**Education**

2018-2024 PhD Candidate, Fungal Group and Department of Plant Biology

University of Georgia; Expected graduation May, 2024

Michelle Momany, PhD, Major Advisor

2014-2018 Winthrop University

Bachelor of Science, Biology

**Teaching and Mentoring Experience**

**Instructor of Record**

F2019 and F2021 BIOL 1107L – Principles of Biology I Laboratory, University of

Georgia, 80 students total, Writing Intensive Program

* Led two sections each semester, managing attendance and grades
* Developed and delivered 15-minute lectures introducing key concepts with examples from primary literature
* Facilitated discussions on precision and accuracy, plagiarism, and gene-editing ethics
* Guided students through the primary literature writing process

**Teaching Assistant**

F2023 PBIO 1210 – Principles of Plant Biology, University of Georgia, 180 students

* Point of contact for student questions on material and logistics
* Established our class’s TopHat page
* Recorded attendance and grades
* Introduced twice-weekly, voluntary review sessions of lecture materials. Average weekly attendance: 10-20
* Guest Lecturer: Taught 2 classes introducing Mendelian and Non-Mendelian Genetics as a transition between molecular/cell biology and ecology/evolution portions of the course

S2023 BIOL 8350L – Molecular Phylogenetics, Population Genomics, and

Evolution, University of Georgia, 8 students

* Helped students understand content
* Graduate-level, bioinformatics-based course
* Required proficiency in using a computing cluster and competency in essential Linux commands
* Reviewed and attempted assignments before students, assisted students with homework and computational troubleshooting, and managed grades

F2017-S2018 BIOL 151 – Introductory Biology Laboratory, Winthrop University,

25 students each semester

**Mentorship**

S2024 A. Sanikapally and S. Jones: *Exploration of lateral branching mutants in Aspergillus nidulans using cell culture, microscopy, and mating*

F2019-S2020 S. Lopez. Art and Microbiology Major, *Electron Microscopy of Fungal Branching Mutants*

https://sofialopez866.myportfolio.com/electron-microscope

**Reviews from Previous Students**

**BIOL 1107L**

**Principles of Biology I Laboratory**

**Overall Instructor Rating**

**F19 µ=4.44** **SD=0.87 n=25**

**F21 µ=4.92 SD=0.28 n=37**

[5=Strongly agree; 1=Disagree strongly]

**Brent Shuman...**

…presented material in a clear and **F19** **F21**

interesting way. (µ=4.84 SD=0.37) (µ=4.62 SD=0.59)

…stimulated my interest in the course. (µ=4.08 SD=1.04) (µ=4.62 SD=0.64)

…was regularly well prepared for class. (µ=4.52 SD=0.65) (µ=4.73 SD=0.45)

…was willing to help students. (µ=4.52 SD=0.71) (µ=5.00 SD=0.00)

…made good use of class time. (µ=4.36 SD=1.04) (µ=4.92 SD=0.28)

…graded the course fairly. (µ=4.16 SD=0.90) (µ=4.84 SD=0.37)

“Brent was so great to work with! You could really tell he cared about the students and was willing to put in as much work as it would take for each individual student to understand the material!”

“Brent was a great mentor. Any questions, regardless of what it was, he answered it to the best of his ability. Always well prepared and on time. The material itself was hard to understand, but with a little bit of explaining, it was manageable.”

“Brent is by far my favorite lab TA I have had thus far in my science courses...His presentations in class are both interesting and enjoyable as he brings his own passion for Biology with him each day to class. He was very knowledgeable on all the material taught and did a great job of making the material, what at times could seem boring to most, both interesting and easy to understand.”

**PBIO 1210**

**Principles of Plant Biology**

**Overall Instructor Rating**

**µ=4.83 SD=0.49 n=121**

[5=Strongly agree; 1=Disagree strongly]

**Brent Shuman...**

…communicates clearly and effectively. (µ=4.59 SD=0.70)

…encourages students to think for themselves. (µ=4.52 SD=0.70)

…was willing to help students. (µ=4.83 SD=0.44)

…is enthusiastic about class material (µ=4.64 SD=0.63)

…stimulates student's interest. (µ=4.46 SD=0.79)

“He is so good at explaining things to students who have no previous background in plant science”

“Brent is great! He was always accessible outside of class and easily apporcable! Never made me feel stupid and was always eager to help us learn and grow!”

“Makes sure that the students are understanding the material as he is teaching. He will always check in and see if people are lost or if they need help. Also during his presentations he makes connections to the material that make it easy to remember”

“Brent is an excellent communicator who is able to stimulate student interest and makes complicated subject matter easy to understand.”

**PBIO 8350L**

**Molecular Phylogenetics, Population Genomics, and Evolution**

**Overall Instructor Rating**

**µ=5 SD=0 n=5**

[5=Strongly agree; 1=Disagree strongly]

**Brent Shuman...**

…communicates clearly and effectively. (µ=4.4 SD=0.55)

…encourages students to think for themselves. (µ=4.4 SD=0.55)

…was willing to help students. (µ=4.6 SD=0.55)

…grades quizzes and assignments fairly. (µ=4.4 SD=0.55)

…stimulates student's interest. (µ=4.2 SD=0.55)

“Brent was approachable and helpful in a course with a lot of difficult content. I appreciated that he had experienced the course before and was familiar (or became familiar) with the content.”

“Brent is very accommodating and helpful especially with students who are really struggling in the class. I really appreciate how Brent helped me especially during the start of the semester when I was struggling with the use of the [computing] cluster. He always answers my queries and helped me a lot. His comments on the laboratory worksheets are also very constructive and direct which help you navigate what went wrong.”

