

EDUCATION

University of Southern California

Los Angeles, CA

B.S. in Chemical Engineering (Biochemical), GPA: 3.92

August 2018 – May 2022

Selected Coursework: Chemical Engineering Laboratory, Differential Equations, General Chemistry, MATLAB, Molecular Biology, Organic Chemistry, Separation Processes, Thermodynamics, Viscous Flow

WORK EXPERIENCE

Procter & Gamble

Cincinnati, OH

Incoming Research & Development Intern

Summer 2021

Samuelson Laboratory at University of Nebraska Medical Center

Omaha, NE

Undergraduate Researcher

Summer 2020

- Constructed a microbiome analysis pipeline using R packages to analyze treatments for alcohol use disorder.
- Investigated significant differences with PERMANOVA among indole treatment groups in gut microbiota.
- Wrote a systematic review paper on 10 different treatments and measure effectiveness against alcohol.

Chung Laboratory at University of Southern California

Los Angeles, CA

Undergraduate Researcher

September 2019 – Present

- Synthesize and purify micelle peptides with HPLC and MALDI to build self-assembling nanoparticles.
- Create mice artery cross sections, utilize staining and microscopy to visualize nanoparticle uptake in cells.
- Analyze hundreds of fluorescence microscopy images in FIJI to measure plaque buildup in mice arteries.

Cardiovascular Biomechanics at University of Nebraska Medical Center

Omaha, NE

Undergraduate Researcher

Summer 2019

- Simulated interactions of monocytes, endothelial, and smooth muscle cells to construct 3D cultures.
- Examined shear stress impact on atherosclerosis by exposing 3D cultures to different pressured flows.
- Manipulated lipid nanoparticles to understand adsorption and absorption processes into cell membranes.

LEADERSHIP

Theta Tau (Co-ed Professional Engineering Fraternity)

Los Angeles, CA

Executive Board-Treasurer, Professional Development Chair

January 2019 – Present

- Arrange 7 events for each semester such as the Mock Career Fair, workshops, and mentorship program.
- Coordinate and network with 30 professionals in engineering industries to attend professional events.
- Delegate weekly tasks to a professional committee of 11 students and manage the quality of work.

Teaching and Sharing Skills to Enrich Lives (TASSEL)

Los Angeles, CA

Writing Head

August 2016 – Present

- Educate a community of Cambodian students from ages 16 to 22 to enhance English proficiency.
- Managed 7 fundraisers and raised \$5,300 from food sales for a small village in Cambodia.
- Direct a committee of 15 students and organized bi-weekly meetings to relay new lesson plans.

SKILLS & AWARDS

- **Technical:** MATLAB, Python, R Programming, Autodesk Inventor, Microsoft Office, HTML/CSS
- **Laboratory:** Batch Distillation, Liquid-Liquid Extraction, HPLC, MALDI, Nanoparticle Synthesis, Cryostat, Hematoxylin Staining, Picro Staining, Peptide Synthesis, 3D Modeling, Confocal and Fluorescence Microscopy
- **Awards:** PG Standout Emerging Leaders (2020), USC Viterbi Scholar (2019-20), KSEA Scholar (2020), OTEFE Scholar(2019-20), KASF Scholar (2019-20), Kimbo Scholar (2019-20), Dean's List (2018-19), Korean Honors (2019)