Subunit Vaccine Development. Journal of Applied Microbiology. 2021, 131, 1123--1135. (SCI) 10. Min-Chia Wu, Yi-Ting Lo, Hsing-Chieh Wu, Hsian-Yu Wang, Chun-Yen Chu*. Cross-protection of recombinant Pasteurella multocida toxin proteins against atrophic rhinitis in mice. Research in Veterinary Science. 2021. 137:138-143. (SCI)
Recent conference proceedings (past 3-5 years) (no more than 5)	1. Pranoto Stella, Hsing-Chieh Wu, Doan Thu-Dung, Chun-Yen Chu. (2023). Development of chimeric porcine circovirus type 2 (PCV2) and type 3 (PCV3) subunit vaccine. The 3rd Joint Meeting of Veterinary Science in East Asia. (Oral) 2. Min-Cheng Tsai, Hsing-Chieh Wu, Chun-Yen Chu. (2023). Construction and analysis of Marek virus interleukin (vIL-8) plasmid. 7th Sustainable Development and Green Technology International Symposium. (Oral) 3. Yi-Ting Lo, Hsing-Chieh Wu, Chun-Yen Chu. A new subunit vaccine

	development of bovine viral diarrhea virus E2 glycoprotein applied to improve food security and promote sustainable agriculture. 6th International Symposium on Sustainable Development and Green Technology 2022. Apr. 09. Chiayi, Taiwan. (Oral) 4. Min-Chia Wu, Chun-Yen Chu. Evaluation the protective efficacy of recombinant proteins against Pasteurella multocida in mice. International Conference on Biotechnology and Healthcare 2020. Oct. 16-17. Chiayi, Taiwan. (Oral) 5. Yi-Ting Lo, Hsing-Chieh Wu, Chun-Yen Chu. Cloning and expression of GΔTM protein of bovine ephemeral fever virus. Webinar on Veterinary Medicine and Animal Sciences. 9 July 2020, London, UK. (oral)
Recent funded projects (past 3-5 years) (no more than 5)	1. Development of new generation vaccines against swine corona virus (2/3). JAN 2023 - DEC 2023 2. Development of new generation vaccines against swine corona virus (1/3). JAN 2022 - DEC 2022 3. Immunity test of new adjuvant in pigs. FEB 2022 - DEC 2022 4. Development of novel oral DNA nanovaccines for animal health industry (2/3). JUN 2020 - MAY 2021
Patents (no more than 5)	1. Initial evaluation of immunostimulator (1). OCT 2019 - MAR 2020 胜肽奈米管之製備方法、用途及其免疫組成物。Patent: **I756948.** 2022/03/01-2040/11/29 2. **Recombinant Antigen** With Cross Protection And Animal Vaccine Cmposition Including The Same. Patent: **I638827.** 2018/10/21-2037/07/24 3. Bioadjuvant and Animal Vaccine Cmposition Including The Same. Patent: **I635869.** 2018/09/21-2035/07/14 4. 重組金黃色葡萄球菌表面黏附蛋白在動物疫苗及佐劑之應用。Patent: **I592490.** 2017/07/21-2031/11/10 5. Microneedle Patch Containing Porcine Vaccine. Patent: **I564035.** 2017/01/01-2035/05/03

National Pingtung University of Science and Technology

2025 Announcement

International Ph.D. Assistantship

Reference number: 202502

Information about Research Assistantship	
Research Title (Tentative)	Molecular epidemiology and development of detection kit optimized for locally circulating rotavirus strains in avian species of economic and cultural significance
Abstract/ Description	Since the first identification of the novel pigeon Rotavirus A genotype G18P[17] infections in 2016 in Australia, increasing number of epidemic outbreaks and case reports highlighted the importance of this previously undetected pathogen. The disease is characterized as an acute illness associated with hepatic necrosis, and a clinical presentation consistent with the young pigeon disease syndrome. Bioinformatic investigations of the genome sequences gathered suggested either multiple introductions of different lineages of this pathogen in the European region, or an undetected circulation and subsequent evolution for several years. Cases of infections were described to lead to high morbidity and mortality rates of up to 50%. Aware of the local cultural and economic significance of pigeons and pigeon racing in Taiwan, locally archived liver samples from submitted pigeons and fecal samples from local lofts collected from 2018 to present were also tested for the presence of Rotavirus A infection. Detection by polymerase chain reaction revealed a positive case for the virus infection. Sequencing of several viral genome segments confirmed the identity of the sample, and therefore the local presence of the pigeon Rotavirus A, which also showed high similarity with previously reported epidemic strains. Isolation of the virus from the organ sample was conducted using different cell lines (QT35, MDBK, Vero, MARC-145). A SYBR Green-based quantitative realtime polymerase chain reaction protocol was optimized to monitor the viral titer during the serial passage for the isolation. Ct values (RNA copies) obtained from the supernatant of the cell cultures confirms replication of the virus in MARC-145 cell line. Electron microscopy of the supernatant revealed organized structures resembling rotaviral particles. Additionally, preliminary challenge assay has also been conducted. Future works shall also be discussed in the presentation.
Assistantship	● Monthly stipend: NTD 14,000 ● Tuition-waiver ● Duration of assistantship: 4 years
Qualifying Test for Assistantship	Need

Advisor's General Information			
Name	Kuo Pin Chuang		
Title	Professor		
Department	Graduate Institute of Animal Vaccine Technology/International Degree Program in Animal Vaccine Technology		
Expertise	Immunology, Virology and vaccinology		
Awards	No		
Laboratory Name	Immunology Assay Lab		
Info about Lab	We major focus on virus diseases of dog, cat, avian and companion birds including pigeon and parrots. We development fast diagnostic methods, vaccines and anti-virus treatment for virus infection. On the other hand, we also focus on immune and stem cell therapy for dog and cat tumor diseases. We collaborate with several Taiwanese animal hospitals and foreign biomedical companies and Universities. Student can get complete training including theory and practice. Moreover, there are many overseas internship chances for students.		
Web site	https://immunology.npust.edu.tw/		
Telephone	+886 8 7703202#5333	Email	kpchuang@mail.npust.edu.tw
Advisor's Academic Achievements			
Statistical Data	● Number of publications: 38 papers since 2011. ● Number of funded projects: 25 projects since 2011. ● Total amount of funded projects: NT 10,000,000 since 2011. ● Number of patents: 7 patents since 2011.		
Some of the most cited publications (no more than 5)	1. Yi CC, Liu CH, Chuang KP, Chang YT, Hu SY: A potential probiotic Chromobacterium aquaticum with bacteriocin-like activity enhances the expression of indicator genes associated with nutrient metabolism, growth performance and innate immunity against pathogen infections in zebrafish (Danio rerio). Fish Shellfish Immunol 2019, 93:124-134. (41 次) 2. Ho T-C, Chen Y-MA, Chan H-P, Chang C-C, Chuang K-P, Lee C-H, Yuan C-H, Tyan Y-C, Yang M-H: The effects of heterologous immunization with prime-boost COVID-19 vaccination against SARS-CoV-2. Vaccines 2021, 9(10):1163. (22 次) 3. Huang T-C, Tsai S-S, Liu L-F, Liu YL, Liu H-J, Chuang KP: Effect of Arctium lappa L. in the dextran sulfate sodium colitis mouse model. World journal of gastroenterology: WJG 2010, 16(33):4193. (75 次) 4. Santos HM, Tsai CY, Maquiling KRA, Tayo LL, Mariatulqabtiah AR, Lee CW, Chuang KP: Diagnosis and potential treatments for acute hepatopancreatic necrosis disease (AHPND): a review. Aquac Int 2020, 28(1):169-185. (52 次) 5. Huang WR, Chiu HC, Liao TL, Chuang KP, Shih WL, Liu HJ: Avian Reovirus		

	Protein p17 Functions as a Nucleoporin Tpr Suppressor Leading to Activation of p53, p21 and PTEN and Inactivation of PI3K/AKT/mTOR and ERK Signaling Pathways. PLoS One 2015, 10(8):e0133699. (47 次)
Recent referred journal publications (past 3-5 years) (no more than 10)	1. Santos HM, Chen CC, Tsai CY, Hsish YC, Chung FC, Tyan YC, Tayo LL, Chuang KP: Influence of pigeon interferon alpha (PiIFN-alpha) on pigeon circovirus (PiCV) replication and cytokine expression in Columba livia. Vet Microbiol 2020, 242:108591. 2. Santos HM, Tsai CY, Catulin GEM, Trangia KCG, Tayo LL, Liu HJ, Chuang KP: Common bacterial, viral, and parasitic diseases in pigeons (Columba livia): A review of diagnostic and treatment strategies. Vet Microbiol 2020, 247:108779. 3. Santos HM, Tsai CY, Maquiling KRA, Tayo LL, Mariatulqabtiah AR, Lee CW, Chuang KP: Diagnosis and potential treatments for acute hepatopancreatic necrosis disease (AHPND): a review. Aquac Int 2020, 28(1):169-185. 4. Chang CC, Silva BBI, Huang HY, Tsai CY, Flores RJD, Tayo LL, Tyan YC, Tsai MA, Catulin GEM, Chuang KP et al: Development and Validation of KASP Assays for the Genotyping of Racing Performance-Associated Single Nucleotide Polymorphisms in Pigeons. Genes (Basel) 2021, 12(9). 5. Huang HY, Silva BBI, Tsai SP, Tsai CY, Tyan YC, Lin TC, Flores RJD, Chuang KP: Immunogenicity and Protective Activity of Pigeon Circovirus Recombinant Capsid Protein Virus-Like Particles (PiCV rCap-VLPs) in Pigeons (Columba livia) Experimentally Infected with PiCV. Vaccines (Basel) 2021, 9(2). 6. Tsai CY, Hu SY, Santos HM, Catulin GEM, Tayo LL, Chuang KP: Probiotic supplementation containing Bacillus velezensis enhances expression of immune regulatory genes against pigeon circovirus in pigeons (Columba livia). J Appl Microbiol 2021, 130(5):1695-1704. 7. Ho TC, Chang CC, Chan HP, Chung TW, Shu CW, Chuang KP, Duh TH, Yang MH, Tyan YC: Hydrogels: Properties and Applications in Biomedicine. Molecules 2022, 27(9). 8. Silva BBI, Urzo MLR, Encabo JR, Simbulan AM, Lunaria AJD, Sedano SA, Hsu KC, Chen CC, Tyan YC, Chuang KP: Pigeon Circovirus over Three Decades of Research: Bibliometrics, Scoping Review, and Perspectives. Viruses 2022, 14(7).
Recent conference proceedings (past 3-5 years) (no more than 5)	1. Isolation and characterization of potential probiotic bacteria from juvenile dog and cat fecal samples. Ching-Yi Tsai, Kuan-Lun Wu, Huan-You Yu, Kuo-Pin Chuang. 2022 台灣獸醫秋季研討會 2. Pigeon Rotavirus A in Taiwan – From first local detection to potential vaccine technologies. SILVA BENJI BRAYAN ILAGAN, Kuo Pin Chuang. 2021 台灣獸醫春季研討會
Recent funded	1. 2024/10/01-2024/12/31 消毒劑對ＦＰＶ殺菌能例; 聯軍企業; 400,000 元

projects (past 3-5 years) (no more than 5)	2. 2024/09-2025/12/31 幹細胞用於治療貓慢性腎病; 裕興公司; 200,000 元 3. 2024/01/01-2024/12/31 輪狀病毒株對大腸癌 PDL-1 表現分析其基因表達圖譜; 衛生福利部; 470,000 元 4. 2024/01/01-2025/12/31 調整腸道菌相及抗發炎之雙效牛蒡狗寵物產品開發; 百歐公司; 600,000 元 5. 2024/01-2015/06 TEEP; 教育部; 460,000 元 6. 2024/01-2025/10 學海計畫; 教育部; 250,000 元 7. 2023/01/01-2023/12/31 適應腫瘤細胞之輪狀病毒株篩選並利用轉錄組分析其基因表達圖譜; 衛生福利部; 500,000 元 8. 2023/01/01-2025/12/31 調整腸道菌相及抗發炎之雙效牛蒡狗寵物產品開發; 農委會; 2,000,000 元 9. 2022/07-2023/06 鸚鵡 BFDV 抗原預測及抗體製作研發指導(SBIR); 南科管理局; 250,000 元 10. 2022/08-2023/07 教學實踐計畫; 教育部; 2000,00 元 11. 2022/09-2024/08 寵物疾病的診斷暨員工在職訓練合作計畫; 珂昇股份有限公司; 300,000 元 12. 2022/07-2023/06 科普活動：科技歐姆蛋 in 屏東(主題三) (111-2515-S-020-002-); 國科會; 950,000 元
Patents (no more than 5)	1. I851286 一種抗皮膚發炎藥物 2. I704223 副溶血弧菌ΔlpxD突變株及其用途 VIBRIO PARAHAEMOLYTICUS ΔlpxD MUTANT AND USE THEREOF 3. I531583 用以對抗ＰＲＲＳＶ之融合胜肽及ＰＲＲＳＶ疫苗 A FUSION PEPTIDE AGAINST PRRSV AND AVACCINE AGAINST PRRSV 4. I384983 一種木樨素用於製備治療或預防血癌的保健食品之用途 A USE OF LUTEOLIN OF MANUFACTURING HEALTH PRODUCT FOR LEUKEMIA 5. I376227 以聖草酚降低體外單核球細胞生成極遲反應抗原-4 之方法 METHOD FOR INHIBITING PRODUCTION OF VERY LATE ANTIGEN-4 IN A CELL 6. I360425 佐劑及利用該佐劑晉升細胞之第一型淋巴球功能抗原的方法 ADJUVANT AND METHOD OF USING THE ADJUVANT TO INCREASE LYMPHOCYTE FUNCTION ASSOCIATED ANTIGEN-1 OF CEL 7. I360425 促進神經膠瘤細胞產生活性氧化物之方法 PROMOTING METHOD FOR CELLS TO GENERATE ROS

National Pingtung University of Science and Technology

2025 Announcement

International Ph.D. Assistantship

Reference number: 202503

Information about Research Assistantship	
Research Title (Tentative)	Application of advanced protein expression technology for the development of rapid detection kits for foodborne pathogens and research on biotype vaccine adjuvants.
Abstract/ Description	This study is dedicated to integrating Taiwan's advanced technologies in protein expression and bioinformatics for food safety surveillance, to develop a bioinformatics database for proteins related to foodborne pathogens. By establishing and optimizing a bioinformatics database for key proteins, and further developing an efficient protein expression system, this project aims to apply proteins in the development of rapid detection assays and the evaluation of biotype protein adjuvants. The detection assays are designed for quick, sensitive, and specific identification of foodborne pathogens, providing robust support for food safety and its surrounding regions, while the biotype protein adjuvants could be used in the development of intestinal mucosal adjuvants, offering potential adjuvants for novel mucosal vaccines. The project proceeds in three phases: Firstly, systematically collecting and analyzing bioinformatics of proteins related to foodborne pathogens from various regions, establishing a dedicated database, and optimizing it to ensure the accuracy and convenience of the data; secondly, using this bioinformatics to assist in constructing an efficient protein expression system, including protein expression, purification, and validation, and developing expression platforms suitable for different types of pathogenic proteins, thereby improving expression efficiency and protein quality; lastly, developing rapid detection assays for foodborne pathogens by combining protein expression technology, and researching and evaluating the potential application of biotype protein adjuvants in enhancing vaccine immune responses. The execution of this plan contributes to technology transfer and the enhancement of R&D capabilities, food safety monitoring, public health and economic benefits, scientific cooperation and the strengthening of international influence, as well as fostering innovation and the creation of intellectual property. Through the efforts, substantial achievements are expected in the fields of food safety and public health, making a significant contribution to protecting consumer health and promoting public health safety.
Assistantship	● Monthly stipend: NTD 14,000 ● Tuition-waiver

