



Chen, Po-Wen, Professor

- **Research Interests:** Development of animal and human health foods, laboratory animal disease modules, in vitro rumen fermentation & greenhouse gas emission reduction, research and application of probiotics and postbiotics, and application research of lactoferrin.
- **Courses Taught:** Veterinary Pharmacology, Veterinary Physiology
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• Educational Background

PhD, Department of Veterinary Medicine, National Chung-Hsing University
BS, Department of Veterinary Medicine, National Chung-Hsing University

• Professional Career

1. Professor: Department of Veterinary Medicine, National Chung-Hsing University 2025/08~
2. Associate Professor: Department of Veterinary Medicine, National Chung-Hsing University 2022/02
3. Assistant Professor: Department of Veterinary Medicine, National Chung-Hsing University 2019/02

- **Technology transfer** Non-Viable Probiotic Compositions and Their Applications (2025-2028)

• Honors

1. Distinguished Faculty Award (Academic Years 2024–2025)
2. Outstanding Mentor Award (Academic Year 2025)
3. Flexible Salary Incentive for Newly Appointed Faculty (February 1, 2019 – January 31, 2022)
4. Phi Tau Phi Scholastic Honor Award (2003)
5. First Place, National Veterinary Licensing Examination (1998)
6. Golden Key International Honour Society Awa

Selected Publications 2020-2025

SCI publications

1. Liu ZS, Yang YJ, Tsai CC, Tung YT and **Chen PW*** (2025, Nov). Live GABA Producing and Heat-Killed Probiotic Consortium Improves Sleep and Modulates Inflammation in an Anesthesia- and Caffeine-Induced Sleep Disturbance Model. *Food Bioscience*. (Accepted). 本人為通訊作者. **Impact factor: 5.9; Q1**
2. Liu ZS, Chen BY, Chan JPW Chan, and **Chen PW*** (2025, Aug). Development and Validation of a Custom-Built System for Real-Time Monitoring of In Vitro Rumen Gas Fermentation. *Animals*, 15(15):2308. 本人為通訊作者. **Q1**
3. Hsieh MK, Chung ACC, **Chen PW**, Lu YP, Rairat T, Vijayaram S, Srisapoome P, Chou CC*. (2025, Jul). Probiotic pretreatment reduced the florfenicol concentration and shortened the withdrawal time in Asian seabass (*Lateolabrax niloticus*) presumably by decreasing drug absorption.

Fish Physiol Biochem, 51:127.

4. Bo-Yuan Chen, Zhen-Shu Liu, Yu-Syuan Lin, Hsiao Chin Lin and **Po-Wen Chen*** (2025, Jun). Oral Administration of Heat-Killed Multi-Strain Probiotics Confers Durable Protection Against Antibiotic-Resistant Primary and Recurrent Urinary Tract Infections in a Murine Model . *Antibiotics*, 14, 634. 本人為通訊作者. **Impact factor: 4.6; Q1**
5. Yueh-Ying Chen, Zhen-Shu Liu, Bo-Yuan Chen, Hon-Man-Herman Tam, Wei- Yau Shia, Hsin-Hsuan Yu, **Po-Wen Chen***. (2024, Nov). Effects of Heat-Killed Probiotic Strains on Biofilm Formation, Transcription of Virulence-Associated Genes, and Prevention of UTIs in Mice. *Probiotics and Antimicrobial Proteins*, doi: 10.1007/s12602-024-10399-w. Epub ahead of print. PMID: 39579303.. (SCI, 38/174, BIOTECHNOLOGY & APPLIED MICROBIOLOGY). NSTC 112-2313-B-005-037. 本人為通訊作者. **Impact factor: 4.4; Q1**
6. **Chen PW**, Hsiao MN, Xiao LW, Liu ZS* (2024, Aug). Adsorption behavior of heavy metals onto microplastics derived from conventional and biodegradable commercial plastic products. *Science of The Total Environment*, 951: 175537.. (SCI, 31/358, environmental sciences). NSTC 109-2221-E-131-008. 本人為第一作者. IF: 8.2; rank 31/358. **Impact factor: 8.0; Q1**
7. Shiu WC, Chen BY, Kua YW, and **Chen PW*** (2024, Mar). Exploring the Health-Promoting Potential: Dietary Intervention with Live or Inactivated *Lactobacillus gasseri* HM1 Probiotics in Obese Mice. *Journal of Functional Foods*, 115: 106129. (SCI, 27/142, FOOD SCIENCE & TECHNOLOGY). NSTC 112-2313- B-005-037. 本人為通訊作者. **Impact factor: 4.0**
8. Shiu WC, Liu ZS, Chen BY, Ku YW and **Chen PW*** (2024, Mar). Evaluation of a Standard Dietary Regimen Combined with Heat-Inactivated *Lactobacillus gasseri* HM1, Lactoferrin-Producing HM1, and Their Sonication-Inactivated Variants in the Management of Metabolic Disorders in an Obesity Mouse Model . *Foods*, 13 (7):1079. (SCI, 34/142, FOOD SCIENCE & TECHNOLOGY). NSTC 112-2313-B-005-037. 本人為通訊作者. **Impact factor: 5.1; Q1**
9. Van VTH, Liu ZS, Hsieh YJ, Shiu WC, Chen BY, Ku YW, **Chen PW*** (2023, Aug). Therapeutic Effects of Orally Administration of Viable and Inactivated Probiotic Strains against Murine Urinary Tract Infection. *Journal of food and drug analysis*, 31:583-598. (SCI, 173/354, PHARMACOLOGY & PHARMACY). 本人為通訊作者. **Impact factor: 4.0**
10. Liu ZS and **Chen PW*** (2023, Jun). Featured Prebiotic Agent: The Roles and Mechanisms of Direct and Indirect Prebiotic Activities of Lactoferrin and Its Application in Disease Control. *Nutrients*, 15, 2759. (SCI, 17/88, NUTRITION & DIETETICS). 本人為通訊作者 . IF: 6.706. **Impact factor: 5.0; Q1**
11. **Chen PW** and LIn CF* (2022, Dec). Characterization of a novel theta-type replicon of indigenous plasmid pTE15 from *Lactobacillus reuteri* N16. *BMC MICROBIOLOGY*, 22:298. (SCI, 53/161, MICROBIOLOGY). 本人為第一作者. **Impact factor: 4.2**
12. Liu ZS, Li PL, Ku YW, **Chen PW*** (2022, Nov). Oral administration of recombinant lactoferrin-expressing probiotics ameliorates diet-induced lipid accumulation and

