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EDUCATION

University of Pennsylvania (UPenn), School of Engineering and Applied Sciences
Bachelor of Science in Engineering
Major*:* Chemical and Biomolecular Engineering
Concentration: Pharmaceutics and Biotechnology
Awards: Second prize winner of the Molstad/Seider Prize with *Helium Liquefaction by Reverse Brayton-Cycle Cryogenic Refrigeration*
Certifications: CSWA-Solidworks, Kulture City Training

SKILLS & INTERESTS

Lab Techniques: Polymerase Chain Reaction (PCR), Gel Electrophoresis, Confocal microscopy imaging, Digestion, Gibson Assembly, Microscope, Cloning, Pipetting, Centrifugation, DNA Extraction, Transformations into e.coli cells, Ligation reactions, liquid cultures, PCR purification, Mini-prep, mechanical testing, tissue culturing, Von Kossa staining, Western blot, ELISA
Languages: Spanish: Mother tongue, English: Proficient level, French: Intermediate conversational level, ASL: Basic Level
Interests: 3D bioprinting, Tissue Engineering, Cell Engineering, Biotechnology
Technical: ImageJ, Matlab, Python, Logger Pro, Microsoft, Photoshop, GitHub, Solidworks (CSWA certified)

PROFESSIONAL EXPERIENCE

UPenn, Research Assistant at Hast Lab, McKay Orthopaedic Research Laboratory *May-October 2024 | Philadelphia, PA*

- Collaborated on the project and ORS abstract, "**Triply Periodic Minimal Surface Architectures Improve In Vitro Bone Growth in PCL Scaffolds",** under the guidance of Dr. Michael Hast. Consisting of the successful characterization of scaffold mechanical properties, enhancing the project's progress toward a single-step surgical solution by investigating the potential of polycaprolactone (PCL) scaffolds.
- Performed mechanical testing, tissue culturing, CAD and 3D printing for scaffold design and optimization, and microCT and ImageJ for analysis.
- Enhanced independent research skills by contributing to experimental design, data analysis, and decision-making processes. Fostered collaboration working closely with graduate students to refine, and execute experimental protocols and co-author "**Temporal Zinc Release from Hydrogels: Effects on Mechanics, Metabolic Activity, and Gene Expression",** ORS abstract.

UPenn, Research Assistant at Lim Lab *May 2023-May 2024 | Philadelphia, PA*

- Quantified the role of enhancer-promoter interactions in regulating gene expression in *Drosophila Melanogaster.*
- Systematic perturbation of 3D *Drosophila* genome in a controlled chromosomal context.
- Independently carried out molecular cloning experiments using techniques such as PCR, restriction enzyme digestion, gel electrophoresis, standard DNA ligation, Gibson assembly, bacterial transformation, and liquid cultures, using GFP and mCherry markers. Also supported with preparing plates for *drosophila* embryo imaging and petri dishes for E. coli incubation. Use of imaging techniques as confocal microscopy for fly embryos to analyze the expression of genes with markers and insulators.

UPenn, Engineering Summer Academy at Penn (ESAP), Residential Director *July 2023 & July 2024 | Philadelphia, PA*

- **2024**: Led 30 RTAs and managed 260 high school students as Residential Director. Programmed activities, led weekly meetings, trained RTAs, and handled unexpected challenges during 4 weeks.
- **2023**: Served as a Residential and Teaching Assistant in the Biotechnology Program, teaching lab techniques like electrophoresis and spectrophotometry. Facilitated student engagement, communication, and problem-solving through daily interactions and support.

Lead and Accessibility Usher, Annenberg Center for the Performing Arts *October 2022-Present | Philadelphia, PA*

- Anticipating and troubleshooting any ticketing/seating issues; acting as an "up line" for the Usher team, advising when concerns arise, promoting a welcoming lobby, enforcing theater/building policies. Use of skills like teamwork, working well under pressure, customer service, Sensory Inclusive training, friendly and professional demeanor.

LEADERSHIP & EXTRACURRICULARS

West Philly Swingers, University of Pennsylvania official swing dancing troupe *August 2021-Present | Philadelphia, PA*

- Captain-President (2024), in charge of organization, planning and future of troupe operations such as show, lessons, special events, and community by delegating and working with a board. Link between WPS and the general public. Organized Penn Intercollegiate Lindy Hop Exchange 2024 with over 100 attendees, 7 classes, 6 competitions, and a live band social dance.
- Dancer/Performer: Lindy Hop and West Coast Swing. Choreographer: "Plane" for the Spring 2024 show and "Dylina Badley" for Fall 2022. Social Media Manager (2023).