	● Duration of assistantship: 4 years		
Qualifying Test for Assistantship	Need		
Advisor's General Information			
Name	Yao-Chi Chung		
Title	Associate professor		
Department	Graduate institute of Animal Vaccine Technology		
Expertise	Vaccine Adjuvant, Protein Engineering and vaccinology		
Awards	No		
Laboratory Name	Laboratory of Vaccine Adjuvant Research		
Info about Lab	Currently focusing on the research of "vaccine adjuvant" and applying it to the development of new vaccines for economic animals such as pigs and cattle. At present, in the research of vaccine adjuvants for animals, the focus is on the promotion of "mucosa! immunity". The research focuses on granular adjuvants (chitosan, sodium alginate, etc.), biological adjuvants (:flage ll in, enterotoxin LTB, plant extracts, etc.) and oily adjuvants (vitamin A, special oils, etc.), to analyze the characteristics of the adjuvant and the ability to induce immunity. And adjuvants are combined with various antigens such as inactivated, subunit, DNA, etc. to make various new vaccines for testing. These results can be provided for the application of animal vaccine industry.		
Web site	https://adjuvant.npust.edLI. tw/		
Telephone	08-7703202-5337	Email	ycchtmg@mail.npust.edu.tw
Advisor's Academic Achievements			
Statistical Data	● Number of publications: 10 papers in 10 years. ● Number of funded projects: 22 projects in 10 years. ● Total amount of funded projects: NT 10,500,000 in 10 years. ● Number of patents: 1 patents in 10 years.		
Some of the most cited publications (no more than 5)	1. Chung, Y. C., Ho, M. S., Wu, J. C., Chen, W. J., Huang, J. H., Chou, S. T., & Hu, Y. C. (2008). Immunization with virus-like particles of enterovirus 71 elicits potent immune responses and protects mice against lethal challenge. Some of the most cited publications (no more than 5) Vaccine, 26(15), 1855-1862. https://doi.org/10.1016/j.vaccine.2008.01.058 (181 citations) 2. Yang, D. G., Chung, Y. C., Lai, Y. K., Lai, C. W., Liu, H. J., & Hu, Y. C. (2007). Avian influenza virus hemagglutinin display on baculovirus envelope: cytoplasmic domain affects virus properties and vaccine potential. Mol Ther, 15(5), 989-996. https://doi.org/10.1038/mt.sj.6300131 (95 Citations) 3. Chung, C. Y., Chen, C. Y., Lin, S. Y., Chung, Y. C., Chiu, H. Y., Chi, W. K., Lin, Y. L., Chiang, B. L., Chen, W. J., & Hu, Y. C. (2010). Enterovirus 71 virus-like particle vaccine: improved production conditions for enhanced yield. Vaccine,		

	28(43), 6951-6957. 4. https://doi.org/10.1016/j.vaccine.2010.08.052 (57 Citations) 5. Lin, S. Y., Chung, Y. C., & Hu, Y. C. (2014). Update on baculoviral as an expression and/or delivery vehicle for vaccine antigens. Expert Rev Vaccines, 13(12), 1501-1521. https://doi.org/10.1586/14760584.2014.951637 (30 Citations) 6. Huang, K. S., Lo, W. H., Chung, Y. C., Lai, Y. K., Chen, C. Y., Chou, S. T., & Hu, Y. C. (2007). Combination of baculovirus-mediated gene delivery and peaked-bed reactor for scalable production of adeno-associated virus. Hum Gene Ther, 18(11), 1161-1170. https://doi.org/10.1089/hum.2007.107 (29 Citations)
Recent referred journal publications (past 3-5 years) (no more than 10)	1. Chuang, S. C., Chung, Y. C., & Yang, C. D. (2017). Protective immunity against toxoplasmosis in mice induced by single-dose immunization with rSAG1/2 protein released from poly(lactide-co-glycolidc) microparticlcs. Parasite, 24, 5. https://doi.org/10.1051/parasitc/2017004 (Immunite protectrice contre la toxoplasmose chez la souris, induitc par une immunisation en dose unique avec la proteine rSAG1/2 liberee par des microparticules de poly (lactide-co-glycolidc) 2. Chung, Y. C., Cheng, L. T., Chu, C. Y., Afzal, H., & Doan, T. D. (2024). Flagellin Enhances the Immunogenicity of Pasteurella multocida Lipoprotein E Subunit Vaccine. Avian Dis, 68(3), 183-191. https://doi.org/10.1637/aviandiseases-D-24-00032 3. Chung, Y. C., Cheng, L. T., Zhang, J. Y., Wu, Y. J. , Liu, S.S., & Chu, C. Y. (2018). Recombinant E2 protein enhances protective efficacy of inactivated bovine viral diarrhea virus 2 vaccine in a goat model. BMC Vet Res, 14(1), 194. https://doi.org/10.1186/s12917-018-1520-2 4. Chung, Y. C., Shen, H. Y., Cheng, L. T., Liu, S. S., & Chu, C. Y. (2016). Effectiveness of a BHV-1/BEFV bivalent vaccine against bovine herpesvirus type 1 infection in cattle. Res Vet Sci, 109, 161-165. https://doi.org/10.1016/j.rvsc.2016.10.004 5. Hoa, N. T., Afzal, H., Gundegmaa, U., Raadan, O., Cheng, L. T., Chu, C. Y., Doan , T. D., & Chung, Y. C. (2024). Enhanced immune response with baculovirus-expressed BoHV-1 glycoprotein D in vaccine development. Vet J, 308, 106228. https://doi.org/10.1016/j.tvjl.2024.106228 6. Hsueh, K. J., Cheng, L. T., Lee, J. W., Chung, Y. C ., Chung, W. B., & Chu, C. Y. (2017). Immunization with Streptococcus suis bacterin plus recombinant Sao protein in sows conveys passive immunity to their piglets. BMC Vet Res, 13(1), 15. https://doi.org/10.1186/s12917-016-0937-8 7. Lin, S. Y., Chung, Y. C., Chiu, H. Y., Chi, W. K., Chiang, B. L., & Hu, Y. C. (2014). Evaluation of the stability of enterovirus 71 virus-like particle. J Biosci Bioeng, 117(3), 366-371. https://doi.org/10.1016/j.jbiosc.2013.08.015

<table>
<tr><td></td><td>8. Lin, S. Y., Chung, Y. C., & Hu, Y. C. (2014). Update on baculovirus as an expression and/or delivery vehicle for vaccine antigens. Expert Rev Vaccines, 13(12), 1501-1521. https://doi.org/10.1586/14760584.2014.951637
9. Murtaza, A., Hoa, N. T., Dieu-Huong, D., Afzal, H., Tariq, M. H., Cheng, L. T., & Chung, Y. C. (2024). Advancing PEDV Vaccination: Comparison between Inactivated and Flagellin N-Terminus-Adjuvanted Subunit Vaccines. Vaccines (Basel) , 12(2). https://doi.org/10.3390/vaccines12020139</td></tr>
<tr><td>Recent conference proceedings (past 3-5 years) (no more than 5)</td><td>1. Hoa T. Nguyen, Yao-chi Chung (2023, May). The Porcine Kidney NF-kB Fluorescent Report Cell Line for Mucosa! Adjuvant Selection in PEDV vaccine. The 3rd Join Meeting of Veterinary Science in East Asia, 台灣本人為通訊作者・
2. DO DIEU HUONG, Yao-Chi Chung (2021, May). PED subunit vaccine based on COE fused with flagellin improved specific humoral and mucosal immunity in mice. 中華民區獸醫學會暨台灣省畜牧獸醫學 會 110 年度春季學術論文發表會，台灣・本人為通訊作者
3. Nguyen Thanh Hoa, Yao-Chi Chung (2021, May). Improving the efficacy of Bovine Herpesvirus 1 subunit vaccine. 中華民國獸醫學會葺台灣省畜牧獸醫學會 110 年度春季學術論文發表會，台灣・本人為通訊作者・
4. Vu Khac Minh Duong, Yao-chi Chung (2021, May). Development Inactivated vaccine against Porcine epidemic diarrhea virus (PEDV) with Flagellin protein adjuvant. 中華民國獸醫學會暨台灣省畜牧獸醫學會 110 年度春季學術論文發表會，台灣・本人為通訊作者・
5. Xing-Yu Huang, Yao-Chi Chung (2020, Jun). Development of Porcine Epidemic Diarrhea Virus Particle-type Oral Vaccines by Using Chitosan and Biological material. 國立屏東科技大學獸醫學院 109 年度學術論文發表會，台灣 本人為通訊作者・</td></tr>
<tr><td>Recent funded projects (past 3-5 years) (no more than 5)</td><td>
<table>
<tr><th>委託單位</th><th>執行計畫名稱</th><th>執行期間</th><th>千元</th></tr>
<tr><td>教育部</td><td>佐劑學再革新：結合數位學習與合作策略進行專案導向學習之教學實踐研究</td><td>20240801-20250731</td><td>330</td></tr>
<tr><td>國科會</td><td>應用幾丁聚醣海藻酸鈉佐劑於豬流行性下痢疫苗的效能和經濟評估</td><td>20240801-20250731</td><td>610</td></tr>
<tr><td>台灣糖業股份有限公司</td><td>具泌乳免疫功效豬流行性下痢(PED)疫苗大型田間試驗</td><td>20231227-20240831</td><td>1400</td></tr>
<tr><td>國科會</td><td>探討佐劑篩選與應用在誘發豬隻黏膜免疫以對抗PEDV感染之研究</td><td>20230801-20240731</td><td>590</td></tr>
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淨旦生物科技股份有限公司	抗胃幽門螺旋桿菌之雞蛋IgY生產測試-延續1	20230101-20231231	65
教育部	教育部教學實踐研究計畫-疫苗好幫手-“佐劑學”專案導向學習之教學實踐研究	20220801-20230731	240
台灣糖業股份有限公司	具母源免疫功效豬流行性下痢(PED)疫苗開發	20220408-20221115	960
淨旦生物科技股份有限公司	抗胃幽門螺旋桿菌之雞蛋IgY生產測試	20220315-20221231	600

