

➤ **Name/ Position**

Sung-Pin Tseng/ Professor and Chair

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Department of Medical Laboratory Science and  
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➤ **The Highest Education Degree**

PhD., Department of Clinical Laboratory Sciences and Medical Biotechnology,  
National Taiwan University, Taiwan

➤ **Research Area**

1. Bacterial antibiotic resistance
2. Bacterial infection

➤ **Personal website**

<http://wp.kmu.edu.tw/tsengsp/>

➤ **Positions and Honors**

**Positions**

- 2009-2011 **Postdoctoral Researcher**, Department of Clinical Laboratory Sciences and Medical Biotechnology, National Taiwan University, R.O.C.
- 2012-2015 **Assistant Professor**, Department of Medical Laboratory Science and Biotechnology, Kaohsiung Medical University, R.O.C.
- 2015-2018 **Associate Professor**, Department of Medical Laboratory Science and Biotechnology, Kaohsiung Medical University, R.O.C.
- 2018- **Professor**, Department of Medical Laboratory Science and Biotechnology, Kaohsiung Medical University, R.O.C.

**Other Experience and Professional Memberships**

- 2012- **Member**, Taiwan Society of Microbiology.
- 2012- **Member**, American Society for Microbiology.
- 2013- **Reviewer**, *Journal of Microbiology, Immunology and Infection*.
- 2015 **Member**, Student Forum Committee, Thirty-First World Congress of Biomedical Laboratory Science (IFBLS).
- 2015 **Lead Guest Editor**, *International Journal of Microbiology*.

- 2016- **Editor**, *Insights in Internal Medicine*.
- 2017 **Guest Editor**, *Canadian Journal of Infectious Diseases and Medical Microbiology*
- 2017 **Reviewer**, *Infection and Drug Resistance*.
- 2017 **Reviewer**, *Emerging Infectious Diseases*.

### **Honors**

- 2012 1<sup>st</sup> Place, Clinical Microbiology Poster Competition, Taiwan Society of Microbiology.
- 2013 Outstanding Mentor, Kaohsiung Medical University, R.O.C.
- 2014 Excellence in Teaching, Kaohsiung Medical University, R.O.C.
- 2016 Honorable Mention Award, Effectiveness Study Competition between Kaohsiung Medical University and National Sun Yat-sen University.
- 2017 Excellence Award, Effectiveness Study Competition between Kaohsiung Medical University and National Sun Yat-sen University.
- 2017 Poster Excellence Award, International Conference on Environmental Medicine.

### ➤ **Publications**

- 1 Hsueh PR, Teng LJ, **Tseng SP**, Chang CF, Wan JH, Yan JJ, Lee CM, Chuang YC, Huang WK, Yang D, Shyr JM, Yu KW, Wang LS, Lu JJ, Ko WC, Wu JJ, Chang FY, Yang YC, Lau YJ, Liu YC, Liu CY, Ho SW, Luh KT. Ciprofloxacin-resistant *Salmonella enterica* Typhimurium and *Choleraesuis* from pigs to humans, Taiwan. **Emerg Infect Dis.** 2004 Jan;10(1):60-8.
- 2 Wang JL, **Tseng SP**, Hsueh PR, Hiramatsu K. Vancomycin heteroresistance in methicillin-resistant *Staphylococcus aureus*, Taiwan. **Emerg Infect Dis.** 2004 Sep;10(9):1702-4.
- 3 Hsueh PR, **Tseng SP**, Teng LJ, Ho SW. High prevalence of ciprofloxacin-resistant *Neisseria gonorrhoeae* in Northern Taiwan. **Clin Infect Dis.** 2005 Jan 1;40(1):188-92.
- 4 Sun HY, **Tseng SP**, Hsueh PR, Hung CC, Hsieh SM, Teng LJ, Ho SW. Occurrence of ceftriaxone resistance in ciprofloxacin-resistant *Salmonella enterica* serotype *Choleraesuis* isolates causing recurrent infection. **Clin Infect Dis.** 2005 Jan 1;40(1):208-9.
- 5 Hsueh PR, **Tseng SP**, Teng LJ, Ho SW. Pan-drug-resistant *Pseudomonas aeruginosa* causing nosocomial infection at a university hospital in Taiwan. **Clin Microbiol Infect.** 2005 Aug;11(8):670-3.
- 6 Liao CH, **Tseng SP**, Fang CT, Teng LJ, Hsueh PR. First linezolid- and vancomycin-resistant *Enterococcus faecium* strain in Taiwan. **J Antimicrob Chemother.** 2005 Apr;55(4):598-9.

