

Kelsey M. Hodge-Hanson

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Education

University of Georgia

Ph.D. Candidate in Microbiology

In Progress

University of Wisconsin-Madison

B.S. Natural Sciences, Microbiology major

Graduated May 2012

Research Experience

Graduate Student

Aug 2012- present

Advisor **Dr. Diana M. Downs**, Department of Microbiology, The University of Georgia

- Investigation of RidA superfamily of proteins that respond to endogenous stress caused by reactive nitrogen species in *Salmonella enterica*.

Undergraduate Independent Research

Aug 2009- May 2012

Advisor: **Dr. Jorge C. Escalante-Semerena**, Department of Bacteriology, UW-Madison

- Elucidated the pantothenate auxotrophy of *panM*- (formerly *yhhK*) strains of *S. enterica* and characterized PanM as a maturation factor of aspartate decarboxylase in *S. enterica*.

Undergraduate Research Scholars Program

Aug 2008- May 2009

Advisor **Dr. Robert D. Blank**, Department of Endocrinology, UW-Madison

- Investigated potential genes that determine bone strength in mice by examining short tandem repeats in the murine genetic code and the physical qualities of murine bones.
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Publications

Tara N. Stuecker, **Kelsey M. Hodge**, and Jorge C. Escalante-Semerena. The Missing Link in Coenzyme A Biosynthesis: PanM (formerly YhhK), a Yeast GCN5 Acetyltransferase Homolog Triggers Aspartate Decarboxylase (PanD) Maturation in *Salmonella enterica*. *Molecular Microbiology* (2012) May 84(4). Pages 608-619.

Posters

Kelsey M. Hodge and Diana M. Downs. "Characterizing a paralog of the RidA stress response protein," 2014 American Society for Microbiology Southeastern Branch Meeting.

Kelsey M. Hodge and Jorge C. Escalante-Semerena. "Pantothenate auxotrophy in a *yhhK* mutant in *Salmonella enterica*," 2010 Annual Undergraduate Research Symposium.

Kelsey M. Hodge and Robert D. Blank. "Genetic determinants of bone strength," 2009 Annual Undergraduate Research Symposium.

Awards and Honors

Honorable Mention	Spring 2014
National Science Foundation Graduate Research Fellowship Program	
Ph.D. Scholars of Excellence	Fall 2012
University of Georgia Graduate School	
Karl Leemkuil Memorial Award	Spring 2012
UW-Madison Dept. of Bacteriology award for excellence in undergraduate independent research	

Mentoring Experience

Research Experience for Undergraduates (REU) Mentor	Summer 2014
Mentored a student conducting a summer-long independent research project involving isolation and characterization of <i>Salmonella enterica</i> mutant strains that are resistant to the stress caused by accumulation of metabolites from the pyrimidine biosynthetic pathway.	
Independent Research Project Mentor	Spring 2014- present
Mentored a student conducting independent research for biochemistry course credit in investigating the metabolic networks of <i>Salmonella enterica</i> and methanogen <i>Methanococcus maripaludis</i> using a plasmid-based library containing <i>M. maripaludis</i> genes.	

Career Development

Microbiology 3500 Teaching Assistant	Fall 2014
Teaching assistant for introductory microbiology lecture course.	
Microbiology Graduate Student Association Recruitment Co-chair	2014- 2015
Responsible for planning and executing recruitment weekend for applicants to the UGA doctoral program in microbiology.	
PubSEED Database Training Workshop	Summer 2013
Completed training at the University of Florida to become a curator of the PubSEED database of genomes and gene annotations.	
American Society for Microbiology Member	2012- present

Leadership & Community Involvement

Leadership Without Limits/ Leadership Sin Limites	Summers 2013- present
Designed and led a laboratory experience for youth in the program designed for children of the Georgia Migrant Education Program.	
Association for Women In Science,	2012- 2013
Mentor and graduate student contact for undergraduate students in the biological sciences	
Ecotones	2012-2013
Member of the ecologically-minded a cappella group partnered with Upper Oconee County Watershed Network (UOWN)	
Expanding your Horizons	2009-2012
Group Leader at conference aimed at encouraging young women to achieve in STEM fields	