Patents
(no more than 5)

類別	專利名稱	國別	專利號碼	發明人	專利權人	專利核准日期
A	豬流行性下痢病症TS分離株及其用途	中華民國	I703983	黃怡仁（TW）HUANG, I-JEN; 李岱冀（TW）LEE, TAI-CHI; 柯冠銘（TW）KE, GUAN-MING; 鍾曜吉（TW）CHUNG, YAO-CHI; 楊寄明（TW）YANG,	台灣糖業股份有限公司	中華民國108（2019）年09月 25日

National Pingtung University of Science and Technology

2025 Announcement

International Ph.D. Assistantship

Reference number: 202504

Information about Research Assistantship			
Research Title (Tentative)	Climate change impact on soil and water resources, spatial-temporal process modeling, remote sensing image processing, environment information analysis, monitoring-network design, water resource management and remote sensing applications to soil and water conservation		
Abstract/ Description	Recently, the climate change impact has been taken into serious consideration. The change of precipitation not only influences water quantity but also soil erosion. In this research, we try to evaluate climate change's impact on water/ soil resources and adapt to it.		
Assistantship	■ Monthly stipend: NTD 14,000 ■ Tuition-waiver ■ Duration of assistantship: 4 years		
Qualifying Test for Assistantship	N/A		
Advisor's General Information			
Name	Jie-Lun Chiang		
Title	Professor		
Department	Department of Soil and Water Conservation		
Expertise	Hydrology, GIS and remote sensing applications on watershed management, uncertainty of temporal-spatial data, soil erosion, and climate change impact on soil and water resources.		
Awards	●The best paper award in 2005 from the Chinese Society of Agricultural Engineers. ●Outstanding Young Agricultural Engineer Award in 2011 from the Taiwan Society of Agricultural Engineers.		
Laboratory Name	Laboratory For Remote & Environmental Information		
Info about Lab	Our research interests include, but are not limited to, the following areas: Hydrology, GIS and remote sensing applications on watershed management, uncertainty of temporal-spatial data, soil erosion, and climate change's impact on soil and water resources.		
Web site	http://www.rsei.npust.edu.tw		
Telephone	886-982012375	Email	jlchiang@mail.npust.edu.tw
Advisor's Academic Achievements			
Statistical Data	● Number of publications: journal: 30, conference: 108, papers in 10 years.		

	● Number of funded projects: 36 projects in 10 years. ● Total amount of funded projects: NT _____ in 10 years . ● Number of patents: 1 patents in 10 years.
Some of the most cited publications (no more than 5)	1. Jie-Lun Chiang*, Chia-Ming Kuo and Leila Fazeldehkordi, Using Deep Learning to Formulate the Landslide Rainfall Threshold of the Potential Large-Scale Landslide. Water 2022, 14(20), 3320. 14(20):3320. https://doi.org/10.3390/w14203320. (SCI, IF=3.4) 2. Jie-Lun Chiang*, Jun-Jih Liou, Chiang Wei, Ke-Sheng Cheng, "A Feature-Space Indicator Kriging Approach for Remote Sensing Image Classification", IEEE Transactions on Geoscience and Remote Sensing, Volume: 52 , Issue: 7 : 4046 – 4055. 2014. (SCI, IF=8.2) 3. Jie-Lun Chiang* and Tzu-Ming Liu, "Impact of Climate Change on Paddy Field Irrigation in Southern Taiwan", Paddy and Water Environment, Volume 11, Issue 1, Page 311-320 2013. (SCI, IF=2.2)
Recent referred journal publications (past 3-5 years) (no more than 10)	1. S. S. Mukonza, Jie-Lun Chiang*,Machine and deep learning-based trophic state classification of national freshwater reservoirs in Taiwan using Sentinel-2 data, Physics and Chemistry of the Earth, Parts A/B/C, Volume 134, 2024,103541, ISSN 1474-7065, https://doi.org/10.1016/j.pce.2023.103541. (SCI IF=3.7) 2. Jie-Lun Chiang*, Chia-Ming Kuo and Leila Fazeldehkordi, Using Deep Learning to Formulate the Landslide Rainfall Threshold of the Potential Large-Scale Landslide. Water 2022, 14(20), 3320. 14(20):3320. https://doi.org/10.3390/w14203320. (SCI IF=3.4) 3. Mukonza, S.S.; Chiang, Jie-Lun*, Meta-Analysis of Satellite Observations for UN Sustainable Development, Environments, 2023, 10, 170. https://doi.org/10.3390/environments10100170. (SCI, IF=3.7) 4. Mukonza, S.S. and Chiang, Jie-Lun*, Micro-Climate Computed Machine and Deep Learning Models for Prediction of Surface Water Temperature Using Satellite Data in Mundan Water Reservoir. Water 2022, 14(18), 2935. https://doi.org/10.3390/w14182935. (SCI IF=3.4) 5. Shankar Bhattarai and Jie-Lun Chiang*, Sadananda Upadhyaya, Effectiveness of Snow Harvesting and Water Productivity Practices in Combatting Climate Change–Induced Drought in a Himalayan District of Nepal, Irrigation and Drainage. 72:554-568, 2023. (SCI, IF=1.9) 6. Mukonza SS and Chiang, Jie-Lun*. Satellite sensors as an emerging technique for monitoring macro- and microplastics in aquatic ecosystems. Water Emerg Contam Nanoplastics 2022;1:17. http://dx.doi.org/10.20517/wecn.2022.12 7. 6. Jie-Lun Chiang, Jun-Jih Liou, Chiang Wei, Ke-Sheng Cheng, "A Feature-Space Indicator Kriging Approach for Remote Sensing Image Classification", IEEE Transactions on Geoscience and Remote Sensing, Volume: 52 , Issue: 7 : 4046 – 4055. 2014. (SCI,IF=8.2)

	8. 7. Jie-Lun Chiang* and Tzu-Ming Liu, “Impact of Climate Change on Paddy Field Irrigation in Southern Taiwan”, Paddy and Water Environment, Volume 11, Issue 1, Page 311-320 2013. (SCI, IF=2.2) 9. 8. Jie-Lun Chiang, Knowledge-Based Principal Component Analysis for Image Fusion, Applied Mathematics & Information Sciences, V8 No. 1L, pp.223-230, April 2014. 10. 9. Jie-Lun Chiang, “Potential Influence of Climate Change on Annual Rainfall Erosivity Factor in Taiwan”JOURNAL OF GEOGRAPHICAL SCIENCE (68): 1-17 (2013) 11. 10. Jie-Lun Chiang, Han-Chung Yang, Yie-Ruey Chen, Ming-Hsi Lee, “Potential Impact of Climate Change on Hydropower Generation in Southern Taiwan”, Energy Procedia 40: 34-37, 2013. 12. 11. Jie-Lun Chiang*, “Knowledge-Based Scale Transfer Approach for Image Fusion”, Journal of Computational and Theoretical Nanoscience, 9(10):1772-1781, 2012. 13.
Recent conference proceedings (past 3-5 years) (no more than 5)	1. 1.Jie-Lun Chiang* and Chia-Ming Kuo， Analysis of Differences in Estimating on Soil Erosion by Radar-based Quantitative Precipitation Estimation and Rain Gauges Records, Agricultural engineering conference 2021, Yunlin, Taiwan, 2021. 2. 2.Shankar Bhattarai and Jie-Lun Chiang*, Assessment of climate change induced water stresses in temperature fruit crop in Nepal’s Himalayan Region Shankar Bhattarai, PAWEES 2021 INTERNATIONAL CONFERENCE, Virtual, 2021. 3. 3.Sabastian S. Mukonza and Jie-Lun Chiang*, Uncertainties Quantifications of Deep and Machine Learning Models for Predicting Mundan Reservoir Surface Water Temperature Using Satellite Data, PAWEES 2021 INTERNATIONAL CONFERENCE, Virtual, 2021. 4. 4.S. S. Mukonza and J. -L. Chiang, "Quantifying Cross-Validation Uncertainties for Linear Regression Machine Learning Algorithm Used to Estimate Chlorophyll-a in Mundan Water Reservoir Based on Landsat Derived Spectral Indices," *2022 IEEE Mediterranean and Middle-East Geoscience and Remote Sensing Symposium (M2GARSS)*, 2022, pp. 134-137, doi: 10.1109/M2GARSS52314.2022.9840135. 5. 5.Leila Fazeldehkordi and Jie-Lun Chiang*, “Drought assessment during past three decades based on SPI and SPEI in Tainan city, Taiwan”, IWA Aspire Conference & Exhibition Oct. 2023, Kaoshiung, Taiwan.
Recent funded projects (past 3-5 years) (no more than 5)	1. Sustainable water resources management: the integration and improvement of water resources system for industrial development in Southern Taiwan， 2022~2024. 2. Operation decision support for Mudan reservoir during flood season

	in2020~2024. 3. Analysis on the variation of hydrologic and geomorphologic environment by using big data analysis to build rainfall threshold value and early warning system of large-scale landslide for mountainous area in southern Taiwan(I)(II)(III)，2019~2021.
Patents (no more than 5)	Soil erosion measuring instrument (No.I646238)

National Pingtung University of Science and Technology

2025 Announcement

International Ph.D. Assistantship

Reference number: 202505

Information about Research Assistantship			
Research Title (Tentative)	Air pollution		
Abstract/ Description	PM2.5 and human health		
Assistantship	● Monthly stipend: NTD 14,000 ● Tuition-waiver ● Duration of assistantship: 4 years		
Qualifying Test for Assistantship	Oral meeting		
Advisor's General Information			
Name	How-Ran Chao		
Title	Professor		
Department	Environmental Science and Engineering		
Expertise	Health Risk Assessment、Bioassay、Environmental Epidemiology		
Awards	International Journal Of Environmental Research And Public Health—Editor Frontiers in Environmental Science—Editor		
Laboratory Name	Environmental and Health Risk Assessment Lab.		
Info about Lab	Assess health risks of long-term exposure by collecting indoor and outdoor air dust		
Web site	-		
Telephone	08-7703202 #7517 or 7097	Email	hrchao@mail.npust.edu.tw
Advisor's Academic Achievements			
Statistical Data	● Number of publications: 80 papers in 10 years. ● Number of funded projects: 25 projects in 10 years. ● Total amount of funded projects: NT 19,488,600 in 10 years. ● Number of patents: 1 patents in 10 years.		
Some of the most cited publications (no more than 5)	1. How-Ran Chao, Shu-Li Wang, Wen-Jhy Lee, Ya-Fen Wang, Olaf Päpke. Levels of polybrominated diphenyl ethers (PBDEs) in breast milk from central Taiwan and their relation to infant birth outcome and maternal menstruation effects. IF:10.3 JCR:2023 Journal name: Environment international 2. Te-San Chen, Ting-Chien Chen, Kuei-Jyum C Yeh, How-Ran Chao, Ean-Tun Liaw, Chi-Ying Hsieh, Kuan-Chung Chen, Lien-Te Hsieh, Yi-Lung Yeh.High estrogen concentrations in receiving river discharge from a concentrated livestock feedlot. IF:8.2 JCR:2023 Journal name: Science of the total		

	environment 3. Mu-Rong Chao, Ta-Chang Lin, How-Ran Chao, Feng-Hsiang Chang, Chung-Bang Chen.Effects of methanol-containing additive on emission characteristics from a heavy-duty diesel engine. IF:8.2 JCR:2023 Journal name: Science of the total environment 4. Ta-Chang Lin, Feng-Hsiang Chang, Jue-Hsien Hsieh, How-Ran Chao, Mu-Rong Chao Characteristics of polycyclic aromatic hydrocarbons and total suspended particulate in indoor and outdoor atmosphere of a Taiwanese temple. IF:12.2 JCR:2023 Journal name: Journal of hazardous materials 5. How-Ran Chao, Tsui-Chun Tsou, Huei-Lin Huang, Gou-Ping Chang-Chien. Levels of breast milk PBDEs from southern Taiwan and their potential impact on neurodevelopment. IF:3.1 JCR:2023 Journal name: Pediatric research
Recent referred journal publications (past 3-5 years) (no more than 10)	1. Hui-Kan Su, Wei-Chao Chen, Jian-He Lu, How-Ran Chao, Yun-Fang Liang, Sato Haruka, Wen-Li Hsu, Mei-Li Wu, Ming-Hsien Tsai.The effects of using Tempeh as a supplement for type 2 diabetes. IF:3.5 JCR: 2023 Journal name: Food Science & Nutrition 2. Feng-Shun Chen, Chih-Cheng Chen, Ching-Chang Tsai, Jian-He Lu, Huey-Ling You, Ching-Mei Chen, Wan-Ting Huang, Kai-Fan Tsai, Fu-Jen Cheng, Chia-Te Kung, Shau-Hsuan Li, Chin-Chou Wang, Yu-Che Ou, Wen-Chin Lee, Yu-Ting Chang, Fahimah Hashim, How-Ran Chao, Liang-Jen Wang.Urinary levels of organophosphate flame retardants metabolites in a young population from Southern Taiwan and potential health effects. IF:3.9 JCR: 2023 Journal name: Frontiers in Endocrinology 3. Liang-Jen Wang, Ying-Hua Huang, Wen-Jiun Chou, Sheng-Yu Lee, Hsin-Yu Chang, Chih-Cheng Chen, How-Ran Chao. Interrelationships among growth hormone, thyroid function, and endocrine-disrupting chemicals on the susceptibility to attention-deficit/hyperactivity disorder. IF:6 JCR:2023 Journal name: European Child & Adolescent Psychiatry 4. Juliana Jalaludin, Wan Nurdiyana Wan Mansor, Nur Afizan Abidin, Nur Faseeha Suhaimi, How-Ran Chao.The impact of air quality and meteorology on COVID-19 cases at Kuala Lumpur and Selangor, Malaysia and prediction using machine learning. IF:2.5 JCR:2023 Journal name: Atmosphere 5. Jia-De Lee, Tsyr-Huei Chiou, Hong-Jie Zhang, How-Ran Chao, Kuang-Yu Chen, Yan-You Gou, Chien-Er Huang, Sheng-Lun Lin, Lin-Chi Wang. Persistent Halogenated Organic Pollutants in Deep-Water-Deposited Particulates from South China Sea. IF:3.9 JCR:2023 Journal name: Toxics 6. Sen-Ting Huang, Jian-He Lu, Sherwin M Jualo, Lemmuel L Tayo, Wan-Nurdiyana-Wan Mansor, Yi-Chieh Lai, Chih-Lung Wang, How-Ran Chao. Titanium Dioxide (TiO_2) Nanoparticle Toxicity in a Caenorhabditis elegans Model. IF:3.9 JCR:2023 Journal name: Toxics 7. Nelly Marlina, Fahir Hassan, How-Ran Chao, Mohd Talib Latif, Chi-Fu Yeh,

	Yoshifumi Horie, Ruei-Feng Shiu, Yen-Kung Hsieh, Jheng-Jie Jiang. Organophosphate esters in water and air: A minireview of their sources, occurrence, and air–water exchange. IF:8.1 JCR:2023 Journal name: Chemosphere 8. Liang-Jen Wang, Ching-Chang Tsai, How-Ran Chao, Sheng-Yu Lee, Chih-Cheng Chen, Sung-Chou Li. MicroRNAs in Umbilical Cord Blood and Development in Full-Term Newborns: A Prospective Study. IF:3.4 JCR: 2023 Journal name: Biomarker Insights 9. Lulu Duan, Yu-Lun Hsieh, Sheng-Lun Lin, Wan Nurdiyana Wan Mansor, Muhammad Isyhraff Azhan Bin Mansor, Hyojun Lee, Chien-Er Huang, How-Ran Chao, Mengjie Song, Minseop Song. Unignorable Emissions and Potential Health Effects of Unregulated Pollutants from Nonroad Engines Using Greener Fuels—A Review. IF:2.5 JCR: 2023 Journal name: Aerosol and Air Quality Research 10. Liang-Jen Wang, How-Ran Chao, Chih-Cheng Chen, Ching-Me Chen, Huey-Ling You, Ching-Chang Tsai, Ching-Shu Tsai, Wen-Jiun Chou, Chia-Jung Li, Kai Fan Tsai, Fu-Jen Cheng, Chia-Te Kung, Shau-Hsuan Li, Chin-Chou Wang, Yu-Che Ou, Wen-Chin Lee, Wan-Ting Huang. Effects of urinary organophosphate flame retardants in susceptibility to attention-deficit/hyperactivity disorder in school-age children. IF:6.2 JCR: 2023 Journal name: Ecotoxicology and Environmental Safety
Recent conference proceedings (past 3-5 years) (no more than 5)	1. The effects of $PM_{2.5}$ and high-glucose exposure on the toxicity in A549 lung cancer cells. 2. The Negative Impact of High $PM_{2.5}$ and Glucose Levels on Wound Healing and Antioxidant Genes in Lung Epithelial Cells and the Potential Effects After Intervention of the Chinese Herbal Medicine, Guilu Erxian Jiao. 3. Assessing the Influence of Elevated $PM_{2.5}$ and Glucose Levels on Wound Healing Impairment in A549 Lung Epithelial Cells, and the Therapeutic Potential of Guilu Erxian Jiao 4. The Induced Toxicity of Boron Carbide Nanoparticle in Caenorhabditis elegans 5. The induced toxic effects of Caenorhabditis elegans exposure to Titanium dioxide
Recent funded projects (past 3-5 years) (no more than 5)	1. 委託辦理屏東縣廢棄物處理量能調查及資源循環再利用可行性評估 2. 室內外 $PM_{2.5}$ 暴露與兒童呼吸道相關過敏症候群之相關性 3. 有機磷阻燃劑在居家室內環境流佈、宿命以及其對嬰幼兒健康與發展的影響 4. 氣炸鍋產生室內 $PM_{2.5}$ 內含短鏈氯化石蠟、脂肪酸、脂質、多環芳香烴化合物特徵與其衍生的毒性效應 5. 新興污染物有機磷阻燃劑於室內環境對嬰幼兒健康之影響
Patents (no more than 5)	9,12 一十八碳二炔酸於促進嬰幼兒神經發育之用途

National Pingtung University of Science and Technology

2025 Announcement

International Ph.D. Assistantship

Reference number: 202506

Information about Research Assistantship	
Research Title (Tentative)	Biotechnology, Natural Products, System Biology, Enzyme Substrate Screening, Functional Foods, Peptide Self-assembly
Abstract/ Description	In addition to providing nutritional or biomedical uses, peptides composed of amino acids can self-assemble into biocompatible and diverse microstructures with the properties of encapsulating, transporting and releasing active ingredients. Peptide-based self-assembly is gradually attracting attention in the health food and biopharmaceutical industries. Food protein-derived multicomponent peptides (FPDMPs) can not only construct more refined and diverse nanostructures, but are also easy-to-prepare, non-chemical synthesized, feasible to mass production, and low cost, which is conducive to more self-assembly applications. In this study, different proteases will be used to hydrolyze the proteins of local agricultural and aquaculture products and the resulting hydrolysates will be fractionated by molecular weight cut-off membranes. The external stimuli (such as pH, temperature, time, ionic strength, concentration and added solvents) will be optimized to trigger the self-assembly of peptide mixture. The self-assembled nanostructures will be analyzed using dynamic light scattering (DLS), scanning electron microscope (SEM), transmission electron microscope (TEM), circular dichroism spectroscopy (CD), Fourier transform infrared spectroscopy (FT-IR) and powder X-ray diffractometer (XRD). Meanwhile, the peptides involved in these self-assemblies will be sequenced by liquid chromatography-tandem mass spectrometry (LC-MS/MS) and the correlation between peptide sequence and nanostructure will be investigated and confirmed by synthetic peptides. Furthermore, the efficiency of encapsulating and releasing active peptides or natural products using these self-assemblies will be examined to evaluate their feasibility for industrial applications.
Assistantship	● Monthly stipend: NTD 14,000 ● Tuition-waiver ● Duration of assistantship: 4 years
Qualifying Test for Assistantship	N/A
Advisor's General Information	
Name	Jue-Liang Hsu
Title	Professor
Department	Department of Biological Science & Technology
Expertise	Proteomics, metabolomics, analytical chemistry, natural products
Awards	● Young Scientist Award (HUPO 3rd Annual World Congress, 2004). (HUPO: Human

	Proteome Organization). ● Excellent Teaching Award from College of Agriculture, NPUST (2011 & 2015) ● Ministry of Science and Technology Award for Outstanding Researchers in Colleges (2014-2024) ● NPUST R&D Competition Award (Biotechnology & Medicine category) (2014)
Laboratory Name	Bioanalytical Laboratory
Info about Lab	This lab aims to develop novel and efficient platforms for biochemical applications, in particular, the screening and functional evaluation of biological active proteins, peptides and natural products. Current research topics of this lab include: ✓ Functional evaluation of natural product using proteomics approach ✓ Natural product analysis and molecular docking simulation assisted activity screening ✓ Peptide self-assembly analysis ✓ Novel analytical platforms for protein post-translational modifications ✓ Active peptide screening from food sources ✓ Study of pathogen drug resistance using proteomics, secretomics, peptidomics, and metabolomics ✓ Peptidomics approach for peptidase substrate screening Core technologies of this lab include: ● Liquid chromatography-tandem mass spectrometry (LC-MS/MS) ● Gas chromatography- mass spectrometry ● Separation sciences (FPLC, HPLC, TLC, column chromatography, two-dimensional gel electrophoresis) ● Peptide/protein structure analysis ● Molecular docking simulation ● Peptide synthesis ● In vitro bioassay for functional evaluation
Web site	https://fps.npust.edu.tw/en/teacher/jlhsu/biblio/ https://www.scopus.com/authid/detail.uri?authorId=7402284269
Telephone	886-8-7703202 ext 5197 | Email | jlhsu@mail.npust.edu.tw
Advisor's Academic Achievements	
Statistical Data	● Number of publications: more than 100 papers since 2009. ● Number of funded projects: more than 45 projects since 2009. ● Number of patents: 6 patents since 2009. ● Scopus *h*-index: 27
Some of the most cited publications (no more than 5)	1. Hsu et al. Stable-isotope dimethyl labeling for quantitative proteomics. Analytical Chemistry 2003, 75, 6843-6852. (SCI, Scopus citation = 615) 2. Hsu et al. Functional phosphoproteomic profiling of phosphorylation sites in membrane fractions of salt-stressed Arabidopsis thaliana. Proteome Science,

	2009, 7, 42. (SCI, Scopus citation = 61) 3. Yeh et al. Magnetic Bead-based Hydrophilic Interaction Liquid Chromatography for Glycopeptide Enrichments. Journal of Chromatography A, 2012, 1224, 70-78. (SCI, Scopus citation = 54) 4. Rawendra et al. A novel angiotensin converting enzyme inhibitory peptide derived from proteolytic digest of Chinese soft-shelled turtle egg white proteins. Journal of Proteomics, 2013, 94, 359-369. (SCI, citation = 65) 5. Priyanto al. Screening, discovery, and characterization of angiotensin-I converting enzyme inhibitory peptides derived from proteolytic hydrolysate of bitter melon seed proteins. Journal of Proteomics 2015, 128, 424-435. (SCI, citation = 70)
Recent referred journal publications (past 3-5 years) (no more than 10)	1. Christoper Caesar Yudho Sutopo, Wei-Ting Hung and Jue-Liang Hsu*. A simple tandem bioassay-guided SCX-RP SPE fractionation for efficient active peptide screening from Inca nut cake protein hydrolysate. Journal of Chromatography B 2024, 1236, 124061. 2. Putri Suleman, Christoper Caesar Yudho Sutopo and Jue-Liang Hsu*. Characterization of novel angiotensin-I converting enzyme inhibitory peptides derived from Taiwan red quinoa (Chenopodium formosanum Koidz.) seed proteins using two sequential bioassay-guided fractionations. Medicinal Chemistry Research 2024, 33, 107–116. 3. Ju-Hsuan Huang, Nhung Thi Phuong Nong and Jue-Liang Hsu*. An efficient peptidomics screening for exogenous substrates and inhibitory peptides of the dipeptidase ACE from milk hydrolysate. Pharmaceutics 2023, 15(2), 425. 4. Christoper Caesar Yudho Sutopo, Nurfina Aznam, Retno Arianingrum and Jue-Liang Hsu*. Screening potential hypertensive peptides using two consecutive bioassay-guided SPE fractionations and identification of an ACE inhibitory peptide, DHSTAVW (DW7), derived from pearl garlic protein hydrolysate. Peptides 2023, 167, 171046. 5. Sugiyati Ningrum, Aji Sutrisno,* and Jue-Liang Hsu*. An exploration of ACE inhibitory peptide derived from gastrointestinal protease hydrolysate of milk using modified bioassay-guided fractionation approach coupled with in silico analysis. Journal of Dairy Science 2022, 105, 1913–1928. 6. Nhung Thi Phuong Nong, Jue-Liang Hsu*. Characteristics of food protein-derived antidiabetic bioactive peptides: A literature update. International Journal of Molecular Sciences, 2021, 22, 9508. 7. Muhamad Nur Ghoyatul Amin, Joni Kusnadi, Jue-Liang Hsu*, Robert J. Doerksen*, Tzou-Chi Huang*. Identification of a novel umami peptide in tempeh (Indonesian fermented soybean) and its binding mechanism to the umami receptor T1R. Food Chemistry 2020, 333, 127411. 8. Nhung Nong Thi Phuong, Yu-Kuo Chen, Wen-Ling Shih, and Jue-Liang Hsu*. Characterization of Novel Dipeptidyl Peptidase-IV Inhibitory Peptides from

