

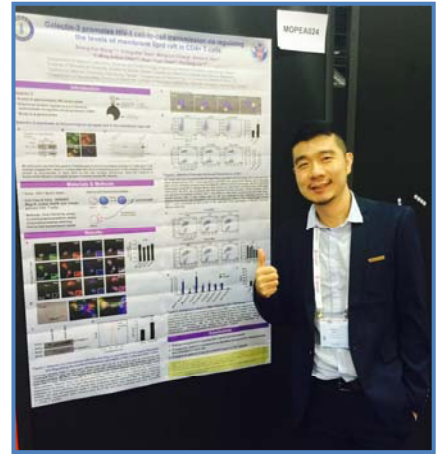
Dr. Sheng-Fan (David) Wang

Assistant Professor

Department of Medical Laboratory Science and Biotechnology,
Kaohsiung Medical University, Kaohsiung 80708, Taiwan.

Tel: +886-7-3121101#2558; Fax: +886-7-322-2783.

Email: wasf1234@kmu.edu.tw



Education

PH.D. Degree	Department of Biotechnology and Laboratory Science in Medicine, National Yang-Ming University, Taiwan	Sep. 2005-Jun.2009
Master Degree	Institute of Medical Biotechnology, National Yang-Ming University, Taiwan	Sep.1999-Jun.2001
Bachelor Degree	School of Medical Technology, National Yang-Ming University, Taiwan	Sep.1995-Jun.1999

Awards, Honors, Scholarships

- The best research award, IBMS, Academia Sinica, Taiwan, 2013.
- The Phi-Tau-Phi Scholastic Honor- Sep. 2009
- Scholarship from National Yang-Ming University Aim for the Top University Plan Grant Approval for attending 8th Asia Pacific Congress of Medical Virology- Feb.2009
- Scholarship from International AIDS conference for attending XV International AIDS Conference- Jul.2004

Work Experience

Defense Industry Reserve Duty (D.I.R.D) Officer- Research assistant Oct.2001-Oct.2005
Taiwan CDC.

- In charge of diagnosis of antigens or antibodies against the emerging infectious pathogens including Enterovirus, HIV-1/2, HBV, HCV and SARS-CoV.

- To develop the new detection and diagnosis assays for those emerging or re-emerging microbes.
- CDC grant writing, applying and performing
- To assist the epidemic prevention or control

National Yang-Ming University- Post doctor fellow

Jul. 2009 to present

- Take response to teach the new students to do the experiments
- To help the PI to apply and carry out the grants.
- Paper writing and support other's work

Languages skills

I can write, read and speak Chinese and English fluently.

Licenses and Certificates

- Medical Technologist License
- BSL-2 and BSL-3 user training certificates
- ISO 15189 certificates

Conferences

- The 14th International AIDS Conference, Barcelona (Jul.2002)
- The 15th International AIDS Conference, Bangkok (Jul.2004)
- Taiwan Society and Microbiology and 11th Western Pacific Congress on Chemotherapy and Infectious Disease (WPCCID) (Nov. 2008)
- The 8th Asia-Pacific Congress of Medical Virology (Feb. 2009).
- BIT's 1st World Congress of Virus and Infections 2010 (July 31-August 3, 2010 Venue: Busan Exhibition & Convention Center, Korea)
- 7th IAS Conference on Pathogenesis, Treatment and Prevention (Jul 30-Jun 3, 2013, Kuala Lumpur Malaysia)
- 8th IAS Conference on Pathogenesis, Treatment and Prevention(Jul 19-22, 2015 , Vancouver Canada)

Publications (Research)

*International publication (SCI papers):

1. Szu-Hao Kung, **Sheng-Fan Wang**, Chao-Wei Huang, Chiu-Chu Hsu, Hsin-Fu Liu,

Jyh-Yuan Yang. **Genetic and antigenic analyses of enterovirus 71 isolates in Taiwan during 1998-2005.** *Clin Microbiol Infect.* 2007;13(8):782-787.