- 7 Tsai JC, Hsueh PR, Chen HJ, **Tseng SP**, Chen PY, Teng LJ. The erm(T) gene is flanked by IS1216V in inducible erythromycin-resistant *Streptococcus gallolyticus* subsp. *pasteurianus*. **Antimicrob Agents Chemother.** 2005 Oct;49(10):4347-50.
- 8 Wang JL, Kao JH, **Tseng SP**, Teng LJ, Ho SW, Hsueh PR. Typhoid fever and typhoid hepatitis in Taiwan. **Epidemiol Infect.** 2005 Dec;133(6):1073-9.
- 9 Chuang YM, **Tseng SP**, Teng LJ, Ho YC, Hsueh PR. Emergence of cefotaxime resistance in *Citrobacter freundii* causing necrotizing fasciitis and osteomyelitis. **J Infect.** 2006 Sep;53(3):e161-3.
- 10 Huang YH, **Tseng SP**, Hu JM, Tsai JC, Hsueh PR, Teng LJ. Clonal spread of SCCmec type IV methicillin-resistant *Staphylococcus aureus* between community and hospital. **Clin Microbiol Infect.** 2007 Jul;13(7):717-24.
- 11 **Tseng SP**, Hsueh PR, Tsai JC, Teng LJ. Characterization of Tn6001, a transposon-like element containing the blaVIM-3-harboring integron In450. **Antimicrob Agents Chemother.** 2007 Nov;51(11):4187-90.
- 12 Liu LC, Tsai JC, Hsueh PR, **Tseng SP**, Hung WC, Chen HJ, Teng LJ. Identification of tet (S) gene area in tetracycline-resistant *Streptococcus dysgalactiae* subsp. *equisimilis* clinical isolates. **J Antimicrob Chemother.** 2008 Feb;61(2):453-5.
- 13 Chen HJ, Tsai JC, Chang TC, Hung WC, **Tseng SP**, Hsueh PR, Teng LJ. PCR-RFLP assay for species and subspecies differentiation of the *Streptococcus bovis* group based on groESL sequences. **J Med Microbiol.** 2008 Apr;57(Pt 4):432-8.
- 14 **Tseng SP**, Teng LJ, Chen CT, Lo TH, Hung WC, Chen HJ, Hsueh PR, Tsai JC. Toluidine Blue O Photodynamic inactivation on multidrug-resistant *Pseudomonas aeruginosa*. **Lasers Surg Med.** 2009 Jul;41(5):391-7.
- 15 **Tseng SP**, Tsai JC, Teng LJ, Hsueh PR. Dissemination of transposon Tn6001 in carbapenem-nonsusceptible and extensively drug-resistant *Pseudomonas aeruginosa*. **J Antimicrob Chemother.** 2009 Dec;64(6):1170-4.
- 16 **Tseng SP**, Lin YY, Tsai JC, Hsueh PR, Chen HJ, Hung WC, Teng LJ. Distribution of emm types and genetic characterization of the mgc locus in group G *Streptococcus dysgalactiae* subsp. *equisimilis* from a hospital in northern Taiwan. **J Clin Microbiol.** 2010 Aug;48(8):2975-7.
- 17 Hung WC, **Tseng SP**, Chen HJ, Tsai JC, Chang CH, Lee TF, Hsueh PR, Teng LJ. Using groESL as a target for identification of *Abiotrophia*, *Granulicatella*, and *Gemella* Species. **J Clin Microbiol.** 2010 Oct;48(10):3532-8.
- 18 Chen HJ, Hung WC, **Tseng SP**, Tsai JC, Hsueh PR, Teng LJ. Fusidic acid resistance determinants in *Staphylococcus aureus* clinical isolates. **Antimicrob Agents Chemother.** 2010 Dec;54(12):4985-91.
- 19 **曾嵩斌、鄧麗珍** 甲氧苄青黴素抗藥性金黃色葡萄球菌的快速檢測。**科儀新知**。民國九十九年第三十二卷第二期第二十六至三十二頁

