

CHUNG-HUEI KATHERINE WANG

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EDUCATION

University of Washington, Seattle September 06 – present Bioengineering PhD Graduate Student	GPA 3.83
University of California, Berkeley December 2005 B.S. Bioengineering	GPA 3.56
Beijing Normal University June 04 – December 04 National Chinese Examination for non-native speakers, intermediate level (HSK)	GPA 3.95 Grade: A

EXPERIENCE

SUZIE PUN MOLECULAR BIOENGINEERING LAB | September 06 – Present Seattle, WA
Graduate Research Assistant

- Synthesized and prepared functionalized self-assembled monolayers for specific immobilization of nanoparticles
- Formulated and characterized different polymer and lipid formulations of non-viral gene delivery carriers
- Transfected polyplexes and lipoplexes into NIH-3T3 fibroblasts to look for transgene expression
- Developed protocol for purifying layer-by-layer polyplexes for increased transfection efficiency

SANDY CHIAN TISSUE ENGINEERING LAB | June 08 – August 08 Nanyang Technological University, Singapore
NSF EAPSI Fellow

- Synthesized poly-lactide membranes and electrospun scaffolds for seeding of NIH-3T3 fibroblasts
- Aminolyzed scaffold for conjugation of small molecules to scaffold surface
- Characterized free amine concentration of scaffold surface using ninhydrin assay before and after conjugation
- Prepared scaffolds with polyplexes physisorbed and conjugated to scaffold surface for cell seeding

KEVIN HEALY BIOMATERIALS LAB | August 05 – December 05 Berkeley, CA
Undergraduate Lab Assistant | Ying Jun Li, Bioengineering PhD candidate, UC Berkeley

- Maintained a tissue culture of MG-63 human osteosarcoma fibroblastic cells using sterile technique
- Characterized physical properties of hydrogels with varying concentrations of N-isopropylacrylamide, Acrylic Acid, Bis-acrylamide
- Cultured different hydrogels with MG-63 cells and performed cell sheet lifting techniques to harvest cells

BERLEX BIOSCIENCES | June 05 – August 05 Richmond, CA
Summer Intern | In Vitro Pharmacology

- Performed ELISA assays using biotin-streptavidin chemistry to detect fluorescence of synthesized biomarker to uPA
- Assessed efficacy of synthesized biomarker to uPA by analyzing fluorescence data generated
- Conducted immunocapture assays with various anti-bodies to detect the presence of uPA in serum and urine
- Calculated enzyme kinetics of uPA clipping fluorescent tagged biomarker as a measure of uPA

HARVEY BLANCH LAB | September 03 – May 04 Berkeley, CA
Undergraduate Lab Assistant | Bradley Holmes, Chemical Engineering PhD candidate, UC Berkeley

- Achieved method of sustaining sponge cultures to yield cells of optimum condition for potential therapeutic uses
- Established phylogenetic relationships between sponge cells and symbiotic archae, bacteria, and eukarya to investigate effects on porifera cell culture
- Gathered information on how sponges acquire new genes into their genome by designing and performing experiment using electroporation to inject gene into sponge

ACTIVITIES

SCIENCE AND ENGINEERING BUSINESS ASSOCIATION (SEBA) | Feb 07- June 09 Seattle, WA
VP of Finance

- Managed budget of \$90,000 for spending on SEBA events and industry conferences
- Involved in preparing forms and filing SEBA as 501 c 6 business league to IRS
- Volunteered for Invest Northwest and Washington Biotechnology & Biomedical Association annual meeting

SEATTLE CHINESE ATHLETIC ASSOCIATION | October 07-Present Seattle, WA
Assistant Basketball Coach

- Helped teach dribbling, shooting, and basketball fundamentals to eighth grade girls team
- Coached eighth grade girls team to community center league championship game

YOUTH TUTORING PROGRAM | September 06 – June 07 Seattle, WA

Volunteer Tutor

- Tutor low-income at-risk youth in math, language arts, and homework for 2 hours/ week
- One-on-one interaction with two individuals for an hour each to help with skill building and academics

AWARDS

NSF East Asian Pacific Summer Institute (EAPSI) Fellow | June 08 – Aug 08

ABSTRACTS AND PRESENTATIONS

Wang, C.K., Saul, J.M., Ng, C.P., Pun, S.H. “Novel layer-by-layer polyplexes using poly(ethylenimine) and poly(acrylic acid) for gene Delivery,” Oral presentation at the American Society for Gene Therapy 2007 conference.

Wang, C.K., Jiang, S.Y., Pun, S.H. “Indole-modified self-assembled monolayers enable host inclusion complex formation with α -CD modified polyethylenimine polyplexes for substrate-mediated gene delivery,” Poster presentation at the American Society for Gene Therapy 2009 conference.

PUBLICATIONS/PRESENTATIONS

*Saul, J. M., *Wang C.K, Ng C.P., Pun S.H. “Multilayer nanocomplexes polymer and DNA exhibit enhanced gene delivery.” *Advanced Materials*, (2008), **20**: 19-25. *equally contributing authors