Chao, Day-Yu
Professor (ORCID_ID: 0000-0001-7139-026X)

Research Interests: Infectious disease epidemiology, B-cell immune response and infectious diseases
Courses Taught:
Undergraduate: Biostatistics
Graduate: (Master) Advanced veterinary public health、Infectious Disease epidemiology、Preventive medicine、Emerging zoonosis in human and animal (Doctor) Molecular Epidemiology

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Educational Background

1999.7-2003, 7   Doctor degree, Department of Epidemiology, National Taiwan University

1992,1-1993,12   Master degree, Department of environmental and industrial hygiene, University of Iowa

1987, 8-1991, 6   BS, Department of Nursing, National Taiwan University

Professional Career

2007.8~   Assistant/associate/full professor, National Chung-Hsing University

2006, 2 - 2007,6   Postdoctoral research, Institute of molecular biology, Academia sinica

2003,11 - 2006,2 Postdoctoral research, DVBID, US-CDC

1994,4-1999,7   Assistant researcher, FETP, CDC-Taiwan

Honors

1. Visiting scholar in Institute Pasteur awarded by Dragon gate project, MOST, 2023
2. Awarded for Belmont Forum-Pathway to Sustainability by the project title "Eco2Health" in 2021
3. Top Ten Best Paper with Destructive Innovation" awarded by MOST in 2020
4. One of selected 15 spotlight laboratories in Taiwan, selected by Center for Global Affairs and Science Engagement (GASE), MOST, 2020
5. Academic member of Risk Assessment Advisory Committee of Bureau of Animal and Plant Health Inspection and Quarantine (BAPHIQ), Council of Agriculture (COA), Taiwan
6. Editorial board of "Microbiology Spectrum" of ASM journal, "Frontiers in Microbiology" of Frontiers Journal and "Diagnostics" of MDPI publisher

Selected Publications

1. Eloina Faye S. Gampoya,1, Jedhan U. Galulab, Gielenny M. Salemb, Fresthel Monica M. Climacosac, Leslie Michelle M. Dalmacioa, and **Day-Yu Chao**. SARS-CoV-2 Antibody Response and Serum Neutralizing Capacity of Early Unvaccinated COVID-19 Patients in the Philippines. Journal of Clinical Virology Plus 2025; 5(2): 100217

2. Hui-Ying Ko, Yao-Tsun Li, Han-Peng Yu, Ya-Yuan Li, Ming-Tsai Chiang, Yogy Simanjuntak, Yi-Ling Lee, Shih-Syong Dai, Pei-Jung Chung, Guann-Yi Yu, **Day-Yu Chao***, Yi-Ling Lin.

Emergence and increased epidemic potential of dengue variants with the NS5V357E mutation after consecutive years of transmission. iScience. 2024 Oct 11;27(11):110899

3. Chang-Hua Chen, **Day-Yu Chao**, Chew-Teng Kor, Su-Feng Kuo, Jen-Shiou Lin, Huei-Wen Lai, Yen-Tze Liu, Ching-Hsiung Lin and Mu-Kuan Chen. A cross-section study of SARS-CoV-2 antibodies among healthcare workers in a tertiary care hospital in Taiwan: Implications for protection against the omicron variants. *BMC Infect Dis*. 2024; 24(1): 529

4. Bo-Jia Chen, Ching-Hung Lin, Hung-Yi Wu, James J Cai, **Day-Yu Chao***. Experimental and analytical pipeline for sub-genomic RNA landscape of coronavirus by Nanopore sequencer. *Microbiol Spectr* 2024; Mar 14: e0395423

5. Gielenny M. Salem, Jedhan Ucat Galula, Shang-Rung Wu, Jyung-Hurng Liu, Yen-Hsu Chen, Wen-Hung Wang, Sheng-Fan Wang, Cheng-Sheng Song, Fan-Chi Chen, Adrian B. Abarientos, Guan-Wen Chen, Cheng-Yi Wang, and **Day-Yu Chao***. Antibodies from dengue patients with prior exposure to Japanese encephalitis virus are broadly neutralizing against Zika virus. *Communication Biology* 2024; 7(1):15.

6. Hong-Dar Isaac Wu, Ruey-Shing Lin, Wen-Han Hwang, Mei-Liang Huang, Bo-Jia Chen, Tseng-Chang Yen, **Day-Yu Chao***. Integration of citizen science data into the surveillance system for avian influenza virus. *Emerging Infectious Diseases* 2023; 29(1): 45-53

7. Hong-Dar Wu, **Day-Yu Chao***. Two-stage algorithms for visually exploring spatio-temporal clustering of Avian influenza virus outbreaks in poultry farms. *Scientific Reports* 2021; 11: 22553.

