

CMU Faculty Profile

Shou-Lun Lee

Associate Professor, Department of biological Science and Technology,
College of Biopharmaceutical and Food Sciences



Phone: (886)-4-22053366 ext 2526

E-mail: sllee@mail.cmu.edu.tw

URL: http://bst.cmu.edu.tw/english/faculty_01.php

Research Interests:

- Enzymology of human alcohol dehydrogenase family and aldehyde dehydrogenase family
- Pathogenetic mechanisms of alcohol-related organ injury
- Herbal medicine for alcohol-related organ injury

Appointments:

2003–2004: Postdoctoral fellow: Department of Biochemistry, National Defense Medical Center

2004–2008: Associate Research Fellow: Division of Biotechnology, Animal Technology Institute
Taiwan

2008–2015: Assistant Professor: Department of biological Science and Technology, CMU

2015–present: Associate Professor: Department of biological Science and Technology, CMU

Representative Publications:

Tasi, Y.C., Chin, T.Y., Chen, Y.J., Huang, C.C., Lee, S.L.*, and Wu, T.Y.* Potential Natural Products for Alzheimer's Disease: Targeted Search Using the Internal Ribosome Entry Site of Tau and Amyloid- β Precursor Protein. *Int J Mol Sci.* 2015, 16: 8789–8810.

Lee S.L.*, Lee, Y.P., Wu, M.L., Chi, Y.C., Liu, C.M., Lai, C.L., Yin, S.J. Inhibition of human alcohol and aldehyde dehydrogenases by aspirin and salicylate: Assessment of the effects on first-pass metabolism of ethanol. *Biochem Pharmacol.* 2015, 95: 71–79.

Lee, S.L.*, Lee, H.K., Chin, T.Y., Tu, S.C., Kuo, M.H., Kao, M.C.*, Wu, Y.C.* Inhibitory Effects of Purple Sweet Potato Leaf Extract on the Proliferation and Lipogenesis of the 3T3-L1 Preadipocytes. *Am J Chin Med.* 2015, 43: 915–925.

Lee, S.L.*, Chin, T.Y., Lai, C.L., Wang, W.H. *Sedum mexicanum* Britt. Induces Apoptosis of Primary Rat Activated Hepatic Stellate Cells. *Evid Based Complement Alternat Med.* 2015, doi: 10.1155/2015/194373.

Yu-Hsin Lin

Professor, Department of Biological Science and Technology, Department of Biological Science and Technology

Ph.D., National Tsing Hua University (Taiwan), 2006

Phone: (886)-4-22053366 ext252

Email: ylhsin@mail.cmu.edu.tw

URL: <http://bst.cmu.edu.tw/faculty.php>



Research Interests: Biomedicine engineering, Biomaterials, Nanotechnology, Drug Release

Academic Distinctions:

The Twenty-Second of Ten Outstanding Young Women, Taiwan (2013)

Best Young Investigator Poster Award in the 5th Asian Biomaterials Congress, Taiwan (2015)

Appointments:

2006-2007: Postdoctoral fellow: Chemical Engineering, NTHU

2007-2011: Assistant Professor: Department of Biological Science and Technology, CMU

2011-2015: Associate Professor: Department of Biological Science and Technology, CMU

2014-2015: Visiting Assistant Professor: Department of Urology, UT Southwestern Medical Center, Dallas, Texas

2014-present: Professor: Department of Biological Science and Technology, CMU

Research Interests:

The research themes in our lab aim to prepare nanoparticles for controlled drug delivery system and targeted cancer therapy. We have used chemical grafting for modifying biopolymers (such as chitosan, gelatin and hyaluronic acid) to produce targeted nanoparticles and encapsulate doxorubicin clinical drug or epigallocatechin gallate for combination cancer therapies. Several areas of the research are actively studied in my lab.

Representative Publications:

[Nanoparticle targeting CD44-positive cancer cells for site-specific drug delivery in prostate cancer therapy.](#) Huang WY, Lin JN, Hsieh JT, Chou SC, Lai CH, Yun EJ, Lo UG, Pong RC, Lin JH, **Lin YH***. *ACS Appl Mater Interfaces*. 2016 Nov 16;8(45):30722-34.

[Berberine-loaded targeted nanoparticles as specific *Helicobacter pylori* eradication therapy: in vitro and in vivo study.](#) **Lin YH***, Lin JH, Chou SC, Chang SJ, Chung CC, Chen YS, Chang CH. *Nanomedicine (Lond)*. 2015 Jan;10(1):57-71.

[Active targeted nanoparticles for oral administration of gastric cancer therapy.](#) **Lin YH***, Chen ZR, Lai CH, Hsieh CH, Feng CL. *Biomacromolecules*. 2015 Sep 14;16(9):3021-32.

[Genipin-cross-linked fucose-chitosan/heparin nanoparticles for the eradication of *Helicobacter pylori*.](#) **Lin YH***, Tsai YS, Lai CH, Lee CH, He ZS, Teseng GC. *Biomaterials*. 2013 Jun;34(18):4466-79.

Dean, Graduate Student Affairs

Professor, Department of Biological Science and Technology, College of Biopharmaceutical and Food Sciences

Ph.D., Cornell University, Ithaca, New York, USA, 2001

Phone: (886)-4-22053366 ext 2503

Email: yuanmh@mail.cmu.edu.tw

URL: http://webap.cmu.edu.tw/TchEportfolio/index_1/yuanmh



Research Interests: Bacterial Pathogenesis, Microbiology, Infectious Diseases

Academic Distinctions:

Distinguished Teaching Professor, CMU (2008)

Distinguished Undergraduate Advisor, CMU (2008)

Distinguished Teaching Professor, Taichung, Taiwan (2010)

Distinguished Teaching Professor, College of Life Sciences, CMU (2011)

Excellence Award for Industry-University Collaboration of CMU (2012)

Excellence Award for Teaching Materials of CMU (2013)

Appointments:

2001-2002: Postdoctoral fellow: Department of Molecular Biology and Genetics, Cornell University, Ithaca, New York, USA

2002-2007: Assistant Professor: Department of Biological Science and Technology, CMU

2007-2012: Associate Professor: Department of Biological Science and Technology, CMU

2012-present: Professor: Department of Biological Science and Technology, CMU

2003-2004: Head of Administration Division: Biotechnology Incubation Center, CMU

2004-2005: Head of Industrial Promotion Division: Biotechnology Incubation Center, CMU

2007-2008: Head of Gene Diversity Division: Research Center for Biodiversity, CMU

2008-2013: Head of Academic Research Division: Office of Research and Development, CMU

2013-2015: Deputy Dean: Office of Research and Development, CMU

2013-2014: Chairman: Department of Biological Science and Technology, CMU

2014-2015: Dean: Office of Graduate Student Affairs, CMU

2015-2016: Dean: Office of Research and Development, CMU

2016-present: Deputy Dean: Office of Research and Development, CMU

Research Interests:

My research is focused on therapeutic effects of herbal medicines and probiotics in treating pathogenic bacterial infection, mainly *Helicobacter pylori* and *Salmonella* spp.. We are also working on the interaction between probiotics, host cells, and pathogens. Our research offers a closer view of how gut microbiota and human health are tightly associated and also help developing probiotic-based health food to promote gut function.

Representative Publications:

[Preventive activities of *Scutellariae Radix*, *Gardeniae Fructus*, and probiotics in *Salmonella enterica* serovar *Typhimurium* infection in chickens.](#) Yuan-Man Hsu ^{*,#}, Bi Yu [#], Chih-Sian Tseng, Chiung-Hung Chang, Daniel S. Chen, Chiu-Hsian Su, Yueh-Sheng Chen. *Animal Feed Science and Technology*, 2016 Apr, 214:121-129.