- 20 曾嵩斌、鄧麗珍、許博欽、林俊彬、蔡瑞章 光動力醫學在牙醫學、婦科及神經外科的應用。 台灣醫學。2011年15卷5期507-511頁
- 21 Tseng SP, Teng LJ, Tsai JC. Photodynamic inactivation enhanced by special biomaterial on methicillin-resistant Staphylococcus aureus. Photodiagnosis and Photodynamic Therapy. 2011; 8:224.
- 22 Chung KP,\* Tseng SP,\* Huang YT, Tsai TH, Teng LJ, Hsueh PR. Arrival of Klebsiella pneumoniae carbapenemase (KPC)-2 in Taiwan. J Antimicrob Chemother. 2011 May;66(5):1182-4. (\*equal contribution)
- 23 Lai CC, Lin TL, Tseng SP, Huang YT, Wang JT, Chang SC, Teng LJ, Wang JT, Hsueh PR. Pelvic abscess caused by New Delhi metallo- $\beta$ -lactamase-1-producing Klebsiella oxytoca in Taiwan in a patient who underwent renal transplantation in China. Diagn Microbiol Infect Dis. 2011 Dec;71(4):474-5.
- 24 Chen HJ, Tsai JC, Hung WC, Tseng SP, Hsueh PR, Teng LJ. Identification of fusB-mediated fusidic acid resistance islands in Staphylococcus epidermidis isolates Antimicrob Agents Chemother. 2011 Dec;55(12):5842-9.
- 25 Hung WC, Chen HJ, Tseng SP, Liaw SJ, Tsai JC, Hsueh PR, Teng LJ. Genetic and transcriptional organization of the groEL operon containing trxA in Gemella morbillorum. Gene. 2012 Apr 15;497(2):307-13.
- 26 Ho CM, Ho MW, Chi CY, Lin CD, Lin CW, Tseng SP, Teng LJ, Chang HY, Chang HL, Chang YF, Lin HH, Tien N, Lu JJ, Lai CH. Repeated colonization by multi-drug-resistant Acinetobacter calcoaceticus- A. baumannii complex and changes in antimicrobial susceptibilities in surgical intensive care units. Surg Infect (Larchmt). 2013 Feb;14(1):43-8.
- 27 Chen HJ, Chang YC, Tsai JC, Hung WC, Lin YT, You SJ, Tseng SP, Teng LJ. New structure of phage-related islands carrying fusB and a virulence gene in fusidic acid-resistant Staphylococcus epidermidis. Antimicrob Agents Chemother. 2013 Nov;57(11):5737-9.
- 28 Tseng SP, Teng SH, Lee PS, Wang CF, Yu JS, Lu PL. Rapid identification of Mycobacteria abscessus and Mycobacteria massiliense by matrix-assisted laser desorption ionization - time of flight mass spectrometry with a comparison to sequencing identification, multi-locus sequence analysis and antimicrobial susceptibility patterns. Future Microbiol. 2013 Nov;8(11):1381-9.
- 29 Tseng SP, Wang JT, Liang CY, Lee PS, Chen YC, Lu PL. The First report of blaIMP-8 in Raoultella planticola. Antimicrob Agents Chemother. 2014;58(1):593-5.
- 30 Tseng SP, Tsai WC, Liang CY, Lin YC, Huang JW, Chang CY, Tyan YC, Lu PL. The contribution of antibiotic resistance mechanisms in clinical Burkholderia cepacia complex isolates: an emphasis on efflux pump activity. PLoS One. 2014 9(8):e104986 [SCI=3.534; MULTIDISCIPLINARY SCIENCES (8/55; 14%)]

