

Amy Moore

Graduate Student
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Education

B.S. University of Minnesota, Twin Cities (Minneapolis, MN)

2018-2022

College of Biological Sciences

Major: Genetics, Cell Biology, and Development

Minor: Plant Biology

Honors and Awards

High Distinction Graduate

2022

University of Minnesota Presidential Scholarship (merit based)

2018-2022

Research Experience

Brewer Lab, University of Washington Genome Sciences

2022-2024

Research Scientist/Engineer 1

Characterizing Centromeric Replication Delays in the *mcm4^{chaos3}* Replicative Helicase Allele

- Constructed yeast strains by CRISPR and gene replacement for testing helicase mutation effects in varying genetic backgrounds
- Engineered chromosomal markers to test chromosome loss by fluctuation assay
- Profiled whole genome replication timing by single stranded assay
- Presented work at Pacific Northwest Research Club meeting, Cold Spring Harbor Eukaryotic DNA Replication meeting, FASEB Yeast Cell Cycle and Chromosome Biology meeting
- Mentored undergraduate students

Undergraduate Mentor: Reducing rDNA copy number by CRISPR in a *fob1* background

- Mentored undergraduate student independent research project using CRISPR to target yeast ribosomal DNA repeats.

Katagiri Lab, University of Minnesota Plant and Microbial Biology

2019-2022

Undergraduate Researcher

Ligand Engineering Project

- Expressed tagged tomato receptors in *Nicotiana benthamiana* by agrobacterium mediated transformation for testing novel ligands designed by bioengineering graduate student collaborators
- Verified expression by western blot

- Classical genetics approaches to isolate phenotypes of interest

Rice Pattern Triggered Immunity Project

- Conducted reactive oxygen species assays in Arabidopsis and adapted method to rice
- Generated RT-qPCR data to measure transcription of pathogenesis related genes
- Developed tissue culture and hydroponic rice growth systems

PAD4 Project

- Conducted forward genetic screening for loss of characteristic response to pathogen elicitors in mutagenized populations of Arabidopsis
- PCR barcoding for sequencing to verify putative mutant lines

Conferences and Presentations

FASEB Yeast Cell Cycle and Chromosome Biology

June 2024

Talk: Investigating the effects of *mcm4*^{Chaos3} centromere replication delays on genome stability

Cold Spring Harbor Eukaryotic DNA Replication and Genome Maintenance

Sept 2023

Poster: Does the *mcm4*^{Chaos3} replicative helicase allele live up to its name?

Pacific Northwest Yeast Club

July 2023

Talk: Does the *mcm4*^{Chaos3} replicative helicase allele live up to its name?

University of Minnesota Undergraduate Research Symposium

April 2019

Poster: Identification of Novel PAD4 Molecular Signaling Components in *Arabidopsis thaliana* Immunity Against *Pseudomonas syringae*

Fellowships and Grants

University of Minnesota Undergraduate Research Opportunity

2021

Project title: Identification of Novel PAD4 Molecular Signaling Components in *Arabidopsis thaliana* Immunity Against *Pseudomonas syringae*

Status: Awarded

University of Minnesota Undergraduate Research Opportunity

2020

Project title: Determining Rice Immune Network Resilience Using a Network Reconstitution Approach

Status: Awarded

Teaching Experience

Biol4003: Genetics (online and in-person sections)

2021, 2022

Professor Nathan Springer

- Provided in-lecture support to professor and students in a course with 100+ students
- Held weekly office hours
- Provided input on teaching strategies and utilization of technological resources in flipped classroom/fully online setting

Biol400: Experiments in Molecular Biology

2024

Professor Adam Steinbrenner

- Led lab sections independently
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Service and Extracurricular

University of Minnesota Men's Crew Coxswain

2018-2022

Student Leadership Board: Safety Officer and Fundraising Coordinator

2020-2022

Team Leadership Award

2022

American Collegiate Rowing Association (ACRA) All-Regional Plains Coxswain

2022

ACRA All-American Academic Team

2020-2022

Outreach Event: Botany Bus

2021

- Assisted in planning and participation in plant research outreach event at Minneapolis K-4 school, in collaboration with Katagiri lab members and the UMN conservatory

Summer Field Volunteer

2020

Shaw Lab, University of Minnesota

- Conducted field crosses of *Schizachyrium scoparium* to aid graduate student Wesley Braker in land management research on prairie restoration efforts using non-native ecotypes.

Youth Conservation Corps

2018

Lake County, IL

- Youth crew member involved in seed collection, grounds maintenance, and restoration efforts in Lake County Forest Preserves.
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