**Education**

University of Georgia, Athens, Georgia

Doctorate of Philosophy Student

Genetics

June 2023 - Present

Presbyterian College, Clinton, South Carolina

Bachelor of Science in Computational Biology

Minor in Biology

May 2023

**Research Experience**

**Senior Capstone**, Presbyterian College

*Metagenomic analysis of the effect of dietary iron on the composition and function of the Danio rerio gut microbiome*

Primary Investigator: Stuart Gordon

Spring 2023

**CGGv2 REEU**, University of Georgia

*Candidate gene identification for tomato monoterpenoid volatiles in fruits through an automated gene screening pipeline with GWAS*

Primary Investigator: Esther van der Knaap

Summer 2022

* Developed skills in RNA-Seq analysis via Linux and R
* Attained proficiency in use of Adobe Illustrator for poster design
* Responsible for selection and harvest of tomato samples based on phenotype
* Operated scanning software for determination of tomato morphology

**SC-INBRE**, Presbyterian College

*Transposon mutagenesis in Acidovorax avenae subsp. avenae*

Primary Investigator: Stuart Gordon

Summer 2021

* Tested RNA extraction and purification procedure with novel organism
* Implemented workflow for genome assembly with whole genome sequencing
* Communicated weekly with research cohorts on contemporary publications
* Worked with primary investigator to design a thorough poster
* Presented poster at Summer Fellows Symposium, Presbyterian College Honors Day Symposium 2022, and virtually at SC-INBRE Science Symposium 2022

**Work Experience**

**Office of Academic Success**, Presbyterian College

Peer Tutor, October 2019 – May 2023

Supervisor: Dr. Amy Davis

* Designed tailored tutoring experiences for students and student athletes
* Tutored for a diverse range of courses in different fields
  + Mathematics: Mathematics for the Liberal Arts, Introductory Statistics, Applied Calculus, Calculus and Analytic Geometry, Integral Calculus, Calculus II
  + Chemistry: Chemistry: A Human Experience, General Chemistry
  + Biology: Biology in the 21st Century, Biological Concepts, Organismal Biology
  + Psychology: Introductory Psychology
  + Business: Data Analytics

**Department of Biology**, Presbyterian College

Undergraduate Laboratory Technician, January 2020 – December 2020

Supervisors: Dr. Payal Ray, Professor Diane Rischbieter

* Prepared solutions for use inside Developmental Biology laboratory course
* Ensured sterilization and maintenance of biological equipment and facilities
* Maintained dietary well-being of *Drosophila* samples
* Computed equations necessary for accurate implementation of chemical compounds
* Prepared laboratory materials and safety equipment for 20+ students
* Assisted students with questions during laboratory hours

**Presentations/Publications**

**Jackson J.**, *A Bill to preserve the sanctity of public schools as the educational foundations of our society*, Legislation Proposition, South Carolina Student Legislature, Clemson University, April 2023.

**Jackson J.**, Whisonant M., Gordon S., *Effect of Dietary Iron on Taxonomic Composition and Function of the Zebrafish Gut Microbiome*, Poster presentation at SC-INBRE 14th Annual SciencMe Symposium, February 2023

**Jackson J.**, Sapkota M., *Candidate gene identification for tomato monoterpenoid volatiles in fruits through an automated gene screening pipeline with GWAS,* Poster presentation at Plant Center Retreat, December 2022.

**Jackson J.**,*A Bill to retain the right of home rule over monuments for municipalities in South Carolina*, Legislation Proposition, South Carolina Student Legislature, South Carolina State House, October 2022.

**Jackson J.**, *Crop Genetics and Genomics REEU at University of Georgia*, Presentation talk at Biology Departmental Seminar, Presbyterian College, October 2022.

**Jackson J.**, Sapkota M., *Candidate gene identification for tomato monoterpenoid volatiles in fruits through an automated gene screening pipeline with GWAS*, Lab report, Institute of Plant Breeding, Genetics, and Genomics, UGA, September 2022.

**Jackson J.**,Sapkota M., *Candidate gene identification for tomato monoterpenoid volatiles in fruits through an automated gene screening pipeline with GWAS,* Poster presentation at Joint Program REEU/REU Poster Symposium, July 2022.

**Jackson J.**, Gordon S., *Transposon mutagenesis in Acidovorax avenae subsp. avenae*, Poster presentation at Presbyterian College Honors Day, April 2022.

**Jackson J.**, Gordon S., *Transposon mutagenesis in Acidovorax avenae subsp. avenae*, Virtual poster presentation at SC-INBRE Science Symposium, January 2022.

**Jackson J.**, Gordon S., *Transposon mutagenesis in Acidovorax avenae subsp. avenae*, Poster presentation at Presbyterian College Summer Fellows Symposium, July 2021.

**Grants, Honors, Awards**

**UGA Plant Center Retreat,** “1st Place Undergraduate Poster”

December, 2022

**SC-INBRE,** “Student Initiated Research Project”

Summer, 2021

$3,000

**Dean’s List**, Fall 2019, Fall 2021

**Extracurricular Activities**

**Student Government Association**, Vice President of Student Life

2021 – 2023

**Theta Chi Fraternity: Beta Psi Chapter**,

2020 – Present

**Student Activities Board,** Vice President of Blue Pride

2021 – 2023

**Student Volunteer Services,**

2021 – 2023

**Presbyterian College Men’s Club Volleyball,**

2020 – 2023

**National Association for the Advancement of Colored People: PC Chapter,** 1st Vice President

2020 – 2023

**Multicultural Student Union,** Vice President

2020 – 2021

**Spectrum,** Vice President

2019 – 2021

**Skills**

**Technical**

* Programming (R, Python/MacOS, Linux)
* Proficient in Microsoft Office package (Excel, Word, PowerPoint)
* Lab Workstation Management
* Linux shell script programming with several bioinformatics tools to perform Genome Assembly, GWAS, RNASeq analysis, and metagenomic analysis
* Proficient in Data Visualization software (Tableau, RMarkdown, RShiny, Excel)

**Molecular**

* DNA and RNA extraction and purification
* Plasmid preparation and transformation
* PCR
* Microscopy
* Gel Electrophoresis
* Standard Curve
* Buffer Preparation
* Primer Design

**Field**

* Pruning
* Weeding
* Carpentry
* Planting
* Pollination/Crossing

**References**

Dr. Esther van der Knaap

Distinguished Research Professor,

Department of Horticulture; Institute of Plant Breeding, Genetics and Genomics; Plant Center; Center for Applied Genetic Technologies,

University of Georgia

Dr. Jim Leebens-Mack

Professor,

Department of Plant Biology;

Miller Plant Sciences;

University of Georgia

Dr. Micheal O. Rischbieter

Professor,

Department of Biology;

Lassiter Hall;

Presbyterian College