

# Kara Ann Tinker

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## Education:

Ph.D. Candidate 2012-present  
Department of Microbiology  
University of Georgia

B.S. in Biochemistry and Microbiology 2008-2012  
Minor in Chinese Studies  
North Carolina State University

## Doctoral Research:

**Graduate Student** 2013-present  
Dr. Elizabeth Ottesen, Microbiology Department, University of Georgia  
Thesis Project: Effect of diet on the gut microbial community composition and transcriptional patterns of the American cockroach, *Periplaneta americana*.

### Relevant Experience:

- Maintain an in-house colony of American cockroaches
- Coordinated large (>80 locations) stream water sample collection events
- Conducted field work collecting coastal ocean water samples for metatranscriptomic analysis
- Developed in-house methods for 16S rRNA library preparation
- Organized a departmental graduate student bioinformatics training group

## Undergraduate Research:

**Research Experience for Undergraduates (REU) Student** Summer 2011  
Dr. Samantha Joye, Marine Science Department, University of Georgia  
Project: Assess the effect of the BP Oil Spill on microbial activity in the Gulf of Mexico.

**Research Assistant** 2010-2011  
Dr. Allen Foegeding, Food Science Department, North Carolina State University  
Project: Explore the role of caseins in controlling protein aggregation and understand differences between two types of molecular chaperones: small heat shock proteins and caseins.

**Research Assistant** Summer 2010  
Dr. Stefan Franzen, Physical Chemistry Department, North Carolina State University and Zhejiang University

Project: Create molecular dynamic simulations of dehaloperoxidase (DHP) and DHP mutants as well as synthesize, purify, and analyze these mutants.

## **Publications:**

**Tinker KA** and Ottesen EA. “The core gut microbiome of the American cockroach, *Periplaneta americana*, is stable and resilient to dietary shifts.” (*Submitted*)

## **Oral Presentations:**

“Taxonomic Stability of the Cockroach Gut Microbiota.” Symbiofest, University of Georgia. May 2016. (Scheduled)

“Taxonomic Stability of the American Cockroach Gut Microbiota.” Microbiology Department Student Seminar. University of Georgia. February 2016.

“Effect of Diet on the Gut Microbiome of the American Cockroach, *Periplaneta americana*.” Symbiofest, University of Georgia. May 2015.

“Characterizing the Gut Microbiome using the American Cockroach, *Periplaneta americana*, as a model organism.” Microbiology Department Student Seminar, University of Georgia. August 2014.

## **Poster Presentations:**

**Tinker KA** and Ottesen E.A. “Taxonomic Stability of the American Cockroach Gut Microbiota.” University of Georgia, Department of Microbiology Recruitment Event. Athens, GA. February 2015. *Received Microbiology Recruitment Outstanding Poster Award*

**Tinker KA** and Ottesen E.A. “Taxonomic Stability of the American Cockroach Gut Microbial Community.” Big Data Challenges in Life Sciences Symposium. Athens, GA. October 2015.

**Tinker KA** and Ottesen EA. “Effect of Short- and Long-Term Diet Changes on the Gut Microbial Community Composition of the American Cockroach, *Periplaneta americana*.” Microbial Population Biology, Gordon Research Conference. Andover, NH. July 2015.

**Tinker KA** and Ottesen EA. “Effect of Short- and Long-Term Diet Changes on the Gut Microbial Community Composition of the American Cockroach, *Periplaneta americana*.” Microbial Population Biology, Gordon Research Seminar. Andover, NH. July 2015.

**Tinker KA** and Ottesen EA. “Effect of Diet on the Gut Microbial Community Composition of the American Cockroach, *Periplaneta americana*.” University of Georgia, Department of Microbiology Recruitment Event. Athens, GA. February 2015.

**Tinker KA**, Crespo-Medina M, Joye SB. “Changes in Microbial Activity in the Gulf of Mexico in Response to the BP Oil Spill.” State of North Carolina Undergraduate Research and Creativity Symposium (SNCURCS). Greenville, NC. November 2011.

**Tinker KA**, Crespo-Medina M, Joye SB. “Changes in Microbial Activity in the Gulf of Mexico in Response to the BP Oil Spill.” University of Georgia, Department of Microbiology Research Experience for Undergraduates (REU) Poster Session. Athens, GA. July 2011.

**Tinker KA** and Foegeding EA. “Casein as a Molecular Chaperone: The Ability of Casein to Control Protein Aggregation and Enzyme Activity.” North Carolina State University Undergraduate Research Symposium. Raleigh, NC. April 2011.

## **Professional Development:**

- Member of the University of Georgia’s Women in Science (WiSci) Organization, 2015-present
  - Treasurer, 2015-present
- Member of the University of Georgia’s Microbiology Graduate Student Association, 2012-present
  - Treasurer, 2014-2015
- Participant in the University of Georgia’s Department of Microbiology’s “Entering Mentoring” Workshop, Summer 2013
- Selected participant in University of Georgia’s Seeking Educational Equity and Diversity (SEED) Workshop, 2012-2013

## **Teaching Experience:**

**Microbiology and Health Care (MIBO2500L):** Fall 2015 & Spring 2016

Instructed six sections covering general laboratory techniques in experimental microbiology, with an emphasis on techniques relevant to health care fields. Responsibilities included writing concept checks, quizzes, and exams for the laboratory course.

## **Mentoring & Outreach:**

- **Teaching Assistant** (2015) and **Mentor** (2013, 2015) for the University of Georgia Summer REU in Prokaryotic Biology
- **Member** of the Upper Oconee Watershed Network (UOWN) Science and Monitoring Committee, 2013-2015
- **Certified Monitor** in the Georgia Adopt-A-Stream Program, Spring 2013

## **Honors and Awards:**

- Microbiology Graduate Student Association Award Recipient, 2016

- University of Georgia Ph.D. Scholar of Excellence, 2012-present
- Selected participant in North Carolina State University's College of Agriculture and Life Sciences Honors Program, 2009-2012
- Selected participant in North Carolina State University's University Scholars Program, 2008-2012

## **References:**

- Dr. Elizabeth Ottesen, Assistant Professor  
Department of Microbiology, University of Georgia  
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