8. Pan YH, Liao MY, Chien YW, Ho TS, Ko HY, Yang CR, Chang SF, Yu CY, Lin SY, Shih PW, Shu PY, **Chao DY,** Pan CY, Chen HM, Perng GC, Ku CC, King CC. Use of seroprevalence to guide dengue vaccination plans for older adults in a dengue non-endemic country. *PLoS Negl Trop Dis*. 2021 Apr 1;15(4):e0009312

9. Galula JU, Salem GM, Destura RV, Remenyi R, **Chao DY***. Comparable Accuracies of Nonstructural Protein 1- and Envelope Protein-Based Enzyme-Linked Immunosorbent Assays in Detecting Anti-Dengue Immunoglobulin G Antibodies. *Diagnostics (Basel)*. 2021 Apr 21;11(5):741

10. Wei-Shan Liang, Yu-Chen He, Hong-Dar Wu, Yao-Tsun Li, Tai-Hwa Shih, Gour-Shenq Kao, Horng-Yuh Guo, **Day-Yu Chao***. Ecological factors associated with persistent circulation of multiple highly pathogenic avian influenza viruses among poultry farms in Taiwan during 2015-17. *PLoS One* **2020;** 15(8): e0236581

11. Hui-Ying Ko, Gielenny M Salem, Gwong-Jen J Chang, **Day-Yu Chao***. Application of next-generation sequencing to reveal how evolutionary dynamics of viral population shape dengue epidemiology. *Frontiers in Microbiology* 2020; 11:1371

12. Yao-Tsun Li, Chen-Chih Chen, Ai-Mei Chang, **Day-Yu Chao***, Gavin JD Smith. Co-circulation of both low and highly pathogenic avian influenza H5 viruses in current poultry epidemics in Taiwan. *Virus Evolution* 2020; 6(1): veaa037.

13. Jedhan U Galula, Chung-Yu Yang, Brent S Davis, Gwong-Jen J Chang, **Day-Yu Chao***. Cross-reactivity reduced dengue virus 2 vaccine has not cross-protection against heterotypic dengue viruses. *Future Virology* 2020; 15(2) (Published Online: 23 Mar 2020)

14. Hsu PS, Lian IB, **Chao DY***. A population-based propensity score-matched study to assess the impact of repeated vaccination on vaccine effectiveness for influenza-associated hospitalization among the elderly. *Clin Interv Aging* 2020; 15:301-312.

15. Galula JU, Salem G, Chang GJ and **Chao DY***. Does structurally-mature dengue virion matter in vaccine preparation in post-Dengvaxia era? *Human Vaccines & Immunotherapeutics 2019, ,*15(10):2328-2336

16. Jedhan Ucat Galula, Gwong-Jen J. Chang, **Day-Yu Chao***. Production and Purification of Dengue Virus-like Particles from COS-1 Cells. *Bio-protoco* 20l 9; 19(12): e3280

17. **Chao DY***, Whitney MT, Davis BS, Medina FA, Munoz JL and Chang GJ. Comprehensive Evaluation of Differential Serodiagnosis between Zika and Dengue Viral Infections. *Journal of Clinical Microbiology* 2019. Feb 27;57(3). pii: e01506-18. (SCI)

18. Sung MH, Lin CN, Chiou MT, Cheng IJ, Thanh QH, **Chao DY**, Lan YC. Phylogeographic investigation of porcine epidemic diarrhea virus transmission in Taiwan, 2014. *PLoS One*. 2019 Mar 6;14(3):e0213153. (SCI)

19. Shen WF, Galula JU, Liu JH, Liao MY, Huang CH, Wang YC, Wu HC, Liang JJ, Lin YL, Whitney, MT, Chang GJ, Chen SR, Wu SR, **Chao DY***. An epitope-resurfaced virus-like particle can induce broad neutralizing antibody against four serotypes of dengue virus. *Elife*. 2018 Oct 18;7. pii: e38970. (SCI)

20. Ko HY, Li YT, **Chao DY***, Chang YC, Li ZR, Wang M, Kao CL, Wen TH, Shu PY, Chang GJ, and King CC. Inter- and intra-host sequence diversity reveal the emergence of viral variants during an overwintering epidemic caused by dengue virus serotype 2 in southern Taiwan. *PLoS Negl Trop Dis* 2018 Oct 4;12(10):e0006827. (SCI)

21. Hsu SY, Chen FL, Liaw YP, Huang JY, Nfor ON, **Chao DY***. A matched influenza vaccine strain was effective in reducing the risk of acute myocardial infarction in elderly persons. *Medicine* 2016; 95(10): e2869. (SCI)