

# CODY NHAN PHAM

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## EDUCATION

**Bachelor of Science in Microbiology and Biotechnology**

August 2019-May 2023

*Missouri State University – Springfield, MO*

- GPA 3.86/4.00
- International Leadership Scholarship (2019-2023)
- Dean's List for 8 consecutive semesters
- Ranked in the top 98<sup>th</sup> percentile in the ETS Biology Major Field Test

## LABORATORY EXPERIENCE

**Research Assistant**

April 2021-May 2023

*Missouri State University – Springfield, MO*

- Investigated toxicological effects of engineered Ag and Zn nanomaterials on 2 model plant species (*Arabidopsis thaliana* and *Brassica napus*) to reveal potential environmental impacts and inform nanomaterial safety regulations.
- Conducted total RNA extraction, RNA-seq analysis, and qPCR validation for differential gene expression using the Bioinformatics software CLC Genomics Workbench, identifying 380+ differentially expressed genes.
- Performed 3 independent Inductively Coupled Plasma Mass Spectrometry (ICP-MS) analyses over 4 months to accurately determine the amount of metal uptake by plants, providing data for understanding metal toxicity in plants and their potential for phytoremediation.
- Developed general-purpose automation scripts that accelerated the Data Analysis pipelines by over 8 times, significantly reducing data processing time and labor costs.
- Extracted and quantified the plant's total chlorophyll concentration with spectrophotometry, and did Statistical Analysis and graphing using R.
- Designed and created 40+ hydroponics growing pots and optimized a hydroponics planting protocol for future experiments.

## ADDITIONAL WORK EXPERIENCE

**Student Tutor**

October 2022-May 2023

*Missouri State University – Springfield, MO*

- Led groups of over 25 students weekly through advanced biology, chemistry, and physics courses, creating up to 10 customized study plans each semester.
- Assisted in demonstrating and executing biology and chemistry experiments, emphasizing the technical mechanisms underlying each phenomenon.
- Achieved a 20% increase in group session attendance over the semester and maintained a 95% positive feedback rate from both peers and students.

**Customer Service**

October 2020-March 2021

*Compass Group USA – Springfield, MO*

- Operated POS cash register, handling 300 transactions per shift on average.
- Compiled and managed reports and records.

## ADDITIONAL SKILLS

NodeJS

R and R Studio

Python

MongoDB (NoSQL)

GraphPad Prism

HTML/CSS/JS

Microsoft Office Suite

CLC Genomics Workbench

MATLAB