Paulina Bargalló González Lugo 3820 Locust Walk Philadelphia, PA
bpaulina@seas.upenn.edu | 215 220 5447|LinkedIn

EDUCATION

University of Pennsylvania (UPenn), School of Engineering and Applied Sciences
Candidate for Bachelor of Science in Engineering–*May 2025*
Major: Chemical and Biomolecular Engineering ***Concentration:*** Pharmaceutics and Biotechnology
GPA: 3.3/4.0
Coursework: Biotechnology & Biochemical Engineering laboratory, Molecular & Cellular Bioengineering, ChemE Laboratory, Product Process & Device Design, Chemical Process Control, Heat & Mass Transfer, Quantum Physics, Fluid Mechanics, Organic Chemistry, Chemistry II, Calculus IV, Electromagnetics, Ethics, Molecular Thermodynamics & Chemical Kinetics, Separation Processes.

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, Mechanical testing, Project Management.
Languages: Spanish: Mother tongue, English: Proficient level, French: Intermediate conversational level, ASL: Basic Level
Interests: Tissue & Cell Engineering, 3D bioprinting, Molecular Biology, Biotechnology
Technical: ImageJ, Matlab, Python, Logger Pro, Microsoft: Excel, Word, Powerpoint, Photoshop, Prusa and CAD software

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PROFESSIONAL EXPERIENCE

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

- Collaborated on the "Development of Scaffolds for Critical Sized Defect Repairs with 3D Printed 'Bonuts'" project under the guidance of Dr. Michael Hast. Contributed to the successful characterization of scaffold mechanical properties, enhancing the project's progress toward a single-step surgical solution by investigating the potential of PCL scaffolds.
- Performed mechanical testing, tissue culturing, Von Kossa, and microCT analysis on polycaprolactone (PCL) scaffolds. Utilized ImageJ for imaging analysis, and CAD software for scaffold design and 3D printing optimization.
- Enhanced independent research skills by actively contributing to experimental design, data analysis, and decision-making processes. Fostered collaboration by working closely with a bioengineering master's student to refine and execute experimental protocols.

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 to date | 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, by making 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, 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 to ensure tasks are completed on schedule. Link between WPS and the general public. Previously Social Media Manager. Organized Penn Intercollegiate Lindy Hop Exchange 2024 with over 100 attendees, 7 classes and 6 competitions, and a live band social dance.
- Dancer/Performer: Lindy Hop and West Coast Swing since August 2021.
- Choreographer: "Plane" for the show "Swingwives of West Philadelphia" and "Dylina Badley for "Swing out of my Swamp".