

KYLIE BROWN

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EDUCATION

Georgia Institute of Technology, Atlanta, GA
Bachelor of Science in Biomedical Engineering with Research Option

Exp. Grad: May 2023
GPA: 4.0/4.0

EXPERIENCE

Jan 2020- Present **Undergraduate Research Assistant**, Jang Lab, *Georgia Institute of Technology*
Jang Lab for Integrative Stem Cell Engineering focuses on determining cellular and molecular mechanisms of musculoskeletal aging and neuromuscular disease.

- Engineering a 3D Microfluidic neuromuscular junction (NMJ) on-a-chip to characterize muscle degeneration in amyotrophic lateral sclerosis (ALS) for undergraduate thesis
- Conducted independent experiments to optimize timeline and concentration of Agrin to maximize AChR expression in primary isolated myoblasts
- Performed genotyping protocols on mice tail samples to confirm gene expression and support MD/PhD experiments

PROJECTS

Jan 2021- Apr 2021 **Team Leader**, Team Urine Good Hands, *Introduction to Biomedical Engineering Design*
Worked with a 5-person team in a hybrid setting to redesign a urine collection cup geared towards pregnant women and female anatomy

- Interviewed primary and secondary user groups, and analyzed market trends to gauge user needs and urinalysis market potential
- Designed several concept drawings to address user needs and prototyped them several times physically and/or virtually through Fusion360
- Pitched our final design, gaining experience on how to merge the design and business elements of device development, and received feedback on how to move forward with our design

Aug 2020- Dec 2020 **Team Leader**, Team Early On, *Problems in Biomedical Engineering*
Worked with an 8-person team in a hybrid setting to create an electrodermal activity circuit that tracks stress in children to prevent stress-related obesity

- Analyzed health trends and medical literature to illustrate prevalence of stress-related obesity in children and create three concept designs based on different biometrics
- Constructed a mathematical model using MATLAB to simulate and optimize analysis parameters using public datasets
- Performed a Go/No Go decision based on our prototype's performance and market opportunity

SKILLS

Laboratory: Animal handling, Cell Culture, DNA extraction, RT-PCR, Gel electrophoresis, Fluorescent imaging, Subculture, Freezing, Myoblast isolation and culture, NSC34 culture

Software: MATLAB, Arduino, Java, SQL, HTML, C/C++, Fusion360, Microsoft Office

Concepts: Statistics, Engineering process, Device design and development, Systems physiology

Languages: Fluent English, Conversational Spanish, Elementary Korean

Extracurriculars: Vietnamese Student Association (President), Biomedical Engineering Society, Tutoring, Tennis

AWARDS AND HONORS

Faculty Honors and Dean's List (2019 – 2020), Chubb Foundation Scholarship Recipient, Chubb Worldwide Scholarship Recipient, Nakatani Research and International Experience Intern