**Maria Lovallo**

The Pennsylvania State University

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Phone: 814-441-7107

**Education**

**Pennsylvania State University**, State College, PA

Bachelor of Science, May 2025

Major: Microbiology

Minor: Plant Pathology and Environmental Microbiology

GPA: 3.96/4.00

**Penns Valley Junior/Senior Highschool**, Spring Mills, PA

Highschool Diploma, June 2021

Weighted GPA: 4.20/4.00

**Relevant Coursework**

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| General Chemistry I, II, & LabGeneral Physics I & IICalculus I & IIMolecular/Cell Biology I & IIOrganic Chemistry I, II, & LabGenetic AnalysisVirus EcologyMolecular Immunology Lab | Molecular Biology of the GeneGeneral Biochemistry I & IIMicrobial PhysiologyApplied Microbiology LabHorticultural Crop DiseasesProtein Molecular Cloning LabMedical Microbiology Mushroom Cultivation | Medical Microbiology LabAir Pollution Impacts on EcosystemsPhysical ChemistryMicrobial GeneticsPrinciples of ImmunologyMicrobes and PlantsTechnical Writing |
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**Research Experience**

**Thomas Lab - Undergraduate Research Associate**

Pennsylvania State University

* Contributed to a new research project exploring the evolutionary link between the microbiome and *Drosophila* flight muscle physiology for 3 years.
* Developed critical thinking and troubleshooting skills during project development and optimization.
* Proficient in a variety of molecular biology techniques over the course of 3 years
* Learned fly husbandry of *Drosophila melanogaster* during its use as a model organism for investigating the impact of the microbiome on flight endurance capabilities.
* Mentored 2 other undergraduates on the project and delegated project tasks
* Led discussion in Thomas Lab meetings and collaborative meetings with the Davenport Lab

**Technical Experience**

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| --- | --- | --- |
| Fly HusbandryMedia Preparation DNA Extraction Protein ExtractionGel Electrophoresis  | Polymerase Chain Reaction (PCR)Gel Extraction PCR Clean-upWestern BlottingSterile TechniqueFly dissection | DADA2 Bioinformatic AnalysisColumn PCR Clean-upLight MicroscopyMicrobial Culturing |

**Teaching Experience**

**PSU Chemistry Department - Learning Assistant, Spring & Fall 2022**

**Course: CHEM110: Principles of General Chemistry I**

* Adjusted teaching style to suit the needs of my students in lectures, recitation, and tutoring settings.
* Volunteered tutoring sessions to students in general chemistry courses that requested individual assistance with course content.

**PSU Biochemistry, Microbiology, and Molecular Biology Department – Learning Assistant, Spring 2023**

**Course: MICRB203 – Inquiry-Based Introductory Microbiology Lab**

* Managed the needs of a microbiology course, including answering student queries, distributing materials, and transportation/storage of experimental materials.
* Sat on undergraduate research panels to provide my personal undergraduate research narrative to undergrads in the course, offering ways for them to become engaged and involved with research relevant to their interests.

**PSU Biochemistry, Microbiology, and Molecular Biology Department – Teaching Assistant, Summer 2024**

**Course: BMB205S - Course-Based Research Experience in Biochemistry and Molecular Biology FYS**

* Maintained and guided student learning and safety in a BSL 1 level laboratory course.
* Practiced and taught the process of vibriophage isolation, purification, lysate creation, culture maintenance, DNA extraction, and sequencing.

**Presentations**

NASA Pennsylvania Space Grant Consortium Undergraduate Research Symposium, 2022

One Health Microbiome Center Annual Networking Event Lightning Talk, 2024

**Honors & Awards**

Dean’s List, 2021-Present

President Walker Award, 2021

NASA Pennsylvania Space Grant Consortium Research Fellowship [WISER], 2022

Learning Assistant Excellence Scholarship, 2025

**Memberships & Activities**

Phi Sigma Pi (Honors Fraternity), 2023-Present

* Parliamentarian, 2024

One Health Microbiome Center, 2023-Present