- 31 Hung WC, Chen HJ, Tsai JC, **Tseng SP**, Lee TF, Hsueh PR, Shieh WY, Teng LJ. *Gemella parahaemolysans* sp. nov. and *Gemella taiwanensis* sp. nov., isolated from human clinical specimens. **Int J Syst Evol Microbiol.** 2014 Jun;64(Pt 6):2060-5. [SCI=2.798; MICROBIOLOGY (48/119; 40%)]
- 32 Wang SF, **Tseng SP**, Yen CH, Yang JY, Tsao CH, Shen CW, Chen KH, Liu FT, Liu WT, Chen YM, Huang JC. Antibody-dependent SARS coronavirus infection is mediated by antibodies against spike proteins. **Biochem Biophys Res Commun.** 2014 Aug 22;451(2):208-14. [SCI=2.281; BIOPHYSICS (46/74; 62%)]
- 33 **Tseng SP**, Lin YT, Tsai JC, Hung WC, Chen HJ, Chen PF, Hsueh PR, Teng LJ. Genotypes and phenotypes of *Staphylococcus lugdunensis* isolates recovered from bacteremia. **J Microbiol Immunol Infect.** 2015 Aug;48(4):397-405. [SCI=2.077; MICROBIOLOGY (73/119; 61%)]
- 34 Wang SF, **Tseng SP**, Huang SW, Yen CH, Hong YW, Chen M, Chen YM. Mitochondria Polarization in the Contact Regions of Virus-Infected Effector Cells During Cell-to-Cell Transmission of HIV-1. **AIDS Res Hum Retroviruses.** 2015; 31(2):175-6. [SCI=2.077; INFECTIOUS DISEASES (41/72; 57%)]
- 35 Liaw CC, Chen PC, Shih CJ, **Tseng SP**, Lai YM, Hsu CH, Dorrestein PC, Yang YL. Vitroprocines, new antibiotics against *Acinetobacter baumannii*, discovered from marine *Vibrio* sp. QWI-06 using mass-spectrometry-based metabolomics approach. **Sci Rep.** 2015 Aug 4;5:12856
- 36 **Tseng SP**, Wang SF, Kuo CY, Huang JW, Hung WC, Ke GM, Lu PL. Characterization of fosfomycin resistant extended-spectrum  $\beta$ -Lactamase-producing *Escherichia coli* isolates from Human and Pig in Taiwan. **PLoS One.** 2015 Aug 17;10(8):e0135864.
37. Hung WC, Chen HJ, Lin YT, Tsai JC, Chen CW, Lu HH, **Tseng SP**, Jheng YY, Leong KH, Teng LJ. Skin Commensal *Staphylococci* May Act as Reservoir for Fusidic Acid Resistance Genes. **PLoS One.** 2015;10(11):e0143106.
38. Wang CC, Yang PW, Yang SF, Hsieh KP, **Tseng SP**, Lin YC. Topical simvastatin promotes healing of *Staphylococcus aureus*-contaminated cutaneous wounds. **Int Wound J.** 2016 13(6):1150-1157
39. Wang SF, Su MW, **Tseng SP**, Li MC, Tsao CH, Huang SW, Chu WC, Liu WT, Chen YM, Huang JC. Analysis of codon usage preference in hemagglutinin genes of the swine-origin influenza A (H1N1) virus. **J Microbiol Immunol Infect.** 2016 Aug;49(4):477-86 [SCI=2.077; MICROBIOLOGY (73/119; 61%)]
40. Wang SF, Wang WH, Chang K, Chen YH, **Tseng SP**, Yen CH, Wu DC, Chen YA. Severe Dengue Fever Outbreak in Taiwan. **Am J Trop Med Hyg.** 2016 Jan 6;94(1):193-7.
- 41 Hsieh YJ, **Tseng SP**, Kuo YH, Cheng TL, Chiang CY, Tzeng YM, Tsai WC.

Ovatodiolide of *Anisomeles indica* Exerts the Anticancer Potential on Pancreatic Cancer Cell Lines through STAT3 and NF- $\kappa$ B Regulation. **Evid Based Complement Alternat Med.** 2016; 8680372

42 **Tseng SP\***, Hung WC, Huang CY, Lin YS, Chan MY, Lu PL, Lin L, Sheu JH\*. 5-episinuleptolide decreases the expression of the extracellular matrix in early biofilm formation of multi-drug resistant *Acinetobacter baumannii*. **Mar Drugs.** 2016;14 (8), 143.

