



Mabel Campos

Research Assistant, Neurobiology

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STRENGTHS

- 📅 **Laboratory documentation**
Detailed notebooks and sample records kept faculty review efficient. A consistent tracking habit helped connect results with controls and follow up work.
- 🔧 **Practical troubleshooting**
Unexpected results prompted notebook review, control comparison, and repeat testing. This approach kept problems visible and supported sound next steps.
- 🧪 **Molecular workflow support**
Plasmid preparation, PCR, and subcloning work moved construct studies forward. Faculty could rely on organized preparation before expression testing.
- ♥️ **Sterile technique**
Cell culture and transfection practice required steady contamination control. Careful handling protected shared materials and supported dependable fluorescence observations.
- 👥 **Responsible teamwork**
Mouse records, laboratory preparation, and supervised procedures were handled with care. Teammates valued dependable follow through during shared research activities.

SKILLS

Neurobiology Neuronal metabolism
Molecular biology
Plasmid preparation PCR

SUMMARY

Early career neurobiology researcher with more than two years of supervised academic laboratory experience focused on **neuronal metabolism**, **neuronal activity**, fluorescent biosensors, molecular biology, and experimental imaging. Hands on work includes **plasmid DNA preparation**, PCR, subcloning, expression vectors, bacterial protein expression, **fluorescence analysis**, biochemical assays, sterile technique, mammalian cell culture, and transfection. Research practice includes mouse colony support, genotyping, experimental documentation, sample tracking, and preparation for stereotactic viral vector procedures under trained supervision. Careful notebook maintenance and control comparison support reproducible results. Coursework and capstone research developed practical problem solving within established protocols, plus growing independence in biosensor development and imaging studies. Collaborative laboratory work has strengthened organization, responsibility, and reliable follow through in support of supervised neurobiology research.

EDUCATION

Bachelor's Degree in Biology, Neurobiology Concentration

University of Wisconsin-Madison 🎓 GPA: 3.8 📅 2026 📍 Madison, WI

Coursework: *Molecular Biology, Neurobiology, Cell Biology, Biochemistry, Experimental Methods*

TECHNICAL SKILLS

- **Molecular Biology:** Plasmid DNA preparation, PCR, subcloning
- **Expression Systems:** Expression vectors, bacterial expression, fluorescent proteins
- **Fluorescence Methods:** Fluorescence analysis, fluorescent imaging, signal comparison
- **Cell Culture:** Mammalian cell lines, sterile technique, transfection
- **Animal Research:** Mouse colony support, mouse genotyping, animal care procedures
- **Neurobiology Research:** Neuronal metabolism, neuronal activity, neuronal excitability
- **Biosensor Research:** Fluorescent biosensors, biosensor development, metabolic dynamics
- **Laboratory Practices:** Good laboratory practices, documentation, sample tracking
- **Biochemical Methods:** Biochemical assays, protein analysis, control comparison
- **Research Analysis:** Experimental imaging, basic statistics, graphical comparisons

EXPERIENCE

Undergraduate Research Assistant, Neurobiology

University Research Lab 📅 September 2025 - Present 📍 Madison, WI

Supports supervised neurobiology research examining neuronal activity, cellular metabolism, and fluorescent signals. Maintains molecular workflows, cell culture, mouse records, and research documentation while preparing for advanced imaging and animal procedures.

- Examined **neuronal activity**, cellular metabolism, and fluorescence signals through supervised experiments and detailed research records.
- Prepared plasmid DNA, PCR products, and gel checks for fluorescent biosensor construct workflows under faculty guidance.
- Expressed **fluorescent proteins** in bacteria, compared readings with controls, and documented findings for weekly discussions.
- Maintained mammalian **cell lines** with **sterile technique**, then completed supervised transfection studies for construct localization.
- Updated **mouse colony** records and **genotyping** logs, matching identifiers with breeding plans and institutional procedures.
- Prepared materials and observed trained staff during stereotactic viral vector procedures, recording biosafety and recovery details.

Subcloning Expression vectors

Protein expression

Fluorescence analysis

Biochemical assays

Sterile technique Cell culture

Transfection Mouse genotyping

Biosensor development

LANGUAGES

English Native

Spanish Proficient

MY CAREER



● Undergraduate Research Assistant, Neurobiology at University Research Lab (1 Years)

● Student Researcher, Fluorescent Biosensor Development at Capstone Project (1.3 Years)

● Molecular Biology Laboratory Researcher at Academic Research (3 Months)

Student Researcher, Fluorescent Biosensor Development

Capstone Project 📅 January 2025 - May 2026 📍 Madison, WI

Completed a supervised capstone investigation of fluorescent metabolism biosensors in controlled cellular conditions. Defined test questions, controls, measurement procedures, and follow up analysis while communicating methods and limitations to academic audiences.

- Evaluated a fluorescent metabolism biosensor under controlled cellular conditions with defined controls and repeatable measurements.
- Prepared plasmid DNA, **PCR** products, and subcloned constructs under faculty guidance before expression experiments.
- Expressed **fluorescent proteins** in bacterial cultures and compared signals across conditions to identify inconsistent runs.
- Maintained cell lines with **sterile technique** and **transfection**, recording culture conditions and imaging observations.
- Summarized experimental data with basic statistics and graphs, separating technical variation from follow up patterns.
- Presented methods, limitations, and results, connecting **biosensor development** with future **neuronal metabolism** studies.

Molecular Biology Laboratory Researcher

Academic Research 📅 September 2024 - December 2024 📍 Madison, WI

Completed supervised molecular biology laboratory research centered on plasmids, expression vectors, PCR, sterile technique, protein analysis, **biochemical assays**, and fluorescence measurements. Applied careful labeling, contamination control, notebook review, and repeat testing within established guidance.

- Completed **molecular biology** experiments involving plasmids, **expression vectors**, PCR, sterile technique, and protein analysis.
- Prepared bacterial cultures and plasmid DNA with contamination control, accurate labeling, and supervised laboratory procedures.
- Used PCR to evaluate DNA targets, then interpreted controls and samples in formal laboratory reports.
- Practiced restriction based **subcloning** concepts and construct verification, linking design choices with protein expression outcomes.
- Performed biochemical and fluorescence assays, organizing measurements and calculating values required by laboratory protocols.
- Investigated unexpected results through notebook review, control comparison, and repeat testing within provided guidance.

PROJECTS

Neuronal Metabolism Biosensor Study 📅 2026

Built a supervised study around fluorescent metabolism biosensor behavior in cellular conditions. Defined controls, recorded imaging observations, compared signals, and identified follow up questions relevant to neuronal activity research.

Fluorescent Protein Expression Analysis 📅 2025

Compared bacterial expression results and fluorescence measurements across controlled conditions. Organized raw observations, reviewed inconsistent runs, and presented practical conclusions about biosensor signal behavior.

LEADERSHIP & AWARDS

- Dean's List, University of Wisconsin-Madison, 2025
- Undergraduate Research Presentation Recognition, 2026
- Biological Sciences Academic Scholarship, 2024

CERTIFICATIONS

- Laboratory Safety and Biosafety Training 📅 2026
- Responsible Conduct of Research Foundations 📅 2025

PROFESSIONAL AFFILIATIONS

- Peer Mentor, Undergraduate Biology Learning Community, 2025 to 2026
- Student Member, Campus Undergraduate Research Network, 2024 to 2026
- Volunteer, Science Outreach Program, 2025 to 2026

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST