


## Department of Biochemical Science and Technology

Title	Professor	
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Lab	Biomedical Engineering Lab	
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### Education

B.S., Aquaculture, National Taiwan Ocean University, Taiwan

M.S., Biotechnology, National Chiao Tung University, Taiwan

Ph.D., Life Sciences, National Defense Medical Center, Taiwan

### Professional Experience

1. Director of Academia-Industry Collaboration and Continuing Education, NCYU, Taiwan
2. Director of Innovation Incubation Center, NCYU, Taiwan
3. Postdoctoral Fellow, Division of Medical Engineering, NHRI, Taiwan
4. Visiting Scholar, Department of Bioengineering, UC San Diego, U.S.A.

### Research Interests

1. Development of natural product manufacturing processes
2. Research on metabolic syndrome and cardiovascular diseases
3. Biomechanical study on osteoarthritis and cartilage
4. Research on inflammation and cancer progression

### Publications

1. Tung SY, Lin CT, **Chen CN**, Huang WS. Effect of mitomycin C on X-ray repair cross complementing group 1 expression and consequent cytotoxicity regulation in human gastric cancer cells. *J Cell Biochem.* 2019 Jan 6. doi: 10.1002/jcb.28116.
2. Liu JL, Huang WS, Lee KC, Tung SY, **Chen CN\***, Chang SF\*. (2018, Nov). Effect of 5-fluorouracil on excision repair cross-complementing 1 expression and consequent cytotoxicity regulation in human gastric cancer cells. *J Cell Biochem.*, 119(10):8472-8480. 本人為通訊作者.
3. Huang WS, Lin CT, **Chen CN**, Chang SF, Chang HI, Lee KC. (2018, Aug). Metformin increases the

cytotoxicity of oxaliplatin in human DLD-1 colorectal cancer cells through down-regulating HMGB1 expression. *J Cell Biochem.*, 119(8):6943-6952.

4. Chen TC, Lin CT, Chien SJ, Chang SF, **Chen CN\***. (2018, Jun). Regulation of Calcification in Human Aortic Smooth Muscle Cells Infected with High-glucosetreated *Porphyromonas Gingivalis*. *J Cell Physiol.*, 233(6):4759-4769. 本人為通訊作者.

5. Su YP, **Chen CN**, Huang KC, Chang HI, Lee KC, Lo CM, Chang SF. (2018, Apr). Leptin induces MMP1/13 and ADAMTS 4 expressions through bone morphogenetic protein-2 autocrine effect in human chondrocytes. *J Cell Biochem.*, 119(4):3716-3724.

6. Chang SF, Huang KC, Chang HI, Lee KC, Su YP, **Chen CN\***. (2018, Jan). 2 dyn/cm<sup>2</sup> shear force upregulates kruppel-like factor 4 expression in human chondrocytes to inhibit the interleukin-1 $\beta$ -activated NF- $\kappa$ B. *J Cell Physiol.*, 234(1):958-968. 本人為通訊作者.

7. Lee KC, Lin CT, Chang SF, **Chen CN**, Liu JL, Huang WS. (2017, Nov). Effect of AICAR and 5-Fluorouracil on X-ray Repair, Cross-Complementing Group 1 Expression, and Consequent Cytotoxicity Regulation in Human HCT-116 Colorectal Cancer Cells. *Int J Mol Sci.*, 18(11). pii: E2363.

8. Chang SF, Huang KC, Cheng CC, Su YP, Lee KC, **Chen CN**, Chang HI. (2017, Oct). Glucose adsorption to chitosan membranes increases proliferation of human chondrocyte via mammalian target of rapamycin complex 1 and sterol regulatory element-binding protein-1 signaling. *J Cell Physiol.*, 232(10):2741-2749.

9. Su YP, **Chen CN**, Chang HI, Huang KC, Cheng CC, Chiu FY, Lee KC, Lo CM, Chang SF (2017, Jun). Low Shear Stress Attenuates COX-2 Expression Induced by Resistin in Human Osteoarthritic Chondrocytes. *J Cell Physiol.*, 232(6):1448-1457.

10. Kuo HC, Chang LC, Chen TC, Lee KC, Lee KF, **Chen CN**, Yu HR. (2016, Dec). Sterol Regulatory Element-Binding Protein-1c Regulates Inflammasome Activation in Gingival Fibroblasts Infected with High-Glucose-Treated *Porphyromonas gingivalis*. *Front Cell Infect Microbiol.*, 6:195.

11. Lin CT, Lin MJ, Chen YP, Lee KC, Huang KC, Chang SF, **Chen CN\***. (2016, Feb). Long-term antihypertensive effects of far-infrared ray irradiated from wooden board in spontaneously hypertensive rats. *BMC Complement Altern Med.*, 16(1), 57. 本人為通訊作者.

12. Chang SF, Hsieh RZ, Huang KC, Chang CA, Chiu FY, Kuo HC, **Chen CN\***, Su YP. (2015, Dec). Upregulation of Bone Morphogenetic Protein-2 Synthesis and Consequent Collagen II Expression in Leptin-stimulated Human Chondrocytes. *PLoS One.*, 10(12), e0144252. 本人為通訊作者.

13. Huang WS, Yang JT, Lu CC, Chang SF, **Chen CN**, Su YP, Lee KC. (2015, Dec). Fulvic Acid Attenuates Resistin-Induced Adhesion of HCT-116 Colorectal Cancer Cells to Endothelial Cells. *Int J Mol Sci.*, 16(12), 29370-82.

14. Yu HR, Sung ML, Kuo HC, Lin CH, **Chen CN\***. (2015, Sep). Shear Stress Modulates Resistin-Induced CC Chemokine Ligand 19 Expression in Human Aortic Endothelial Cells. *J Cell Physiol.*, 230(9), 2120-7. 本人為通訊作者.

15. Yeh CC, Su YH, Lin YJ, Chen PJ, Shi CS, **Chen CN\***, Chang HI\* (2015, Apr). Evaluation of the protective effects of curcuminoid (curcumin and bisdemethoxycurcumin)-loaded liposomes against bone turnover in a cell-based model of osteoarthritis. *Drug Des Devel Ther.*, 9, 2285-300. 本人為通訊作者.

16. Chien SJ, Chen TC, Kuo HC, **Chen CN\***, Chang SF\* (2015, Mar). Fulvic acid attenuates homocysteine-induced cyclooxygenase-2 expression in human monocytes. *BMC Complement Altern Med.*, 15, 61. 本人為通訊作者.

17. Chen TC, Sung ML, Kuo HC, Chien SJ, Yen CK, **Chen CN\*** (2014, Nov). Differential regulation of human aortic smooth muscle cell proliferation by monocyte-derived macrophages from diabetic patients. *PLoS One.*, 9(11), e113752. 本人為通訊作者.