CMU Faculty Profile

[Polymorphism of gene cassette promoter variants of class 1 integron harbored in *S. Choleraesuis* and *Typhimurium* isolated from Taiwan](#). Chih-Sian Tseng, Yu-Chieh Yen, Chao-Chin Chang, and **Yuan-Man Hsu***. *Biomedicine*, 2014 Sep, 4(3): 29-34.

[Coptidis rhizome and Si Jun Zi Tang Can Prevent *Salmonella enterica* Serovar Typhimurium Infection in Mice](#). Chiung-Hung Chang, Bi Yu, Chiu-Hsian Su, Daniel S. Chen, Yu-Chi Hou, Yueh-Sheng Chen^{#*}, **Yuan-Man Hsu***. *PLoS One*, 2014 Aug 18;9(8):e105362.

[Application of *Scutellariae radix*, *Gardeniae fructus*, and probiotics to prevent *Salmonella enterica* serovar *Choleraesuis* infection in swine](#). Chiung-Hung Chang, Yueh-Sheng Chen, Ming-Tang Chiou, Chiu-Hsian Su, Daniel S. Chen, Chin-En Tsai, Bi Yu[#] and **Yuan-Man Hsu^{#*}**. *Evidence-Based Complementary and Alternative Medicine*, 2013 Feb, 26.

[Comparative study of class 1 integron, ampicillin, chloramphenicol, streptomycin, sulfamethoxazole, tetracycline \(ACSSuT\) and fluoroquinolone resistance in various *Salmonella* serovars from humans and animals](#). **Yuan-Man Hsu**, Chiu-Ying Tang, Hsuan Lin, Yu-Hsin Chen, Yu-Lin Chen, Yu-Heng Su, Daniel S. Chen, Jiunn-Horng Lin, Chao-chin Chang*. *Comparative Immunology, Microbiology & Infectious Diseases*, 2013 Jan, 36(1):9-16.

MING-CHING KAO

Professor, Department of Biological Science and Technology
College of Biopharmaceutical and Food Sciences

Ph.D., Louisiana State University, Louisiana, USA, 1987

Phone: (886)-4-22053366 ext 2206

Email: mckao@mail.cmu.edu.tw

URL: <http://bst.cmu.edu.tw/faculty.php>



Research Interests: Gene Therapy, Anti-cancer Traditional Chinese Medicines

Academic Distinctions:

* Outstanding Teacher of the Year 2010, CMU, Taichung, Taiwan.

* Outstanding Teaching Materials Award of the Year 2012, CMU, Taichung, Taiwan

* Panelist of the Polychemical Activities and Mechanism Study I (Cancer, Immunomodulation and Inflammation)---The 15th Consortium for Globalization of Chinese Medicine (CGCM) Meeting, August 23-25, 2016, Academia Sinica, Taipei, Taiwan.

Appointments:

- 2015/08 - date Professor, Department of Biological Science and Technology, College of Biopharmaceutical and Food Sciences, CMU, Taichung, Taiwan
- 2007/08 - 2015/07 Professor, Department of Biological Science and Technology, College of Life Sciences, CMU
- 2004/08 - 2007/07 Professor, Graduate Institute of Basic and Clinical Medical Science, College of Medicine, CMU
- 2006/06 - 2006/12 Associate Director, Center for Molecular Medicine, CMUH
- 2005/07 - 2005/08 Visiting Professor, Yale University School of Medicine (Professor Yung-chi Cheng's Lab)
- 2002/04 - 2004/07 Professor & Chairman, Department of Biochemistry, National Defense Medical Center (NDMC), Taipei, Taiwan
- 1997/08 - 2002/03 Professor, Department of Biochemistry, NDMC, Taipei, Taiwan
- 1987/05 - 1997/07 Associate Professor, Department of Biochemistry, NDMC, Taipei, Taiwan

Research Interests:

- (1) Gene Therapy: especially in cancer gene therapy
- (2) Development of anti-cancer traditional Chinese medicines: e.g., Lingzhi (*Ganoderma tsugae*), Four-Agents-Decoction, Purple Sweet Potato Leaves, etc.
- (3) The anti-obesity and longevity effects of *Ganoderma tsugae*

Representative Publications:

1. [Inhibitory Effects of Purple Sweet Potato Leaf Extract on the Proliferation and Lipogenesis of the 3T3-L1 Preadipocytes.](#) Lee SL, Lee HK, Chin TY, Tu SC, Kuo MH, Kao MC*, Wu YC. *Am J Chin Med.* 2015;43(5):915-25.
2. [Growth-suppressive effect of berberine on endometrial carcinoma cells: Role of mitochondrial and PI3K/Akt pathway.](#) Kuo HP, Lee YJ, Hsu CY, Lee SL, Hsu SC, Chuang TC, Liu JY, Kuo CL, Ho CT, Kao MC*. *Journal of Functional Foods* 2015; 17: 600-609.
3. [Ganoderma tsugae Induces S Phase Arrest and Apoptosis in Doxorubicin-Resistant Lung Adenocarcinoma H23/O.3 Cells via Modulation of the PI3K/Akt Signaling Pathway.](#) Yu YH, Kuo HP, Hsieh HH, Li JW, Hsu WH, Chen SJ, Su MH, Liu SH, Cheng YC, Chen CY, Kao MC*. *Evid Based Complement Alternat Med.* 2012;2012:371286. doi: 10.1155/2012/371286.
4. [Ganoderma tsugae extract inhibits expression of epidermal growth factor receptor and angiogenesis in human epidermoid carcinoma cells: In vitro and in vivo.](#) Hsu SC, Ou CC, Chuang TC, Li JW, Lee YJ, Wang V, Liu JY, Chen CS, Lin SC, Kao MC*. *Cancer Lett.* 2009 Aug 18;281(1):108-16.
5. [Downregulation of HER2 by RIG1 involves the PI3K/Akt pathway in ovarian cancer cells.](#) Ou CC, Hsu SC, Hsieh YH, Tsou WL, Chuang TC, Liu JY, Kao MC*. *Carcinogenesis.* 2008 Feb;29(2):299-306.

CMU Faculty Profile

Wei-Wen Kuo, PhD

Professor, Dept. of Biological Science & Technology School of Life Science

Master : Institute of Environmental Toxicology, University of Illinois at Urbana-Champaign U. S. A.

Ph.D., Institute of Biochemistry and Biotechnology, Chung Shan Medical University, 2005



Phone: (886)-4-2205-3366 ext. 2510

Email: wwkuo@mail.cmu.edu.tw

Academic Distinctions: Full English course Professor for Molecular Cardiology (diabetic cardiomyopathy) ; Other courses : Cell Biology 、 Cancer Metabolism

Distinguished Professor, College of Biopharmaceutical and Food Sciences, CMU (2016)

Appointments:

1989-1990: Assistant: Department of Bromatology, NTU

1990-1992: Assistant: Department of Agricultural, NTU

1995-1999: Graduate Assistant: Department of Environmental Toxicology, University of Illinois

2001-2003: Teaching assistant: Biochemistry Science & Biological Science, CSMU

2005-2008: Assistant Professor: Biological Science & Technology School of Life Science, CMU

2008-2013: Associate Professor: Biological Science & Technology School of Life Science, CMU

2013-present: Professor: Biological Science & Technology School of Life Science, CMU

Research Interests:

The research themes in my lab aim to investigate the signaling pathways for the pathogenesis of diabetic cardiomyopathy (DCM). Cancer metabolism becomes the current focus in my lab. Other projects include skin health promoting from natural products. We have combined the biochemical approaches and disease animal model to address the relevant regulation in disease (cancer and DCM) progression.

Representative Publications:

Kun-Hsi Tsai, Wei-Jan Wang, Cheng-Wen Lin, Peiy-ing Pai, Tung-Yuan Lai, Cheng-Yen Tsai, **Wei-Wen Kuo***.

[NADPH oxidase-derived superoxide anion-induced apoptosis is mediated via the JNK-dependent activation of NF- \$\kappa\$ B in cardiomyocytes exposed to high glucose.](#) *Journal of Cellular Physiology* 2012, 227(4):1347-57

Cheng-Yen Tsai, Chien-Chung Wang, Tung-Yuan Lai, Chia-Li Way, Han-Nien Tsu, Chung-Hsing Wang, ..

Wei-Wen Kuo* [Antioxidant effects of diallyl trisulfide on high glucose-induced apoptosis are mediated by the PI3K/Akt-dependent activation of Nrf2 in cardiomyocytes.](#) *Int J Cardiol.* 2013, 168:1286-1297.

Cheng-Yen Tsai, Su-Ying Wen, Marthandam Asokan Shibu, Yao-Chih Yang, Binghe Wang, Yu-Min Wei, Hung-Yu Chang, Cheng-Yu Lee, Chih-Yang Huang* , **Wei-Wen Kuo*** [Diallyl trisulfide protects against high glucose-induced cardiac apoptosis by stimulating the production of Cystathionine gamma-lyase-derived hydrogen sulfide.](#) *Int J Cardiol.* 2015 , 195:300-310

Shi-Yann Cheng* , Yao-Chih Yang* , Kuan-lun Ting, Su-Ying Wen, Vijaya Padma Viswanadha, Chih-Yang

Huang,* **Wei-Wen Kuo*** . [Lactate Dehydrogenase Downregulation Mediates the Inhibitory Effect of Diallyl Trisulfide on Proliferation, Metastasis, and Invasion in Triple-Negative Breast Cancer .](#)

Environmental Toxicology . 2016 Jul (in press)

Jeng-Wei Tsai

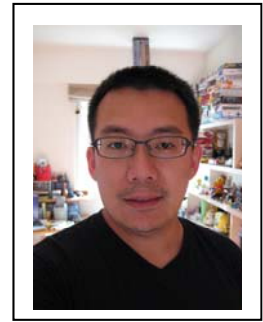
Associate Professor, Department of Biological Science and Technology, College of Biopharmaceutical and Food Sciences

Ph.D., Department of Bioenvironmental Systems Engineering, National Taiwan University 2005

Phone: (886)-4-22052121 ext8103

Email: tsaijw@mail.cmu.edu.tw

URL: http://webap.cmu.edu.tw/TchEportfolio/index_2/tsaijw



Research Interests: Environmental Toxicology, Aquatic ecosystem ecology, Modeling in aquatic ecotoxicology/ecology, Environmental/Ecological exposure risk prediction/assessment

Academic Distinctions:

Shorted candidate for Canada Research Chair (Tier II in Aquatic Toxicology/Fish Behavior, Jan. 2014)

Appointments:

2013 onward: Associate Professor, Department of Biological Science and Technology, China Medical University (Taiwan)

2011-2013: Associate Professor, Graduate Institute of Ecology and Evolutionary Biology (closed in 2013), China Medical University (Taiwan)

2007-2016: Group Leader for Ecosystem Studies, Research Center for Biodiversity, China Medical University (Taiwan)

2006 : Visiting Researcher, Center for Limnology, University of Wisconsin-Madison (USA)

Research Interests:

My professional specialty and research interest are centered around aquatic science and ecology by using field and/or laboratory-derived data and mechanistic modeling techniques, which include three main area within that realm: (1) **aquatic toxicology, ecological/ecotoxicological modeling and prediction**. (2) **carbon cycling and climate change ecology**. These programs have been very useful in studying the impact of climate change and anthropogenic disturbances on the aquatic ecosystem functions and services over different temporal and spatial scales.

Representative Publications:

Tsai JW*, Kratz T, Rusak J, Chiu CY. 2016. Rapid metabolic alternation in a subtropical lake due to climatically-induced water level change arising from the absence of winter and spring monsoons. **Inland Waters** 6:436-448.

Wu SM, **Tsai JW***, Tzeng WN, Chen WY, Shih WY. 2015. Analyzing the effectiveness of using branchial NKA activity as a biomarker for assessing waterborne copper toxicity in tilapia (*Oreochromis mossambicus*): A damage-based modeling approach. **Aquatic Toxicology** 163: 51–59.

Tsai JW, Chang LI, Wu ZY, Kuo MH, Lin HJ*. 2013. Effects of storm-induced events on seasonal dynamics of epilithic algal biomass in subtropical mountain streams. **Marine and Freshwater Research** 65: 25-38.

Tsai JW, Kratz TK, Hanson PC, Kimura N, Liu WC, Lin FP, Chou HM, Wu JT, Chiu CY*. 2011. Metabolic changes and the resistance and resilience of a subtropical heterotrophic lake to typhoon disturbance. **Canadian Journal of Fisheries and Aquatic Sciences** 68:768-780.

Tsai JW, Chen WY, Liao CM*. 2009. Bioavailability links mode of action can improve the long-term field risk assessment for tilapia exposed to arsenic. **Environment International** 35:727–736.

Tsai JW, Kratz TK, Hanson PC, Wu JT, Chang WYB, Arzberger PW, Lin BS, Chao YL, Lin FP, Chou HM, Chiu CY*. 2008. Seasonal dynamics, typhoons and the regulation of lake metabolism in a subtropical humic lake. **Freshwater Biology** 53:1929–1941.

CMU Faculty Profile

Tzong-Der Way

Chair, Department of Biological Science and Technology
Professor, Department of Biological Science and Technology, China Medical University



Ph.D., Institute of Biochemistry and Molecular Biology, College of Medicine, National Taiwan University (Taiwan), 2004

Phone: (886)-4-22053366 ext:2509

Email: tdway@mail.cmu.edu.tw

URL: http://webap.cmu.edu.tw/TchEportfolio/index_1/tdway

Research Interests:

1. Molecular and biochemical mechanisms of anticarcinogenesis of resveratrol, apigenin, and tea polyphenols including catechins and theaflavins.
2. New drug development

Academic Distinctions:

Distinguished Teaching Professor, College of Medicine, CMU

Appointments:

- 1999-2000: Research Assistant
Institute of Molecular Biology, Academia Sinica, R.O.C
- 2004-2005: Postdoctoral Fellow
Institute of Biochemistry, College of Medicine, National Taiwan University, Taipei.
- 2005-2009: Assistant Professor
Department of Biological Science and Technology, China Medical University, Taichung
- 2009-2013: Associate Professor
Department of Biological Science and Technology, China Medical University, Taichung
- 2013-present: Full Professor
Department of Biological Science and Technology, China Medical University, Taichung
Department of Health and Nutrition Biotechnology, College of Health Science, Asia University, Taichung, Taiwan

Research Interests:

The research themes in my lab aim to decipher the molecular and biochemical mechanisms of anticarcinogenesis of resveratrol, apigenin, and tea polyphenols including catechins and theaflavins.. Several areas of the research are actively studied in my lab.

Representative Publications:

1. Lin HY, Lin JN, Ma JW, Yang NS, Ho CT, Kuo SC, Way TD.* (2015) Demethoxycurcumin induces autophagic and apoptotic responses on breast cancer cells in photodynamic therapy. *Journal of Functional Foods*, 2015, 12:439-449.
2. Chang HY, Hou SC, Way TD, Wong CH, Wang IF. Heat-shock protein dysregulation is associated with functional and pathological TDP-43 aggregation. *Nature Communication* 4, 2757.