

Jennifer R. Walker

527 Biological Sciences Building, Department of Microbiology, Athens, Georgia 30602

Office: (706) 542-0947

Email: jrswalk@uga.edu

Education

Ph.D., Microbiology, December 2002, University of Georgia, Athens, Georgia

Dissertation: *Improving the Stability of Bioactive Peptides Using Protein-based Motifs*

B.S., Biology, *cum laude*, July 1996, University of Georgia, Athens, Georgia

Teaching Experience

Lecturer, January 2016-present, University of Georgia, Microbiology Department

Course load: four sections per semester per academic year; 19-48 students per section

Introduction to Microbiology, MIBO 3500E, summer semesters

- Created online lectures, learning objectives, exams, assessments, and group activities for up to 150 online students
- Correspond regularly with students via email, phone, and online video chat to personalize course
- Coordinate with up to four teaching assistants in creating and grading exams and assessments; coach teaching assistants to create online lectures and assessments

Introduction to Microbiology, MIBO 3500, spring semesters

- Majors course redesigned to analyze case scenarios/peer-reviewed papers and encourage collaborative learning through weekly group activities with support of Microbiology Peer Assistants

Introduction to Microbiology with Health Perspective, MIBO 2500, and MIBO 2500L, fall and spring semesters

- Non-majors course designed with integrated medical case studies or peer-reviewed papers along with weekly small group activities supported by Microbiology Peer Assistants
- Provided assistance for coordinating graduate lab assistants in teaching weekly labs and handling student issues
- Created online instructional videos to provide additional learning resources for students
- Created new inquiry based lab experiments for corresponding MIBO 2500L course
- Collaborated with Office of Biosafety to create online lab safety training for undergraduates taking microbiology labs

Departmental Teaching Workshop, GRSC 7770, fall semesters

- Present and discuss current pedagogical trends in higher education for graduate students preparing to be Teaching Assistants; 11-13 students per semester
- Provide practice for active learning strategies, assessment and grading, study strategies, classroom management and peer observation in undergraduate courses

Instructor, part-time, Spring 2003- Fall 2015, University of Georgia, Microbiology Department

- Taught majors (MIBO 3500 and MIBO 3510L) and non-major MIBO courses (MIBO 2500 and MIBO 2500L) and labs; total 16 courses, ranged 90-240 students per course
- Managed 20+ teaching assistants for lab classes

Current Teaching Activities

Coordinator for Microbiology Peer Assistants program, Department of Microbiology

- Created and currently directing the recruitment and training of undergraduate peer assistants for microbiology introductory courses; currently directing 9 peer assistants in four sections of courses
- Weekly and monthly meetings with peer assistants to prepare for in-class activities and best pedagogical practices in the classroom

Member, Undergraduate Affairs Committee, Department of Microbiology

- Assisted with development of departmental framework of learning goals for majors and non-majors introductory microbiology courses aligned with American Society of Microbiology guidelines
- Assisting in creating concept surveys to help faculty gauge students' foundational knowledge before and after taking microbiology courses
- Assist with spring departmental graduation ceremony

Contributions to University and Departmental Teaching and Mentoring

Recruit and maintain microbiology undergraduate students for Division of Academic Enhancement peer tutoring program

Mentor and assist undergraduates in professional school applications with approximately fifty letters of recommendation per year

Co-advisor for UGA ASM undergraduate club

Mentor graduate students on teaching certificate projects: Julie Grainy and Amanda Howard (2019), Caitlin Reeves (2018) and Joe Worth (2019)

Assistance and feedback for eleven (11) graduate students with guest lecturing or teaching as instructor of record, MIBO 2500

Guest speaker, Future Faculty Fellows program sponsored by Center for Teaching and Learning, UGA

Member, search committee for Lecturer position, Dept. of Microbiology, Fall 2016

Departmental representative, UGA majors and Double Dawgs fairs

Affiliations

Member, American Society of Microbiology

Member, Affiliate Faculty, Scientists Engaged in Educational Research (SEER), UGA

Member, American College and University Biology Educators

Presentations

Innovations in Teaching Conference, Athens, GA, October 2018, **co-presenter** with Amanda Howard, *A Concept Framework for Improving Metacognition*

University System of Georgia's Teaching and Learning Conference, Athens, GA, March 2018, **co-presenter** with Julie Grainy, *Crafting Concept Inventories to Assess Student Misconceptions and Prior Knowledge*

Innovation in Teaching Conference, Athens, GA, October, 2017, **speaker**, *How I Got Into SoTL (and why I stayed)*

American Society for Microbiology Conference on Undergraduate Education, Washington D. C., July 2016, **presenter**, *Best Small Class Teaching Practices*

Awards and Fellowships

Teaching Academy Fellows Program member, 2018-2019 – funded by the Office of the President for mentoring and instructional support of early career faculty

Sandy Beaver Teaching Award, 2018 – Franklin College of Arts and Sciences, UGA

Online Learning Fellows, 2016-2017 - awarded for major revision of online introductory microbiology course, MIBO 3500E

Travel grant recipient for American Society for Microbiology Conference on Undergraduate Education, Washington D. C., July 2016

Community Service

Service to Malcom Bridge Middle School's FFA to provide science mentoring for AgriScience Fair projects, Bogart, Georgia, Spring 2018

FFA's National Convention's AgriScience Fair **judge**, Indiana, October 2017

Outreach at Malcom Bridge Elementary public school second grade – coordinated and directed with six graduate students to conduct interactive microbiology sessions, Bogart, Georgia, September 2016

Research Experience

Post-doctoral Research, Zolaris Biosciences, LLC, Athens, Georgia 2003-2004

- Research focus: fusion protein purification, peptide half-life assays and antimicrobial peptide screens
- Developed student projects and trained undergraduates in laboratory skills

Graduate Research Assistant, Microbiology Department, University of Georgia, 1998- 2002

- Developed and executed variety of projects including: Uptake of inhibitory peptides by MRSA and uptake of peptides by Gram negative organisms by use of biotin
- Developed and assisted undergraduate student projects

Research Technician III, July 1996-March 1998

Publications, Patent and Editorship

Contributing editor, Norman-McKay, L., 2018. *Microbiology: Basic and Clinical Principles*, San Francisco, Pearson; ISBN 13: 978-0-13-479620-8; contributed five of twenty two chapters

E. Altman and **J. R. Walker**, 2009. Biotin facilitated transport in Gram-negative bacteria. US patent number 7,601,511, filed Nov 12, 2004.

J. R. Walker and E. Altman, 2004. Biotinylation Facilitates the Uptake of Large Peptides by *Escherichia coli* and Other Gram-Negative Bacteria, *App. Environ. Micro.* 71:1850-1855

J. R. Walker, R. Altman, J. W. Warren, and E. Altman, 2003. Novel protein protective motifs, *J. Pept. Res.* 62:214-226

J. R. Walker, J. R. Roth, and E. Altman, 2001. An *in vivo* study of novel bioactive peptides which can inhibit the growth of *Escherichia coli*. *Amer. Pep. J.* 58:380-388.

Publications, Patent and Editorship, continued

R. R. Gokarn., J. D. Evans, **J. R. Walker**, S. A. Martin, M. A. Eiteman, and E. Altman, 2001.

The physiological effects and metabolic alterations caused by the expression of *Rhizobium etli* pyruvate carboxylase in *Escherichia coli*. *App. Micro. Biotech.* 56:188-195.

J. W. Warren, **J. R. Walker**, and E. Altman, 2000. Construction and characterization of a highly regulable expression vector, pLAC11 and its multipurpose derivatives, pLac 22 and pLac 33. *Plasmid* 44:138-151.