	Soft-Shelled Turtle Yolk Hydrolysate Using Orthogonal Bioassay-Guided Fractionations Coupled with in Vitro and in Silico Study. Pharmaceuticals 2020, 13(10), 308. 9. Christoper C. Y. Sutopo, Aji Sutrisno, Li-Fei Wang, and Jue-Liang Hsu*. Identification of a potent angiotensin-I converting enzyme inhibitory peptide from black cumin seed hydrolysate using orthogonal bioassay-guided fractionations coupled with in silico screening. Process Biochemistry 2020, 95, 204-213. 10. Sin-Hong Chen, Ya-Chi Lin, Ming-Kuei Shih, Li-Fei Wang, Shyh-Shyan Liu*, and Jue-Liang Hsu*. LC–MS Quantification of Site-Specific Phosphorylation Degree by Stable-Isotope Dimethyl Labeling Coupled with Phosphatase Dephosphorylation. Molecules 2020, 25(22), 5316.
Recent conference proceedings (past 3-5 years) (no more than 5)	1. A LC-MS/MS platform for screening the substrates of dipeptidase angiotensin-converting enzyme (ACE) from milk protein hydrolysates. 17th TSMS Annual Conference (NCU 2020/9/1~9/3) by Ju-Hsuan Huang and Jue-Liang Hsu*. 2. Characterization Angiotensin-I Converting Enzyme Inhibitory Peptides Derived from Red Quinoa (Chenopodium formosanum) Hydrolysates Seed Proteins in “Bandung International Conference on Food and Health 2019” (2019/9/26~9/28, Bandung, Indonesia) by Dininurilmi Putri and Jue-Liang Hsu*. 3. Screening of Prodrug Type ACE Inhibitory Peptide Derived from Milk Using Preincubation Approach in 2019 Agricultural Biotechnology and Industrial Resources Forum (2019/10/4) by Sugiyati Ningrum and Jue-Liang Hsu*. (Poster Paper Competition - Food Biotechnology Group: First Place) 4. Chemical derivatization coupled with multistage fragmentation of ion trap mass spectrometry for the positional determination of carbon-carbon double bond in long-chain unsaturated fatty acid in 16th TSMS Annual Conference (NCHU 2019/7/3~7/5) by Yun-Yi Tseng and Jue-Liang Hsu*。 5. Screening of Angiotensin-I Converting Enzyme Inhibitory Peptides from Tryptic Digest of Jue Ming Zi in 2018 International Symposium of Agricultural Biotechnology by Chao-Yin Chen and Jue-Liang Hsu*. (NPUST, 2018/9/21).(Outstanding Poster Award)
Recent funded projects (past 3-5 years) (no more than 5)	1. Exploring peptides with self-assembly potential from food protein hydrolysates and their application in encapsulating active ingredients. (113/08/01-114/07/31) (NSTC 113-2113-M-020- 001) (NT 1,350,000) 2. Exploring the ACE2’s substrate specificity using a peptidomics approach and synthesizing the specific substrate for the evaluation of ACE2 activity in samples (112/08/01-113/07/31) (NSTC 112-2113-M-020- 001) (NT 1,100,000) 3. A novel dual-function peptidase substrate and its application in screening of peptidase inhibitors (111/08/01-112/07/31) (MOST 111-2113-M-020- 001) (NT 1,200,000)

	4. Targeting screening for exogenous substrates and inhibitory peptides of dipeptidyl peptidase 4 from protein hydrolysate using liquid chromatography-tandem mass spectrometry (110/08/01-111/07/31) (MOST 110-2113-M-020-001) (NT 1,700,000) 5. Targeting screening for exogenous substrates and inhibitory peptides of dipeptidyl peptidase 4 from protein hydrolysate using liquid chromatography-tandem mass spectrometry. (109/08/01-110/07/31) (MOST 109-2113-M-020-001) (NT 1,200,000)
Patents (no more than 5)	1. A method for manufacturing a peptide of Pelodiscus sinensis, the peptide of Pelodiscus sinensis, and the use of the peptide of Pelodiscus sinensis being manufacturing a drug for reducing blood pressure thereof. Taiwan Patent（I477607, 2015/3/21~2033/11/7）. 2. Angiotensin-I converting enzyme inhibitory peptides derived from proteolytic hydrolysate of bitter melon seed proteins and preparation method thereof. Taiwan Patent（I516273, 2016/1/11~2034/11/23）. 3. “アンギオテンシン I 転換酵素抑制と血圧低下に用いる短鎖活性ペプチド”，Japan patent（特許第 6018614 号, 2014/11/7~2034/11/6）. 4. Device and method for cultivation management of soft-shelled turtles. Taiwan Patent（I621393, 2016/ 1/11~2034/11/23） 5. Peptides for lowering blood glucose level and use thereof. Taiwan Patent（I702961, 2020/ 9/1~2039/12/3） 6. Shrimp allergen identification method（I781481, 2022/10/21~ 2040/11/24）

National Pingtung University of Science and Technology

2025 Announcement

International Ph.D. Assistantship

Reference number: 202507

Information about Research Assistantship			
Research Title (Tentative)	Bioactive Natural Products from Medicinal Plants		
Abstract/ Description	1. Isolations and structural elucidation of bioactive constituents from herbs 2. Development and establishment of standardized quality control of medicinal plants		
Assistantship	● Monthly stipend: NTD 14,000 ● Tuition-waiver ● Duration of assistantship: 4 years		
Qualifying Test for Assistantship	N/A		
Advisor's General Information			
Name	Chi-I Chang		
Title	Professor		
Department	Department of Biological Science & Technology		
Expertise	Natural Products Chemistry		
Awards	2011-2020 National Science Council Award for Outstanding Researchers in Colleges		
Laboratory Name	Natural Products Laboratory		
Info about Lab	1. Isolations and structural elucidation of bioactive constituents from medicinal plants 2. Development and establishment of standardized quality control of medicinal plants		
Web site			
Telephone	886-8-7703202 Ext 5185	Email	changchii@mail.npust.edu.tw
Advisor's Academic Achievements			
Statistical Data	● Number of publications: 80 papers in 10 years. ● Number of funded projects: 26 projects in 10 years. ● Total amount of funded projects: NT 14,000,000 in 10 years. ● Number of patents: 14 patents in 10 years.		
Some of the most cited publications (no more than 5)	1. C. I Chang,C. C. Kuo, J. Y. Chang and Y. H. Kuo, 2004, 67(1), Three New Oleanane-Type Triterpenes from Ludwigia octovalvis with Cytotoxic Activity against Human Cancer Cells, J. Nat. Prod. 91-93. 2. Chi-I Chang, Chiy-Rong Chen, Yun-Wen Liao, Hsueh-Ling Cheng, Yo-Chia		

