

ALISHA ZHU

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EDUCATION

Rutgers University Honors College, School of Engineering – New Brunswick, NJ

Expected: May 2023

Bachelor of Science, Biomedical Engineering; Minor: Statistics

GPA: 3.98/4.0

- Relevant Coursework: Tissue Engineering, Principles of Drug Delivery, Optical Imaging, Biochemistry, Honors Organic Chemistry, Biomaterials, Biomechanics, Transport Phenomena
- Honors and Awards: Rutgers University Presidential Scholarship (2019 – Present), National Merit Scholarship Corporation – Novartis Special Scholarship (2019 – Present), Dean's List (all semesters)

PRESENTATIONS AND PUBLICATIONS

- Author: "A Perfect Imperfect Performance: Remodeling the Model Minority," *Dialogues@RU Journal*, 2022. (Highly selective: 26 papers were selected from 250+ submissions, submissions limited to "A" level papers)
- Poster Presentation: "Relationship Between Molecular Properties of Cationic Antimicrobial Peptides and their Drug Efficacies," *17th Annual Aresty Virtual Symposium*, 2021.

WORK EXPERIENCE

Rutgers University Biomedical Engineering Senior Design

New Brunswick, NJ

Research Assistant

Sept 2022 – Present

- Project: Wound Healing, led by Dr. Francois Berthiaume
- Create a drug release system that will release engineered proteins over time and promote wound healing
- Optimize protein production of PDGF-B-ELP by varying 5+ parameters
- Lab Techniques Applied: Bacterial Culture, Protein Purification, Column Chromatography, Western Blot, ELISA

Rutgers University Undergraduate Research

New Brunswick, NJ

Research Assistant

Jul 2020 – Present

- Project: Cationic Antimicrobial Peptides Designed for Activity and Delivery, led by Dr. Charles Roth
- Perform database analyses on 18,000+ entries to find a set of candidate peptides designed to be effective when administered as part of a polymer nanomedicine in cystic fibrosis patients
- Develop and implement programs in R to calculate the molecular properties of cationic antimicrobial peptides
- Statistical Methods Applied: Kernel Density Estimations, Scatter Plot Matrices, Classification and Regression Trees (CART), k-Means Clustering, Significance Testing, Principal Component Analysis (PCA), Random Forest

Pfizer Inc.

Peapack, NJ (Remote)

Pfizer Global Supply (PGS) Launch Excellence Intern

Jun 2022 – Aug 2022

- Calculated key milestone metrics for 15+ product launches to analyze the launch timelines for global markets and to support the New Product Launch Optimization (NPLO) initiative
- Assessed portfolio metrics for 65+ project plans, including "Project Light Speed" (COVID-19 vaccine)
- Performed hypercare testing to identify issues within the Product Launch Dashboard and Data Repository apps

Rutgers University Aresty Research Program

New Brunswick, NJ

Peer Instructor

Aug 2021 – Apr 2022

- Led 10 interactive discussions on research ethics, scholarly communication, and the role of research in society
- Directed workshops for writing abstracts and presenting research posters

LEADERSHIP EXPERIENCE

Chinese Student Organization (CSO)

New Brunswick, NJ

External Vice President

Sep 2019 – Present

- Oversee logistics for major events/programs that engage 250+ members, lead the interview process for ChinaNite Coordinators, act as liaison for regional network of student associations, increase alumni engagement
- Past Positions: Secretary (2021 – 2022), Cultural Chair (2020 – 2021), Intern (2019 – 2020)

Society of Women Engineers (SWE)

New Brunswick, NJ

Section President

Sep 2019 – Present

- Direct executive board meetings, represent SWE to the School of Engineering and outside companies, supervise planning for 35+ events (SHE-SWE-MEET Career Fair, WE22 National Conference, End-of-Year Banquet, etc.)
- Past Positions: Treasurer (2021 – 2022), Career Fair Tertiary (2020 – 2021), First-Year Rep (2019 – 2020)

SKILLS

- Technical Skills: Microsoft Office (Word, PowerPoint, Excel, Project), Java, R, MATLAB, LaTeX, SAS
- Language Skills: English, Chinese-Mandarin