

Christine (Chrissy) C. Spencer, Ph.D.

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Professional Appointments

Georgia Institute of Technology

Academic Professional (Teaching Faculty), School of Biology 2010 – present

Lees-McRae College

Assistant Professor, Biology 2008 – 2010

University of Toronto

Post-Doctoral Fellow, Department of Ecology and Evolutionary Biology 2006 – 2008

University of British Columbia

Post-Doctoral Fellow, Department of Zoology 2003 – 2006

Education

University of Georgia

Genetics

Ph.D. 2003

University of Louisiana, Lafayette

Biology

M.S. 1998

Earlham College

Biology

B.A. 1995

Courses Taught (Selected)

Biological Principles

Genetics Lab

Microbiology

PreHealth Biology 1 & 2

Honors Genetics Lab

Microbiology Lab

General Ecology

Math Models in Biology

TA Training

Genetics

Biomedical Ethics

Publications

Wang A, Sharp N, **Spencer CC**, Tedman KA, Agrawal AF. 2009. Selection, epistasis, and parent-of-origin effects on deleterious mutations across environments in *Drosophila melanogaster*. *American Naturalist*.

Spencer CC, Tyerman J, Bertrand M, Doebeli M. 2008. Adaptation increases the likelihood of diversification in an experimental bacterial lineage. *Proceedings of the National Academy Sciences* 105:1585–1589 (direct submission).

Tyerman J, **Spencer CC**, Bertrand M, & Doebeli M. 2008. Experimental demonstration of ecological character displacement in *Escherichia coli*. *BMC Evolutionary Biology* 8:34.

Le Gac M, Brazas M, Bertrand M, Tyerman J, **Spencer CC**, Hancock R, & Doebeli M. 2008. Metabolic changes associated with adaptive diversification in *Escherichia coli*. *Genetics* 178:1049–1060.

Spencer CC, Saxer G, Travisano M, Doebeli M. 2007. Seasonal resource oscillations maintain diversity in a dimorphic bacterial population. *Evolutionary Ecology Research* 9:775–787.

Spencer CC, Bertrand M, Travisano M, and Doebeli M. 2007. Adaptive diversification in genes regulating resource use in *Escherichia coli*. *PLoS Genetics* 3:e15. doi:10.1371.

Spencer CC, Promislow DEL (2005) Age-specific changes in epistatic effects on mortality rate in *Drosophila melanogaster*. *Journal of Heredity* 96:513–521.

Spencer CC, Howell CE, Wright AR, Promislow DEL (2003) Testing an 'aging gene' in long-lived *Drosophila* strains: Increased longevity depends on sex and genetic background. *Aging Cell* 2: 123.

Spencer CC, Neigel JE, Leberg PL (2000) Experimental evaluation of the usefulness of microsatellite DNA for detecting demographic bottlenecks. *Molecular Ecology* 9, 1517–1528.

Spencer CC, Chlan CA, Neigel JE, Scribner KT, Wooten MC, Leberg PL (1999) Polymorphic microsatellite markers in the western mosquitofish, *Gambusia affinis*. *Molecular Ecology* 8, 157–158.

Laerm J, Livingston G, **Spencer C**, Stuart B (1997) *Condylura cristata* (Insectivora: Talpidae) in the Blue Ridge Province of Western South Carolina. *Brimleyana* 24, 46–49.

Livingston PG, Stuart BL, **Spencer CC** (1995) Geographic distribution note on the range of *Desmognathus aeneus*. *Herpetological Review* 26, 207.

Meetings and Symposia (Selected)

- 2012 PKAL Atlanta Regional Network Fall Meeting, Spellman College, Atlanta, GA. Participant.
Tech Gets Medieval Symposium, Georgia Tech, Atlanta, GA. Talk.
Evolution Meeting 2012, Ottawa, ON, Canada. Poster Presentation.
Association for Biology Laboratory Education 2012 Conference, Chapel Hill, NC. Participant.
Southeast Summer Institute 2012, Athens, GA. Participant.
GTREET: Georgia Tech Retreat for Exploring Effective Teaching, Atlanta, GA. Participant.
- 2011 Meeting of the Hesburgh Fellows, Center for Teaching and Learning, Georgia Tech, Atlanta, GA. Panelist.
GTREET: Georgia Tech Retreat for Exploring Effective Teaching, Atlanta, GA. Participant.
PKAL Atlanta Regional Network Fall Meeting, Agnes Scott College, Decatur, GA. Participant.
MathBench Symposium and Workshop, Emory University, Atlanta, GA. Participant.
Genomic Approaches in BioSciences Workshop presented by the DNA Learning Center of Cold Spring Harbor Laboratory, Gwinnett Technical College, Lawrenceville, GA. Participant.
- 2010 PKAL Atlanta Regional Network Fall Meeting, Brenau University, Gainesville, GA. Participant.
Scholarship of Teaching and Learning Symposium, Georgia Southern, Statesboro, GA. Participant.

2009 Teaching and Laboratory Development, Lyman-Briggs College, Michigan State University, East Lansing, MI.
Appalachian College Association Quantitative Literacy Workshop, Emory and Henry College, Emory, VA. Participant.
Appalachian College Association Teaching and Learning Institute, Brevard College. Participant.
Gordon Research Conference: Microbial Population Biology, Andover, NH.

Synergistic Activities

Professional development

- Fellow, Southeast Summer Institute, Athens, GA. 2012
- Facilitator, Fundamentals of Scientific Teaching Workshops, Georgia Institute of Technology, 2013.
- Class of 1969 Teaching Scholar, Georgia Institute of Technology, 2011-2012.
- Grapes of Wrath Faculty Book Club (Co-facilitator). Georgia Tech. 2011–present.
- Scholarship of Teaching and Learning Symposium, Georgia Southern, Statesboro, GA. October 2010.
- Teaching and Laboratory Development, Lyman-Briggs College, Michigan State University, East Lansing, MI. January 2009.
- ACA Quantitative Literacy Workshop, Emory and Henry College, May 2009.
- ACA Teaching and Learning Institute, Brevard College, June 2009.
- Gordon Research Conference: Microbial Population Biology, Andover, NH, July 2009.

Curricular development

- Implemented video projects for Introductory Biology course (view videos at bio1510.biology.gatech.edu)
- developed project-based lab model system for Honor's Genetics Lab (BIO 2354) based on strains and ideas from my own research on experimental evolution in *E. coli*.
- developed inquiry-based labs for Genetics Lab (BIOL 2345) and a corresponding TA training curriculum to coach TA's to help their students make their own discoveries about the lab concepts
- promoted and developed a Concept Inventory Assessment for our undergraduate Genetics course

Professional Service

- Contractor, Pearson's Mastering Biology content. 20
- Reviewer, Introductory Biology Textbooks by Morris, Russell. 2011–present.
- Member, Introductory Biology Committee, School of Biology, Georgia Institute of Technology. 2011–present.
- Advisor, Pre-Veterinary Medical Association, School of Biology, Georgia Institute of Technology. 2010–present.
- Executive Board Member, Georgia Tech Academic Advising Network, , School of Biology, Georgia Institute of Technology. 2011–2013.