Chiou, Shyan-Song
Professor

Research Interests：Vector-borne Viruses、Epidemiology

Courses Taught：Important Viral Infectious Diseases in Taiwan、Fundamentals in Veterinary Basic Science、Principles of Epidemiology、Analytical Methods in Sero-epidemiology、Advanced Microbiology、Advanced Veterinary Public Health

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Educational Background

- BS, Department of Public Health, NTU (1991.9-1995.7)
- PhD, Institute of Epidemiology and Preventive Medicine, NTU (1995.9-2001.7)

Professional Career

- Postdoctoral Fellow, Chang Gung University (2003.04-2004.01)
- Assistant Professor, Dept. of Microbiology, Immunology and Biopharmaceuticals, National Chiayi University (2004.02-2005.07)
- Visiting scholar, Institute of Molecular Biology, Academia Sinica (2005.07-2005.09)
- Assistant Professor, Graduate Institute of Microbiology and Public Health, NCHU (2005.08-2009.01)
- Visiting scholar, Centers for Disease Control and Prevention (2006.07-2006.10)
- Visiting scholar, Centers for Disease Control and Prevention (2008.06-2008.09)
- Associate Professor, Graduate Institute of Microbiology and Public Health, NCHU (2009.02-2013.07)
- Visiting scholar, Centers for Disease Control and Prevention (2010.07-2011.02)
- Professor, Graduate Institute of Microbiology and Public Health, NCHU (2013.08-)

Honors
- Outstanding Young Faculty Award, NCHU (2008, 2015)
- Outstanding Young Scholar Award, NCHU (2013)
- Teacher Award in General Education, NCHU (2017)
- Distinguished Professor, NCHU (2018.08-2020.07, 2020.08-2024.07)

Selected Publications
1. Fan YC, Chen JM, Chen YY, Ke YD, Chang GJ, **Chiou SS**. **2024.** Epitope(s) involving amino acids of the fusion loop of Japanese encephalitis virus envelope protein is(are) important to elicit protective immunity. *J Virol.* 16;98(4):e0177323.

2. Fan YC, Chen JM, Chen YY, Hsu WL, Chang GJ, and **Chiou SS**. **2024.** Low-temperature culture enhances production of flavivirus virus-like particles in mammalian cells. ***Applied Microbiology & Biotechnology***, 108(1):242.

3. Fan YC, Chen YY, Chen JM, Huang C, Huang M, **Chiou SS. 2022.** Effectiveness of Live-Attenuated Genotype III Japanese Encephalitis Viral Vaccine against Circulating Genotype I Viruses in Swine. ***Viruses***, 14(1):114.

4. **Chiou SS**, Chen JM, Chen YY, Chia MY, Fan YC. **2021**. The feasibility of field collected pig oronasal secretions as specimens for the virologic surveillance of Japanese encephalitis virus.. ***PLoS Neglected Tropical Disease***, 15(12):e0009977.

5. Fan YC, Liang JJ, Chen JM, Lin JW, Chen YY, Su KH, Lin CC, Tu WC, Chiou MT, Ou SC, Chang GJ, Lin YL, **Chiou SS. 2019**. Enhancement of genotype I Japanese encephalitis virus infectivity in amplifying Hosts associated with NS2B/NS3 mutations. ***PLoS Pathogens***. 5(8):e1007992. (IF=6.463, Rank: 3/36)

6. Fan YC, Chen JM, Lin JW, Chen YY, Wu GH, Su KH, Chiou MT, Wu SR, Yin JH, Liao JW, Chang GJJ, **Chiou SS. 2018.** Genotype I of Japanese Encephalitis Virus Virus-like Particles Elicit Sterilizing Immunity against Genotype I and III Viral Challenge in Swine. ***Scientific Reports***. 8:7481. (IF=4.011, Rank: 15/69)

7. Fan YC, Lin JW, Liao SY, Chen JM, Chen YY, Chiu HC, Shih CC, Chen CM, Chang RY, King CC, Chen WJ, Ko YT, Chang CC, and **Chiou SS*. 2017.** Virulence of Genotypes I and III Japanese Encephalitis Virus in Humans. ***Emerging Infectious Diseases***. 23(11):1883-1886. (IF=7.422, Rank: 4/88)

