

Andrew Hall

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Education

- 2022-in progress **PhD Botany**, *University of British Columbia*, Vancouver, BC
- 2018-2022 **BS Biochemistry and Spanish**, *University of Wisconsin-Madison*, Madison, WI, GPA 3.917
Comprehensive Honors, Dean's List

Research Interests

Plant metabolism in the context of climate change, regulation of primary and specialized metabolism, cell wall biochemistry, evolution and metabolism of bryophytes, evolution of metabolic pathways in diverse plant lineages, ecosystem level biochemical dynamics, biochemistry of plant-microbe symbioses, enhanced production of useful phytochemicals

Research Experience

- 2022 **Post-Baccalaureate Researcher**, *University of Wisconsin-Madison*, Laboratory of Dr. Hiroshi Maeda
- 2021-2022 **Senior Honors Thesis**, *University of Wisconsin-Madison*, Laboratory of Dr. Hiroshi Maeda,
“Regulation of tyrosine biosynthesis in non-flowering plants”
- 2020-2021 **Undergraduate Researcher**, *University of Wisconsin-Madison*, Laboratory of Dr. Hiroshi Maeda

Teaching Experience

- Spring 2022 **BIOCORE 384: Cellular Biology Laboratory**, *University of Wisconsin-Madison*, Undergraduate Teaching Assistant
- Fall 2021 **BIOCORE 382: Evolution, Ecology, and Genetics Laboratory**, *University of Wisconsin-Madison*, Undergraduate Teaching Assistant

Awards

- 2022 Folke Skoog Award for Research in Plant Physiology; *Department of Botany, University of Wisconsin-Madison*
- 2021 Senior Thesis Summer Research Grant; *College of Letters and Science Honors Program, University of Wisconsin-Madison*
for the proposal “Regulation and coordination of aromatic amino acid metabolism during the evolution of vascular land plants”

Presentations

- 2022 Phytochemical Society of North America: “Regulation of tyrosine biosynthesis in non-flowering plants”
- 2022 UW-Madison Letters and Science Senior Honors Thesis Symposium: “Regulation of tyrosine biosynthesis in non-flowering plants”
- 2021 UW-Madison Undergraduate Research Symposium: “Characterization of mutations responsible for suppression of *tyra2* phenotype in *Arabidopsis*”

Technical Skills

Biochemistry and Analytical Chemistry

- Recombinant protein expression and purification
- SDS-PAGE for protein separation and analysis
- Western Blot
- Enzyme kinetics and inhibition assays
- UV/Vis Spectrophotometry
- HPLC-FLD and HPLC-DAD detection of compounds

Genetics and Molecular Biology

- PCR
- Agarose gel electrophoresis for DNA separation and analysis
- Molecular cloning
 - Golden Gate Assembly
 - Gibson Assembly
- Cultivation of *Arabidopsis thaliana*
 - Crossing
 - Genetic transformation with *Agrobacterium tumefaciens*

Software Proficiency

Bioinformatics RAxML, Clustal Multiple Sequence Alignment, BLAST, ApE (A plasmid Editor)

Protein Modeling PyMOL, Swiss-Model Homology Modeling

Data Analysis R, Microsoft Excel, Graph-Pad Prism

Other ImageJ, LaTeX, Adobe Illustrator

Languages

English Native Speaker

Spanish Fluent