2. **Sheng-Fan Wang**, Jason C. Huang, Yuan-Ming Lee, Shih-Jen Liu, Yu-Jiun Chan, Yat-Pang Chau, Pele Chong and Yi-Ming Arthur Chen. **DC-SIGN mediates avian H5N1 influenza virus infection in cis and in trans.** *Biochem Biophys Res Commun.* 2008,373(4):561-566.
3. **Sheng-Fan Wang**, Kuan-Hsuan Chen, Arunee Thitithanyanont, Ling Yao, Yuan-Ming Lee, Yu-Jiun Chan, Shih-Jen Liu, Pele Chong, Wu-Tse Liu, Jason C. Huang, and Yi-Ming Arthur Chen. **Generating and Characterizing Monoclonal and Polyclonal Antibodies against Avian H5N1 Hemagglutinin Protein.** *Biochem Biophys Res Commun.* 2009,382(4):691-696.
4. **Sheng-Fan Wang**, Yuan-Ming Lee, Yu-Jiun Chan, Hsin-Fu Liu, Yung-Fong Yen, Wu-Tse Liu, Jason C. Huang, Yi-Ming Arthur Chen **Influenza A virus in Taiwan, 1980-2006: Phylogenetic and Antigenic Characteristics of the Hemagglutinin Gene.** *Journal of Medical Virology.* 2009 Aug;81(8):1457-70.
5. Yuan-Ming Lee, **Sheng-Fan Wang**, Cheng-Ming Lee, Kuan-Hsuan Chen, Yu-Jiun Chan, Wu-Tse Liu and Yi-Ming Arthur Chen. **Virological investigation of four outbreaks of influenza B reassortants in the northern region of Taiwan from October 2006 to February 2007.** *BMC research Note.* 2009, 9;2(1):86.
6. **Sheng-Fan Wang**, Ling Yao, Shih-Jen Liu, Pele Chong, Yi-Ming Arthur Chen and Jason C. Huang. **Identifying Conserved DR1501-restricted CD4⁺ T cell Epitopes in Hemagglutinin Proteins after H5N1 Vaccine Inoculation.** (*Viral Immunology* ; Accepted).
7. Ying-Feng Chang*, and **Sheng-Fan Wang***, Li-Chen Su, Ying-Chen Li, Cheng-Chung Lee, Ling Yao, Yi-Ming A. Chen, Jason C. Huang, and Chien Chou. **Detection of Swine-origin Influenza A (H1N1) Viruses Using a Localized Surface Plasmon Coupled Fluorescence Fiber-optic Biosensor.** (*equal contribution)(*Biosensors and Bioelectronics*; 2010 ;26(3):1068-73).
8. Che-Feng Liao*, **Sheng-Fan Wang***, Yu-Ting Lin, and Yi-Ming Arthur Chen. **Identification of the DC-SIGN-interactive domains on the envelope glycoprotein of HIV-1 CRF07_BC.** (*equal contribution) *AIDS Research and Human Retroviruses*; 2011,

27(8): 831-839.

9. Yuan-Ming Lee; Huang-Jie Lin; Yen-Ju Chen; Cheng-Ming Lee; **Sheng-Fan Wang**; Kai-Yuan Chang; Tzu-Lang Chen; Hsin-Fu Liu; Yi-Ming Arthur Chen. **Molecular epidemiology of HCV genotypes among injection drug users in Taiwan: Full-length sequences of two new subtype 6w strains and a recombinant form_2b6w.** *Journal of medical virology* 2010;82(1):57-68
10. Chun-Wei Lee, Shr-Jeng Jim Leu, Ruei-Ying Tzeng, **Sheng-Fan Wang**, Shu-Chun Tsai, Kuang-Hui Sun, Ruey-Hwa Chen, Jason C. Huang **Latent membrane protein 1 of Epstein–Barr virus regulates death-associated protein kinase 1 in lymphoblastoid cell line.** *Virology* 2011 Apr. 413 (2011) 19–25.
11. **Sheng-Fan Wang**, Kuan-Hsuan Chen, Yen-Ju Chen, Wen-Yi Lee, Marcelo Chen, Jason C. Huang, Yi-Ming Arthur Chen. **Human-Leukocyte-Antigen Class I Cw 1502 and Class II DR 0301 Genotypes are Associated with Resistance to Severe Acute Respiratory Syndrome (SARS) Infection.** *Viral Immunology*, 2011, 24(5): 421-426.
12. Hoa Minh Luong*, **Sheng-Fan Wang***, Vu Tan Trao, Suh-Chin Wu, Marcelo Chen, Jason C. Huang, Phung Dac Cam, Yi-Ming Arthur Chen. **Retrospective survey of avian influenza H5N1 infection in Northern Vietnam by using a combinational serologic assay.** (*equal contribution) *Health*, 4, 974-982.
13. Lee YM, Chuang SY, **Wang SF**, Lin YT, Chen YM. **Epidemiology of human herpesvirus type 8 and parvovirus B19 infections and their association with HIV-1 among men who have sex with men and injection drug users in Taiwan.** *J Microbiol Immunol Infect.* 2013 Mar 3. pii: S1684-1182(13)00021-2.
14. **Sheng-Fan Wang**, Ming-Wei Su, Ching-Han Tsao, Szu-Wei Huang, Woei-Chyn Chu, Wu-Tse Liu, Yi-Ming Arthur Chen and Jason C. Huang. **Codon Usage Preference Analysis of Hemagglutinin Genes in the Swine-Origin Influenza A (H1N1) Virus.** *Journal of Microbiology, Immunology and Infection* 2014 (under review).
13. **Sheng-Fan Wang**, Sung-Pin Tseng, Chia-Hung Yen, Jyh-Yuan Yang, Ching-Han Tsao, Chun-Wei Shen, Kuan-Hsuan Chen, Fu-Tong Liu, Wu-Tse Liu, Yi-Ming Arthur Chen, Jason C. Huang. **Antibody-dependent SARS coronavirus infection is mediated by antibodies against spike proteins.** *Biochem Biophys Res Commun.* 2014 Aug 22;451(2):208-14.

15. **Sheng-Fan Wang**, Ching-Han Tsao, Yu-Ting Lin, Daniel K. Hsu, Meng-Lin Chiang, Chia-Hui Lo, Fan-Ching Chien, Peilin Chen, Yi-Ming Arthur Chen, Huan-Yuan Chen, Fu-Tong Liu. **Galectin-3 promotes HIV-1 budding via association with Alix and Gag p6.** *Glycobiology* 2014 Nov;24(11):1022-35.
16. **Sheng-Fan Wang**, Ming-Wei Su, Sung-Pin Tseng, Ching-Han Tsao, Szu-Wei Huang, Woei-Chyn Chu, Wu-Tse Liu, Yi-Ming Arthur Chen, and Jason C. Huang (2014, Oct). **Analysis of codon usage preference in hemagglutinin genes of the swine-origin influenza A (H1N1) virus.** *J Microbiol Immunol Infect*, 2014 Oct 31. pii: S1684-1182(14)00180-7.
17. Szu-Wei Huang*, **Sheng-Fan Wang***, Yu-Ting Lin, Chia-Hung Yen, Chih-Hao Lee, Wing-Wai Wong, Hung-Chin Tsai, Chia-Jui Yang, Bor-Shen Hu, Yu-Huei Lin, Chin-Tien Wang, Jaang-Jiun Wang, Zixin Hu, Daniel R. Kuritzkes, Yen-Hsu Chen, Yi-Ming Arthur Chen (***These authors contributed equally to this work**) (2014, Dec). **Patients Infected with CRF07_BC Have Significantly Lower Viral Loads than Patients with HIV-1 Subtype B: Mechanism and Impact on Disease Progression.** *PLoS One*, December 2014 11;9(12):e114441.
18. **Sheng-Fan Wang**, Sung-Pin Tseng, Szu-Wei Huang, Chia-Hung Yen, Yi-Wei Hong, Marcelo Chen, and Yi-Ming Arthur Chen (2015, Feb). **Mitochondria Polarization in the Contact Regions of Virus-Infected Effector Cells During Cell-to-Cell Transmission of HIV-1.** *AIDS RESEARCH AND HUMAN RETROVIRUSES*, 2015 Feb;31(2):175-6.
19. Szu-Wei Huang, **Sheng-Fan Wang**, Ángel E. Cowó, Marcelo Chen, Yu-Ting Lin, Chun-Po Hung, Yi-Hsien Chen, Jyh-Yuan Yang, Hung-Jen Tang, Yi-Ming Arthur Chen. (2015, May). **Molecular Epidemiology of HIV-1 Infection among Men who Have Sex with Men in Taiwan in 2012.** *PLoS One*, 2015 Jun 3;10(6):e0128266.
20. Sung-Pin Tseng, **Sheng-Fan Wang**, Cheng-Yu Kuo, Jun-Wei Huang, Wei-Chun Hung, Guan-Ming Ke, Po-Liang Lu. **Characterization of Fosfomycin Resistant Extended-Spectrum β -Lactamase-Producing Escherichia coli Isolates from Human and Pig in Taiwan.** *PLoS One*. 2015 Aug 17;10(8):e0135864.
21. **Sheng-Fan Wang**, Ko Chang, Ruo-Wei Lu, Wen-Hung Wang, Yen-Hsu Chen, Marcelo Chen, Deng-Chyang Wu and Yi-Ming Arthur Chen. **Large Dengue virus type 1 outbreak in Taiwan.** *Emerging Microbes & Infections* (2015) 4, e46

*Domestic published papers:

1. **Wang S.F.**, Yang C.Y , Tseng T.C , Chen H.Y. Molecular Biological Analysis of the First Imported Rabies Case in Taiwan . *Taiwan Epidemiology Bulletin* 2002 ; October 25 , Vol. 18 , No. 10 : 245-255.
2. **Wang S.F.** , Lin C.L , Yang C.Y. Establishment of Real-time PCR Analysis System to detect Enterovirus infection . *Taiwan Epidemiology Bulletin* 2002 ; November 25 , Vol. 18 , No. 11 : 267-277.
3. Hsu L.C , Hsu F.K , Chang S.F , Chou L , **Wang S.F.** , Yang S.Y. Establishing a Yellow Fever Serological Testing Method . *Taiwan Epidemiology Bulletin* 2003 ; March 25 , Vol. 19 , No. 3 : 47-59.
4. **Wang S.F.**, Yang C.Y , Lee H.C , Chen .H.Y . Molecular Biological Analysis of SARS Virus in Taiwan . *Taiwan Epidemiology Bulletin* 2003 ; June 25 , Vol. 19 , No. 6 : 127-141
5. **Wang S.F.** , Lee H.C , Chen H.Y , Yang J.Y. Establishment and Analysis of SARS Real-time Quantitative System . *Taiwan Epidemiology Bulletin* 2003 ; July 25 , Vol. 19 , No. 7 :153-168
6. Cheng WY, **Wang S.F.**, Yang C.Y, Chen H.Y. Genotype Analysis of Measles Virus ,2002. *Taiwan Epidemiology Bulletin* 2003 ; Oct 25 , Vol. 19 , No. 10 : 231-243.
7. **Wang S.F.** , Yang J.Y ,Chen H.Y. Analysis and testing for AIDS in 92 Homosexuals at a Private Party . *Taiwan Epidemiology Bulletin* 2004.,May 25, Vol.20, No.5: 105-120
8. **Wang S.F.**, Liu S.C, Lee H.C, Wu P.J, Hsu C.C, Wang S.H, Huang Y.F, Tsai S.F, Yang J.Y, Chen H.Y Molecular Biology Confirmation and Analysis of Suspected Transfusion-Associated HIV Cases. *Taiwan Epidemiology Bulletin* 2004.,Dec. 25, Vol.20, No.12: 281-303.
9. **Wang S.F.**, Lu S.J, Lee H.C, Wang S.Z, Shu C.J, Wang S.H, Huang Y.F, Tsai S.F, Yang J.Y, Chen H.Y Subtype Identification and Drug-Resistant Point Mutation of Human Immunodeficiency Virus Type I in Taiwan. *Taiwan Epidemiology Bulletin* 2005.,Apr. 25, Vol.21, No.4: 91-115.
10. **Wang S.F.**, Lin T.L, Hsu C.C, Lee H.C, Luo S.J, Huang C.W, Yang J.Y, Chen H.Y An Epidemiological Analysis of Enterovirus 71: Taiwan, 1998-2004. *Taiwan Epidemiology Bulletin* 2005.,May. 25, Vol.21, No.5: 125-153.

*Book Chapters:

1. Sheng-Fan Wang and Yi-Ming Arthur Chen. **The Interactions between Avian H5N1 Influenza Virus and Dendritic Cell-Specific ICAM-3 Grabbing Non-Integrin (DC-SIGN)**. Chapter 6, *Global View at Fight against Influenza*, Nova Science Publishers.

2. Sheng-Fan Wang and Yi-Ming Arthur Chen. **The Emergence of HIV-1 Circulating Recombinant Form 07_BC Strains in Taiwan.** *Emerging Infectious Diseases: Global Trends, Surveillance and Eradication*, Nova Science Publishers.