8. Chen JM, Fan YC, Lin JW, Chen YY, Hsu WL, **Chiou SS**. 2017. Bovine Lactoferrin Inhibits Dengue Virus Infectivity by Interacting with Heparan Sulfate, Low-Density Lipoprotein Receptor, and DC-SIGN. ***Int J Mol Sci***. 18(9). pii: E1957. (IF=4.183, Rank: 78/298)

9. Fan YC, Chiu HC, Chen LK, Chang GJJ, and **Chiou SS*. 2015.** Formalin inactivation of Japanese encephalitis virus vaccine alters the antigenicity and immunogenicity of a neutralization epitope in envelope protein domain III. ***PLoS Neglected Tropical Diseases***. 9(10): e0004167. (IF=4.487, Rank: 1/21)

10. Chen YY, J.W. Lin, Y.C. Fan, and **Chiou SS* 2014.** Detection and Differentiation of Genotype I and III Japanese Encephalitis Virus in Mosquitoes by Multiplex Reverse Transcriptase-Polymerase Chain Reaction. ***Transboundary and Emerging Diseases***. 61(1): 37-43. (IF=3.554, Rank: 2/141)

11. Fan YC, Chen JM, Chen YY, Lin JW, **Chiou SS**.* 2013. Reduced neutralizing antibody titer against genotype I virus in swine immunized with a live-attenuated genotype III Japanese encephalitis virus vaccine. ***Vet Microbiol***. 163(3-4): 248-56. (IF=2.791, Rank: 7/141)

12. Chen YY, Lin JW, Fan YC, Tu WC, Chang GJ, **Chiou SS**.* 2013. First detection of the Africa/Caribbean/Latin American subtype of Culex flavivirus in Asian country, Taiwan. ***Comp Immunol Microbiol Infect Dis***. 36(4): 387-96. (IF=2.107, Rank: 12/132)

13. Fan YC, J.M. Chen, H.C. Chiu, Y.Y. Chen, J.W. Lin, C.C. Shih, C.M. Chen, C.C. Chang, G.J.J. Chang, and **Chiou SS*.** Partially Neutralizing Potency against Emerging Genotype I Virus among Children Received Formalin-Inactivated Japanese Encephalitis Virus Vaccine. *PLoS Neglected Tropical Diseases.* 2012; 6(9):e1834-1843. (IF=4.569, Rank: 1/22)

14. **Chiou SS,** Fan YC, Crill WD, Chang RY, and Chang GJ. (2012). Mutation Analysis of the Cross Reactive Epitopes of Japanese Encephalitis Virus Envelope Glycoprotein. *Journal of General Virology* 93:1185-1192. (IF=3.127, Rank: 11/34)

15. Chen YY, Fan YC, Tu WC, Chang RY, Shih CC, Lu IH, Chien MS, Lee WC, Chen TH, Chang GJ, **Chiou SS.*** (2011). Japanese encephalitis virus genotype replacement, Taiwan, 2009-2010. *Emerging Infectious Diseases.* 17(12):2354-6. (IF=7.185, Rank: 5/89)

16. Chien Y.J., Chen W.J., Hsu W.L., and **Chiou S.S.*** Bovine lactoferrin inhibits Japanese Encephalitis Virus by binding to heparan sulfate and receptor for low density lipoprotein. *Virology*. 2008; 379:143-151. (SCI, Ranking in VIROLOGY=14/32=43.7%, IF=3.351) (*: Correspondence)

17. **Chiou S.S.,** Crill W.D., Chen L.K., and Chang G.J.J. Enzyme-linked immunosorbent assays using novel Japanese encephalitis virus antigen improves the accuracy of clinical diagnosis in flavivirus infected patients. *Clinical and Vaccine Immunology*. 2008; 15(5):825-35. (SCI, Ranking in MICROBIOLOGY=51/112=45.5%, IF=2.546)