**Awards and Nominations**

2024 Outstanding Teaching Assistant Office of the Vice President for Instruction, UGA,

“recognizes [those] who demonstrate superior instructional skills while serving in the classroom or laboratory.”

2024 Excellence in Teaching Award The Graduate School, UGA,

(Nomination under consideration) “recognizes [those] who have demonstrated superior teaching skills and contributed to teaching beyond their own classroom responsibilities. [This] is the top teaching award for graduate students”

**Relevant Coursework**

**Education**

WIPP 7001 – **Writing Intensive Program Pedagogy**

Introduction to evidence-based pedagogy in writing-intensive courses. Skill-development in designing assignments, shaping rubrics, and giving effective and encouraging feedback through the writing process.

GRSC 7770 – **Graduate Teaching Seminar**

Preparing teaching assistants to lead classes through instruction in active-learning and inquiry-based pedagogy, university policies, and educational resources

PBIO 8920 – **Explaining Your Science**

Communicating science to lay audiences through different formats including: 3-minute thesis, news article, elevator pitch, primary research summary, coloring book.

**Biology**

BCMB 8213-14 **Advanced Genetics, Cell Biology, and Biochemistry**

PBIO 8350 **Molecular Phylogenetics, Population Genomics and Evolution**

PBIO 8960 **Genetics of Fungi**

MIBO 6700 **Medical Mycology**

**Research Experiences and Communication**

**Research Experiences**

Additional Laboratory Rotations Douda Bensasson, PhD, University of Georgia

Fall 2018 Identifying ploidy of the model pathogenic fungus *Aspergillus fumigatus* by measuring B-allele frequency from whole-genome sequences

Xiaorong Lin, PhD, University of Georgia

Knocking-out and tagging genes of interest in the pathogenic fungus *Cryptococcus neoformans*

**N**ational **S**cience **F**oundation Vincent Starai, PhD University of Georgia, and

**R**esearch **E**xperience for Michael Mills, PhD, University of Georgia

**U**ndergraduates Screening bacterial effector proteins expressed in

Summer 2017 yeast for mislocalization of the septin ring at the

mother-bud-neck

Undergraduate Research Julian Smith III, PhD, Winthrop University

Electron microscopy of a local cyanobacterial biofilm to characterize its ultrastructure, and to explore its capacity for copper bioremediation

**Invited Presentation**

Shuman B. March, 2022. Asperfest Flash Talk – Distribution of non-canonical septins in fungi. Asperfest, 31st Fungal Genetics Conference, Genetics Society of America. Pacific Grove, CA.

**Poster Presentations**

Shuman, B and Momany, M. June, 2022. Distribution of non-canonical septins in fungi. Cellular

and Molecular Fungal Biology, Gordon Research Conference. Holderness, NH.

Shuman, B and Momany, M. March, 2022. Distribution of non-canonical septins in fungi. 31st

Fungal Genetics Conference, Genetics Society of America. Pacific Grove, CA.

Shuman, B and Momany, M. September, 2021. Conservation and divergence in septins from

protists to people. Molecular and Cell Biology of Septins, EMBO workshop, Berlin,

Germany. Poster presented by Michelle Momany, PhD.

Shuman B, Scopel EFC, Kang E, Bensasson D, and Momany M. March, 2019. An examination

of ploidy in *Aspergillus fumigatus*. 30th Fungal Genetics Conference, Genetics Society of

America. Pacific Grove, CA.

Shuman B, Smith III J. April, 2017. Observation of adsorbed Cu2+ by a Winthrop biofilm using SEM-EDS. Showcase Of Undergraduate Research and Creative Endeavors (SOURCE). Winthrop University, Rock Hill, SC.

**Publications**

**Shuman B** and Momany M (2022) Septins From Protists to People. Front. Cell Dev. Biol.

9:824850. doi: 10.3389/fcell.2021.824850

Celia-Sanchez BN, Mangum B, Gómez Londoño LF, Burks C, **Shuman B**, Brewer MT, Momany

M. (In review). Tandem repeat (TR)-based pan-azole- and multi-fungicide-resistant

*Aspergillus fumigatus* is widespread in the United States. Acceptance anticipated in late 2023.

**Shuman B**, Scopel E, Ward A, Momany M, Bensasson D. B-allele Frequency as a

Method to Detect Intra-Species Contamination in Whole-Genome Sequence Data. (In

preparation). Submission anticipated in early 2024.

Delic S, **Shuman B**, Momany M, Onishi M. Evolutionary origins and ancestral features of

septins. (In preparation). Submission anticipated in early 2024.

**Service**

**Institutional**

2020-2022 Mycology Graduate Student Organization, President

As President, I hosted weekly seminars given by members of the fungal biology group at UGA. I coordinated logistics for the invitation of professors and graduate students from across the world to present their research to our fungal group.

2019-2020 Plant Biology Graduate Student Association, Vice President

I contributed to the leadership of PBGSA, a democratic organization

responsible for upholding a connected social environment (especially for

incoming students) and communicating with PBIO faculty and staff.

During my tenure as Vice President:

I oversaw the planting and sale of over 500 herbs to raise money for research, teaching and outreach grants awarded to graduate students. I advocated for the PBIO graduate students while attending a faculty meeting to install a new department head.

**Community**

2019-2020 Judge, Georgia Science and Engineering Fair. Athens, GA

2019, 2022 Georgia Junior Science & Humanities Symposium, Paper Reader, Poster Judge, and Presentation Judge. Athens, GA

2019-2020 Judge, Oconee County Science Fair. Oconee, GA

2019 Judge, Plant Biology Paper of the Year Award, University of Georgia