Kayla Choi

(408)533-2329| kaychoij@ucla.edu

EDUCATION

University of California, Los Angeles Expected Graduation Date: June 2021
Bachelor of Science in Bioengineering Bioengineering Preparatory GPA: 3.60/4.0
Minor in Statistics

Relevant Courses: Multivariable Calculus • Differential Equations • Programming in R • Intro to Statistics • Programming in MATLAB • Organic Chemistry • Bioengineering Fundamentals

WORK AND LAB EXPERIENCE

Interconnected & Integrated Bioelectronics Lab, UCLA May 2018 – December 2018
Undergraduate Researcher

- Performed cortisol concentration detection experiments with two-electrode impedimetric systems
- Optimized sensor-aptamer incubation method to stabilize cortisol readings and reduce sensor-to-sensor variation by 10%
- Designed and executed experiments independently, analyzing 30 out of 50 real saliva samples
- Proposed new transdermal method of collecting cortisol non-invasively using agarose hydrogels
- Safely and professionally collected sweat, saliva, and transdermal cortisol samples from 10 human subjects
- Mentored high school summer interns in the wet lab, helping build their problem-solving abilities and technical capabilities

Biophotonics and Nano-engineering Lab, Seoul National University, South Korea August – September 2017
Research Intern

- Created a novel platform to incorporate DNA nanotubules using DNA origami methods into the membranes of live suspension and adherent cells
- Used ImageJ to computationally analyze equilibrium state of DNA nanotube attachment
- Designed and conducted experiments to optimize protocol for attachment, increasing the maximum yield of successful attachments from 35% to 85%

Stanford Institutes of Medicine (Summer Research Program), Stanford University June – October 2016
Research Intern at Gambhir Lab

- Developed a microfluidics system to use gold nanoparticles and camelid antibodies to detect lung cancer circulating tumor cells (CTCs)
- Optimized PDMS production by independently using Rhinoceros and AutoCAD to design 3D mold and mechanize the process, reducing human error and batch variation
- Presented research at the SIMR poster session to professors and professionals in the Bioengineering and Bioinformatics department

PROJECTS

Berkeley Bio Engineering High School Symposium February – April 2016

- Led a group of five peers in researching synthetic biology mechanisms
- Designed a novel schematic for producing butanol biofuel from compost and presented to biofuel industry professionals

SKILLS

- **Computer:** MATLAB, ImageJ, R, Excel
- **Technical:** Cell culture, DNA extraction, Gel electrophoresis
- **Languages:** Fluent in Korean, Proficient in Spanish