inflammation in non-alcoholic fatty liver disease in mice. *Microorganisms*, 10(11):2215. (SCI, 49/161, MICROBIOLOGY). NSTC 109- 2813-C-005-036-B. 本人為通訊作者. **Impact factor: 4.2**

13. **Chen PW**, Lu HF, Liu ZS* (2022, Oct). Development and application of the Ames test using a direct-exposure module: the assessment of mutagenicity of incense and sidestream cigarette smoke. *Indoor air*, 2022;32:e13140.. (SCI, 13/68, CONSTRUCTION & BUILDING TECHNOLOGY). NSTC 107-2221-E-131-001-MY2. 本人為第一作者. **Impact factor: 4.2**
14. Liu ZS, Lin CF, and **Chen PW*** (2021, Sep). Transcriptome analysis of *Lactobacillus rhamnosus* GG strain treated with prebiotic-bovine lactoferrin under a cold environment. *Journal of Food and Drug Analysis* , 29(3): 402-418. (SCI, 173/354, FOOD SCIENCE & TECHNOLOGY). MOST 108-2320-B-005-006. 本人為通訊作者. **Impact factor: 4.0**
15. **Chen PW**, Kuo TC, Liu ZS*, Lu HF. (2021, Mar). Assessment of the mutagenicity of two common indoor air pollutants, formaldehyde and toluene. *Indoor Air*, 31(5):1353-1363. (SCI, 24/203, Public, Environmental & Occupational Health). MOST 107-2221-E-131-001-MY2. 本人為第一作者. **Impact factor: 4.2**
16. Liu ZS, Lin CF, Lee CP, Hsieh MC, Lu HF, Chen YF, Ku YW and **Chen PW***(2021, Jan). A Single plasmid of nisin-controlled bovine and human lactoferrin expressing elevated antibacterial activity of lactoferrin-resistant probiotic Strains. *Antibiotics (Basel)*, 10(2):120.. (SCI, 76/275, PHARMACOLOGY & PHARMACY). MOST 107-2221-E-131-001-MY2. 本人為通訊作者. **Impact factor: 4.6; Q1**
17. **Chen PW***, Kuo YH and Lin YL. (2020, Aug). The Impact of the Postpartum “Doing-the-Month” Practice on Human Milk Microbiota: A Pilot Study in Taiwan. *Microorganisms*, 8(9):E1283. (SCI, 52/137, MICROBIOLOGY). MOST 108-2320-B-005-006. 本人為第一作者、通訊作者. **Impact factor: 4.2**

Seminar

1. Shiu WC, Liu ZS, Chen BY, Chen PW* (2023, Dec). Evaluation of Heat-Killed *Lactobacillus gasseri* HM1, Lactoferrin-Expressing HM1, and Their Sonication- Killed Counterparts in the Management of Metabolic Disorders in an Obesity Mouse Mode. 台灣乳酸菌協會研討會暨二十週年大會, 臺北醫學大學. 本人為通訊作者.
2. Chou, C.C., Chen, PW, LU, YP, Rairat, T., Ho, W. C (2023, May). Probiotic (*Lactobacillus rhamnosus*) pretreatment significantly reduced muscle concentrations of Florfenicol and withdrawal time in Asian Seabass (*Lates calcarifer*). WORLD AQUACULTURE 2023.
3. Hsiao MN, Chen PW, Li PL, Liu ZS* (2023, May). The adsorption potential of heavy metals in aqueous solution by microplastics simulated by commercially available plastic products. 7th Sustainable Development & Green Technology International Symposium.
4. Hsieh, MK, Chen, PW, Wu HC and Chou, CC. (2023, May). Probiotic (*Lactobacillus rhamnosus*) pretreatment significantly reduced steady state serum Florfenicol concentration presumably by reduced drug absorption in Asian Seabass (*Lates calcarifer*). WORLD AQUACULTURE 2023.

5. Shiu WC, Liu ZS, Chen BY, Ku YW, and Chen PW* (2023, May). Evaluation the Beneficial Effects of Live and Inactivated *Lactobacillus gasseri* HM1 on Metabolic Disorders in Mice. 第三屆東亞獸醫學會聯合學術研討會暨中華民國獸醫學會112年度春季學術論文發表會，屏東科技大學獸醫系。本人為通訊作者。
6. Chen PW*, Liu ZS, Lin CF, Lee CP, Hsieh MC, Lu HF, Chen YF, and Ku YW. (2020年10月) Bovine Lactoferrin-resistant *Lactobacillus gasseri* Expressing Bovine Lactoferrin Enhances Antibacterial Activity against Food-borne pathogens。中華民國獸醫學會暨台灣省畜牧獸醫學會-秋季學術研討會，嘉義大學獸醫學系。本人為第一作者、通訊作者

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