43 Lu PL, Hsieh YJ, Lin JE, Huang JW, Yang TY, Lin L, **Tseng SP\***. Characterization of fosfomycin resistance mechanisms and molecular epidemiology in extended-spectrum  $\beta$ -lactamase-producing *Klebsiella pneumoniae* isolates. **Int J Antimicrob Agents.** 2016;48(5):564-568.

44. Wang SF, Chang K, Loh EW, Wang WH, **Tseng SP**, Lu PL, Chen YH, Chen YA. Consecutive large dengue outbreaks in Taiwan in 2014-2015. **Emerg Microbes Infect.** 2016 Dec 7;5(12):e123. [SCI=4.012; MICROBIOLOGY (27/123; 22%)]

45. Yang TY, Hung WW, Lin L, Hung WC, **Tseng SP\***. *mecA*-related structure in methicillin-resistant coagulase-negative staphylococci from street food in Taiwan. **Sci. Rep.** 7, 42205; doi: 10.1038/srep42205 (2017). (\*corresponding author) [SCI=5.228; MULTIDISCIPLINARY SCIENCES (7/63; 11%)]

46. Wang SF, **Tseng SP**, Loh EW, Wang WH, Li MC, Chen KH, Tsai WC, Lee YM, Chen HY, Liu FT, Arthur Chen YM, Huang JC. Generation and characterization of new monoclonal antibodies against swine origin 2009 influenza A (H1N1) virus and evaluation of their prophylactic and therapeutic efficacy in a mouse model. **Dev Comp Immunol.** 2017; 67:8-17.

47. **Tseng SP**, Hung WC, Chen HJ, Lin YT, Jiang HS, Chiu HC, Hsueh PR, Teng LJ, Tsai JC. Effects of toluidine blue O (TBO)-photodynamic inactivation on community-associated methicillin-resistant *Staphylococcus aureus* isolates. **J Microbiol Immunol Infect.** 2017; 49(4):46-54 [SCI<sub>2016</sub>=2.973; MICROBIOLOGY (49/124; 39.5%)]

48. Li CY, Lo IW, Wang SW, Hwang TL, Chung YM, Cheng YB, **Tseng SP**, Liu YH, Hsu YM, Chen SR, Hu HC, Chang FR, Wu YC. Novel 11-norbetaenone isolated from an entomopathogenic fungus *Lecanicillium antillanum*. **Bioorg Med Chem Lett.** 2017; 27(9):1978-1982.

49. **Tseng SP**, Wang SF, Ma L, Wang TY, Yang TY, Siu LK, Chuang YC, Lee PS, Wang JT, Wu TL, Lin JC, Lu PL. The plasmid-mediated fosfomycin resistance determinants and synergy of fosfomycin and meropenem in carbapenem-resistant *Klebsiella pneumoniae* isolates in Taiwan. **J Microbiol Immunol Infect.** 2017; 50(5):653-661. [SCI<sub>2016</sub>=2.973; MICROBIOLOGY (49/124; 39.5%)]

50. Lin L, Wang SF, Yang TY, Hung WC, Chan MY, **Tseng SP\***. Antimicrobial

resistance and genetic diversity in ceftazidime non-susceptible bacterial pathogens from ready-to-eat street foods in three Taiwanese cities. **Sci. Rep.** 2017; 7(1):15515. (\*corresponding author) [SCI=4.259; MULTIDISCIPLINARY SCIENCES (10/64; 15.6%)] (**Top 100 read microbiology papers for *Scientific Reports* in 2017**)

51. Yang TY, Lu PL, **Tseng SP\***. Update on fosfomycin-modified genes in *Enterobacteriaceae*. **J Microbiol Immunol Infect.** 2017 DOI: 10.1016/j.jmii.2017.10.006 (\*corresponding author) [SCI<sub>2016</sub>=2.973; MICROBIOLOGY (49/124; 39.5%)]
52. Chien CS, Lin CJ, Ko CJ, **Tseng SP\***, Shih CJ\*. Antibacterial activity of silver nanoparticles (AgNP) confined to mesostructured silica against methicillin-resistant *Staphylococcus aureus* (MRSA). *J. Alloys Compd.* 2018; 747:1-7. (\*corresponding author) [SCI<sub>2016</sub>=3.133; METALLURGY & METALLURGICAL ENGINEERING (5/74; 6.7%)]