***Conference Abstracts:**

1. **S.F Wang**, W.W.Wong, Y.J.Chan and W. T. Liu. **Genotyping and Phenotyping of Human Immunodeficiency Virus Type 1 by Protease Inhibitor Testing.** XIV International AIDS Conference 2002, Barcelona.
2. **S.F Wang**, Yang J.Y and Liu W.T. **Propagation of SARS Coronavirus with human promonocyte cell line, HL-CZ.** The 6 th Asia Pacific Congress of Medical Virology, Nov 2003.
3. **S.F Wang**, J.C. Huang, P. Chong, Y.M Chen. **DC-SIGN Mediates Avian H5N1 Influenza Virus Infection in Cis and in Trans.** Taiwan Society and Microbiology and 11th Western Pacific Congress on Chemotherapy and Infectious Disease (WPCCID) (Nov.29-Dec.9, 2008).
4. Y.M Lee, **S.F Wang**, Y.J Chan, W.T Liu, Y.M. Chen. **Virological investigation of four outbreaks of influenza B reassortants in the northern region of Taiwan from October 2006 to February 2007.** Taiwan Society and Microbiology and 11th Western Pacific Congress on Chemotherapy and Infectious Disease (WPCCID) (Nov.29-Dec.9, 2008).
5. **S.F Wang**, Y.M Lee, J.C Huang, Y.M Chen. **Phylogenetic and antigenic analysis of human influenza A virus hemagglutinin gene during 1980-2006 in Taiwan.** The 8th Asia-Pacific Congress of Medical Virology (Hong Kong, 25-28 Feb 2009).
6. **S.F Wang**, L.Yao, S.J Liu, P. Chong, Y.M.Chen, J. Huang, W.T Liu. **Identifying the B cell and DR-1501 restricted CD4⁺ T cell epitopes of Hemagglutinin proteins in the avian H5N1 virus.** BIT's 1st World Congress of Virus and Infections 2010 (July 31-August 3, 2010 Venue: Busan Exhibition & Convention Center, Korea).
7. **S.-F. Wang**, C.-H. Tsao, Y.-T. Lin, M.-L. Chiang, F.-C. Chien, P. Chen, D. Hsu, Y.-M. Chen, H.-Y. Chen, F.-T. Liu. **Galectin-3 promotes virus budding and cell-to-cell transmission of HIV-1.** 7th IAS Conference on Pathogenesis, Treatment and Prevention (Jul 30-Jun 3, 2013, Kuala Lumpur Malaysia).
8. **Sheng-Fan Wang**, Ching-Han Tsao, Meng-Lin Chiang, Daniel K. Hsu³, Yi-Ming Arthur Chen, Huan-Yuan Chen, Fu-Tong Liu. **Galectin-3 promotes HIV-1 cell-to-cell transmission via up-regulating GM1 ganglioside in lipid raft of CD4⁺ T cells.** 8th IAS Conference on Pathogenesis, Treatment and Prevention (19-22 July, 2015, Vancouver, Canada).

***Patent:**

1. N-terminal fragment of galectin-3 inhibits HIV-1 budding. (Fu-Tong Liu, Huan-Yuan Chen and Sheng-Fan Wang) (No. 12A-1020422).
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Grants:

1. **Multi-resolution 3D visualization of HIV-1 NL4-3 and CRF07_BC viral attachment and internalization kinetics to CD4+ T cells** (2014/08/01~2015/07/31; Supported by Kaohsiung Medical University, grant No. KMU-TP103E03).
 2. **Establishment of HIV-1 functional cure test platform** (2014/08/01~2015/07/31; Supported by Kaohsiung Medical University, grant No. KMU-TP103E20).
 3. **The study of the role of truncated HIV-1 CRF07_BC P6Gag in virus maturation, budding and disease progression** (2015/01/01~2015/12/31; Supported by Kaohsiung Medical University Research Foundation. grant No.KMU-Q104001)
 4. **The role of endogenous galectin-3 in virus budding and cell-to-cell transmission of HIV-1 CRF07_BC viruses** (2015/08/01~2018/07/31; Supported by the Ministry of Science and Technology, R.O.C. grant no. MOST 104-2321-B-037-002).
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*** Teaching courses or joined courses (Teach):**

1. Microbiology (Department of laboratory science and biotechnology, KMU)
2. Microbiology Laboratory (Department of laboratory science and biotechnology, KMU)
3. Biotechnology (Department of laboratory science and biotechnology, KMU)
4. Immunology (Department of laboratory science and biotechnology, KMU)
5. Professional English (Department of laboratory science and biotechnology, KMU)
6. Seminar (Department of laboratory science and biotechnology, KMU/Tropical Medicine and global health, KMU)
7. Special Topics of Medical Virology(Department of laboratory science and biotechnology, KMU)
8. Special topics of virological and immunological researches in HIV-1 and influenza viruses(Department of laboratory science and biotechnology, KMU)
9. Learning service for international students (Department of laboratory science and biotechnology, KMU)

10. Management of Hazardous Waste (Department of Public Health, KMU).
 11. Clinical Microbiology (Department of laboratory science and biotechnology, KMU)
 12. Clinical Virology (Department of laboratory science and biotechnology, KMU).
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*** Service:**

1. 2014/9/1-2015/8/30..... Administrative teacher (Department of laboratory science and biotechnology).
 2. 2014/9/1-2015/8/30..... Administrative teacher (College of Healthy Sciences).
 3. 2013/2/1-2015/6/30.....Class tutor for local Taiwanese students
 4. 2013/9/1- present Class tutor for International students
 5. 3015/9/1- present.....Class tutor for local Taiwanese students in second grade
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***To be as journal reviewer**

1. Journal of Virological Method
 2. BMC infectious Disease
 3. BMC Research Note
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