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研究領域：傳染病流行病學、分子病毒學、節肢動物傳播之病毒傳染病、傳染病監測在獸醫公共衛生之應用、病毒之分子演化學、感染症與抗體反應

教授課程：

大學部：生物統計

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簡要學經歷

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

- 2007.8~今 國立中興大學助理教授/副教授/教授
2006, 2 - 2007, 6 中央研究員分子生物研究所博士後研究員
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研究興趣及成果簡述

- 登革熱方面的研究興趣與成果：從博士論文至今 20 年，發表超過 32 篇關於登革病毒或黃病毒方面的文章在 SCI journal，其中有 18 篇為第一或通訊作者，其中包括區辨抗體來自自然感染或是疫苗產生的抗體方法，結合流行病學與病毒演化找出造成登革出血熱的重要病毒傳播機制，從基礎的結構與實驗室數據找出誘發廣泛性中和性抗體的機制，這些研究成果不僅在登革熱防治上有重要的科學與社會貢獻，同時榮獲科技部年度十大破壞性創新論文獎及多項國際專利。
- 在中興大學獸醫學院服務期間，遇到 2015 年台灣最嚴重的禽流感病毒入侵台灣，造成禽場的重大疫情，受到官方的委託開始進行環境危險因子、病毒傳播與演化的調查，相關結果不只陸續發表在許多重要的國際期刊，且所製作的風險地圖具有高的預測準確度，因此也受政府相當重視，並放在戰情室中作為疫情控制的重要參考。自 2021 年度獲得國際貝蒙論壇的獎助，進行” Pathway to Sustainability”的國際合作，主題為 Eco2Health，此獎項主要針對 17 項地球永續發展目標，篩選重要的國際團隊針對特定的議題提出解決方法，本團隊是唯一在人畜共通傳播疾病議題上獲獎的團隊。

代表著作

1. 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
2. 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
3. Giellenny 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. Abarrientos, 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.
4. 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
5. 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.
6. 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
7. 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
8. 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
9. Hui-Ying Ko, Giellenny 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
10. 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.
11. 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)

12. 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.
13. 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
14. Jedhan Ucat Galula, Gwong-Jen J. Chang, **Dav-Yu Chao***. Production and Purification of Dengue Virus-like Particles from COS-1 Cells. *Bio-protocol* 2019; 19(12): e3280
15. **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)
16. 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)
17. 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)
18. 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)
19. 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)