	Chen, and Chang-Hung Chou,* Cucurbitane-Type Triterpenoids from Momordica charantia, J. Nat. Prod. 2006, 69(8), 1168-1171. 3. Chi-I Chang, Chiy-Rong Chen, Yun-Wen Liao, Hsueh-Ling Cheng, Yo-Chia Chen, and Chang-Hung Chou,* Cucurbitane-Type Triterpenoids from the Stems of Momordica charantia, J. Nat. Prod. 2008, 71(8), 1327-1330.
Recent referred journal publications (past 3-5 years) (no more than 10)	1. Chien-Ning Hsu, Chih-Yao Hou, Chi-I Chang,* You-Lin Tain,* Resveratrol Butyrate Ester Protects Adenine-Treated Rats against Hypertension and Kidney Disease by Regulating the Gut-Kidney Axis, Antioxidants, 2022, 11, 83. 2. Lih-Geeng Chen, Ching-Chiung Wang, Yi-Shan Lee, Yi-Yan Sie, Chi-I Chang,* and Wen-Chi Hou, * Vitisin A, a Resveratrol Tetramer, Improves Learning and Memory Functions in Scopolamine-Induced Amnesiac Mice, Biomedicines, 2022, 1, 273. 3. Tsung-Ming Yeh, Ching-Dong Chang, Shyh-Shyan Liu, Chi-I Chang,* Wen-Ling Shih,* Tea seed flavonoid triglycoside attenuates LPS-induced systemic inflammation and ameliorates cognitive impairment in a mouse model, Molecules, 2022, 27(7), 2055. 4. Mei-Kang Yuan, Ju-Wen Kao, Wen-Tung Wu, Chiy-Rong Chen, Chi-I Chang, ＊ Yu-Jen Wu, ＊ Investigation of cell cytotoxicity Activity and Molecular Mechanism of 5β, 19-epoxycucurbita-6, 23 (E)-diene-3β, 19 (R), 25-triol Isolated from Momordica charantia on Hepatoma Cells, Pharmaceutical Biology, 2022, 60(1), 1214-1223. 5. Bongani Sicelo Dlamini, Chiy-Rong Chen, Yu-Kuo Chen, Jue-Liang Hsu, Wen-Ling Shih, and Chi-I Chang,* Mechanistic insights into the inhibitory activities of chemical constituents from the fruits of Terminalia boivinii on α-glucosidase, Chemistry & Biodiversity, 2022, 19(7), e202200137. 6. Po-Chun Chen, Bongani Sicelo Dlamini, Chiy-Rong Chen, Yueh-Hsiung Kuo, Wen-Ling Shih, Yun-Sheng Lin, Chien-Hsing Lee, and Chi-I Chang*, Structure related α-glucosidase inhibitory activity and molecular docking analyses of phenolic compounds from Paeonia suffruticosa, Medicinal Chemistry Research, 2022, 31:293–306. 7. Bongani S. Dlamini, Chiy-Rong Chen, Wen-Ling Shih, Yu-Kuo Chen, Jue-Liang Hsu, and Chi-I Chang,* Insights into the α-amylase and α-glucosidase inhibition mechanism of 4-(4-hydroxyphenyl)-but-3-en-2-one from Scutellaria barbata D. Don: Enzymatic kinetics, fluorescence spectroscopy and computational simulation, Medicinal Chemistry Research, 2022, 31(11), 2007–2020. 8. You-Lin Tain,† Chi-I Chang,† Chih-Yao Hou, Guo-Ping Chang-Chien, Sufan Lin, Chien-Ning Hsu, Dietary Resveratrol Butyrate Monoester Supplement Improves Hypertension and Kidney Dysfunction in a Young Rat Chronic Kidney Disease Model. Nutrients. 2023, 15(3), 635. (†equal to first author) 9. Chi-I Chang, Cheng-Chih Hsieh, Yung-Shung Wein, Ching-Chuan Kuo, Chi-

	Yen Chang, Jrhau Lung, Jong-Yuh Cherng, Po-Chen Chu, Jang-Yang Chang*, Yueh-Hsiung Kuo, * Synthesis and Structure-Activity Relationship of Salvinal Derivatives as Potent Microtubule Inhibitors, Int. J. Mol. Sci. 2023, 24, 6386. 10. Yuh-Hwa Liu, Yin-Shiou Lin, Yi-Yan Sie, Ching-Chiung Wang, Chi-I Chang,* Wen-Chi Hou, Vitisin B, a resveratrol tetrahedron from Vitis thunbergii var. taiwaniana, ameliorate impaired glucose regulations in nicotinamide/streptozotocin-induced type 2 diabetic mice. J. Trad. Complementary Med., 2023, 13 (5), 479-488.
Recent conference proceedings (past 3-5 years) (no more than 5)	1. Chi-I Chang, Yu-Jen Wu, Yu-Chen Lin, Study of anti-inflammatory activity of 7-Acetylsinumaximol B from cultured soft coral Sinularia sandensis on RAW264.7 cells, 2019 Symposium on Health Care and Health Industry in Southern Taiwan, 2019.11.13. 2. Chi-I Chang, Yu-Jen Wu, Jun-Zhi Qiu, Investigation of 11-dehydrosinulariolide extract from cultured soft coral Sinularia flexibilis induce cell apoptosis and inhibit cell migration in bladder cancer cells, 2019 Symposium on Health Care and Health Industry in Southern Taiwan, 2019.11.13.
Recent funded projects (past 3-5 years) (no more than 5)	1. Structure determination and preparation of hypolipidemic constituents from Swietenia macrophylla and their functionality evaluation, 8/2020~7/2021 (Supported by Ministry of Science and Technology) 2. Purification, structure determination, and functionality evaluation of plant immune-boosting constituents from Bacillus amyloliquefaciens PMB05 8/2023~7/2024 (Supported by Ministry of Science and Technology) 3. Structure determination, preparation and formulation development of plant immune-boosting constituents from Bacillus amyloliquefaciens 8/2024~7/2025 (Supported by Ministry of Science and Technology)
Patents (no more than 5)	1. Taiwan Patent：Cheng, H. L., Chang, C. I. Chen, Y. C., and Chou, C. H. Compound and its composition 2. Patent No. I339580。Date of Patent: 4/1/2011~12/25/2027. 2. Taiwan Patent：Chen, Y. C., Cheng, H. L., Chang, C. I. and Chou, C. H. Compound, its composition and methods of isolation 3. Patent No. I337867。Date of Patent: 3/1/2011~12/25/2027. 3. Taiwan Patent：Chang, C. I., Chen, Y. C., Cheng, H. L. and Chou, C. H. Compound, and its composition 1. Patent No. I336256。Date of Patent: 1/21/2011~12/25/2027.

國立屏東科技大學 | National Pingtung University of Science and Technology

Attach one recent colorful Photograph here

Application Form for 2025 NPUST Ph.D. Research Assistantship

Full name	**(First name/Middle name/Family name)**			**Name in Chinese**	
Home address			**Telephone (+Country Code)**	**(Home)**	
				(Mobile)	
Mailing address	☐**Same as home address**		**E-mail**		
Place of birth		**Date of birth (dd/mm/yyyy)**		**Gender ☐Male ☐Female**	
Nationality		**Marital status**	☐**Single** ☐**Married**	**Number of Children**	

Father's name				**Mother's name**			
Place of birth		**Nationality**		**Place of birth**		**Nationality**	

Passport No.		**Religion**	

■ **Educational Background**

Degree	**College or University**	**Graduate school (Master's Program)**
Name of school		
City and country		
Degree granted		
Graduate month/year		
Major		
Grade(GPA)		

■ **With which advisor do you expect to study at NPUST? (please select ONE only)**

☐ Dr. Chun-Yen Chu ☐ Dr. Kuo Pin Chuang ☐ Dr. Yao-Chi Chung

☐ Dr. Jie-Lun Chiang ☐ Dr. How-Ran Chao ☐ Dr. Jue-Liang Hsu

☐ Dr. Chi-I Chang

■ **If you have any illnesses or handicaps, please specify.**

_____

■ **How do you evaluate your Chinese language proficiency?**

Listening	☐ Excellent	☐Good	☐Average	☐Poor
Speaking	☐ Excellent	☐Good	☐Average	☐Poor
Reading	☐ Excellent	☐Good	☐Average	☐Poor
Writing	☐ Excellent	☐Good	☐Average	☐Poor

■ **Chinese language proficiency test**

(Please write the grade/level on the line.)

☐TOCFL(TOP) _____

☐HSK _____

☐Others _____

■ **How do you evaluate your English language proficiency?**

Listening	☐ Excellent	☐Good	☐Average	☐Poor
Speaking	☐ Excellent	☐Good	☐Average	☐Poor
Reading	☐ Excellent	☐Good	☐Average	☐Poor
Writing	☐ Excellent	☐Good	☐Average	☐Poor

■ **English language proficiency test**

☐TOEIC _____

☐IELTS _____

☐TOEFL _____

☐Others _____

■ **Most convenient means for the advisor to contact you:**

Email	
Telephone (+Country Code)	

Preferable time to be contacted through telephone

(please mark at least one time slot, but marking more is more preferable)

☐ 9:00 a.m.– 10:30 a.m. ☐ 10:30 a.m.– 12:00 a.m. ☐ 12:00 a.m.– 1:00 p.m.

☐ 1:00 p.m.– 2:00 p.m. ☐ 2:00 p.m.– 3:30 p.m. ☐ 3:30 p.m.– 5:00 p.m.

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