

## Kayla Lea Bieser

Curriculum Vitae

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Ph.D.  
Department of Biology  
Nevada State College

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### EDUCATION

**University of Alabama at Birmingham**, Birmingham, AL

Ph.D., Biology, 2013

Dissertation Title: The Molecular Basis of Male Sex Determination during Temperature-Dependent Sex Determination

**Purdue University**, Fort Wayne, IN

MS, Biology, 2007

**University of St. Thomas**, St. Paul, MN

BA, Biology, 2004

### ACADEMIC APPOINTMENTS

2015- **Assistant Professor of Biology Tenure-Track**, Nevada State College, Henderson, NV

2013 – 2015 **Assistant Professor of Biology Tenure-Track**, Northland College, Ashland, WI

2008 – 2009 **Biology Instructor**, Jefferson State Community College, Birmingham, AL

2007 – 2008 **Visiting Assistant Professor of Biology**, Goshen College, Goshen, IN

### PUBLICATIONS

#### Published Manuscripts

**Bieser, K.** and T. Wibbels. 2014. Chronology, Magnitude, and Duration of Expression of Putative Sex Determining/Differentiation Genes in a Turtle with Temperature-Dependent Sex Determination. *Sexual Development* 8: 364-375.

**Bieser, K.**, Wibbels, T., Mourad, G., and F. Paladino. 2013. Cloning and expression analysis of *Lhx9* during gonadal sex differentiation in the red-eared slider turtle, *Trachemys scripta*, a species with temperature-dependent sex determination. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution* 320(4): 238-246.

#### Manuscripts in Preparation

**Bieser, K.** and T. Wibbels. Topical Application of Zebularine is an Effective Delivery Method in a Turtle with Temperature-Dependent Sex Determination. In preparation for the *Scientific Reports*.

Roberge, T., **Bieser, K.**, Wibbels, T., Marion, K., and D. Nelson. Experimental evaluation of hatchling sex ratios predicted for the main nesting beach for the diamondback terrapin, *Malaclemys terrapin*, in Alabama. In preparation for the *Journal of Experimental Zoology*.

## Published abstracts

\*Denotes student author

Corral, C\*, Gallios, W\*, White, R\*, and **Bieser, K.** 2017. Exploring Epigenetic Influences during Embryonic Development in a Turtle with TSD. International Sea Turtle Symposium.

Corral, C\*, Gallios, W\*, White, R\*, and **Bieser, K.** 2016. Exploring Epigenetic Influences during Embryonic Development in a Turtle with TSD. UNLV Undergraduate Student Research Showcase.

**Bieser, K.**, Ginnery, C\*, Roberge, T., and Wibbels, T. 2015. Exogenous 17 $\beta$ -estradiol disrupts gonadal differentiation in freshwater turtles exhibiting temperature-dependent sex determination. Joint Annual Meeting of the MN and WI Chapters of The Wildlife Society.

Roberge, T, **Bieser, K.**, and Wibbels, T. 2015. Exogenous 17 $\beta$ -estradiol disrupts gonadal differentiation in a turtle exhibiting temperature-dependent sex determination. Society for Integrative and Comparative Biology Annual Meeting.

**Bieser, K.** and T. Wibbels. 2013. The Influence of Zebularine, a DNA Methylation Inhibitor, on Embryonic Gene Expression in a Turtle with Temperature-Dependent Sex Determination. Alabama Academy of Science.

**Bieser, K.** and T. Wibbels. 2012. The influence of methylation and acetylation inhibitors on gonadal gene expression during the thermosensitive period in a turtle with temperature-dependent sex determination. Sixth International Symposium on Vertebrate Sex Determination.

**Bieser, K.** and T. Wibbels. 2012. Epigenetic influences of methylation inhibitors on *Dmrt1* expression in the red-eared slider turtle (*Trachemys scripta*). Fourth Annual Meeting for the Alabama Partners for Amphibian and Reptile Conservation.

**Bieser, K.** and T. Wibbels. 2011. DMRT1 as the potential male sex determining factor in reptiles with temperature-dependent sex determination. Society for Integrative and Comparative Biology Annual Meeting.

**Bieser, K.** and T. Wibbels. 2011. Expression analysis of a potential male sex determining factor in a turtle with temperature-dependent sex determination. Alabama Academy of Science.

**Wietgreffe, K.**, Mourad, G., and F. Paladino. 2009. Isolation and Partial Sequence Analysis of *Lhx9* in the red-eared slider turtle, *Trachemys scripta*, a species with temperature-dependent sex determination. Association of Southeastern Biologists Annual Meeting.

**Wietgreffe, K.**, Mourad, G., and F. Paladino. 2006 and 2007. Isolation and Partial Sequence Analysis of *Lhx9* in the red-eared slider turtle, *Trachemys scripta*, a species with temperature-dependent sex determination. American Society of Ichthyologists and Herpetologists Annual Meeting and the 27<sup>th</sup> Annual Sea Turtle Symposium Annual Meeting.

## Poster Presentations

\*Denotes student author

Miranda, K\*, Horning, D\*, Guervara, S\*, Kosh, J\*, Pinelo, D\*, Howerton, A, and **Bieser, K.** 2017. Optimization of Multiplex PCR for *Clostridium difficile* using genes: *tcdA*, *tcdB*, *cdtA* & *cdtB*, and *16S* rRNA. INBRE Undergraduate Research Symposium, NSC.

Heath, N\*, Vinci, S\*, **Bieser, K.**, and Howerton, A. 2017. Cultivation and Extraction of *Clostridium difficile* from Canine Fecal Samples. INBRE Conference UNLV; INBRE Undergraduate Research Symposium, NSC.

Corral, C\*, Gallios, W\*, White, R\*, and **Bieser, K.** 2017. Exploring Epigenetic Influences during Embryonic Development in a Turtle with TSD. International Sea Turtle Symposium.

Corral, C\*, Gallios, W\*, White, R\*, and **Bieser, K.** 2016. Exploring Epigenetic Influences during Embryonic Development in a Turtle with TSD. INBRE Conference Reno, NV; INBRE

Undergraduate Research Symposium, NSC; UNLV Undergraduate Student Research Showcase (took 3<sup>rd</sup> place); ACS-SNS Annual Poster Competition, NSC; Undergraduate Research Fair, NSC.

Corral, C\*, Gallios, W\*, White, R\*, and **Bieser, K.** 2016. Histological Methods to Examine Turtle Gonads upon Application of 17 $\beta$ -Estradiol. INBRE Undergraduate Research Symposium, NSC; Undergraduate Research Fair, NSC.

### Other Publications

Northland College Magazine. 2014. Turtles, Temperature, and Sex.

<http://issuu.com/northlandedu/docs/ncmagazinefall2014-web/1?e=2092018/9988094>

### GRANTS and AWARDS

2017	NIH INBRE Pilot Grant to examine <i>Clostridium difficile</i> in dogs - \$10,000
2017	NIH INBRE Mentor for NSC subaward
2016	NIH INBRE Pilot Grant to examine Epigenetics in TSD - \$10,000
2016	NIH INBRE Mentor for NSC subaward
2014	Three Parsonage Grants for Undergraduate Student Research
2014	Title III Curriculum Development Grant for Introductory Biology
2014	Title III Academic Technology Grant for developing Flipped Class
2014	Professional Development Funding for Travel to ISTS Conference
2013	First place paper Alabama Academy of Science
2012	Symposium on Vertebrate Sex Determination Travel Fellowship
2012	Evelyn M. and Harold C. Martin Endowed Travel Fund Grant
2011	Birmingham Audubon Society Walter F. Coxe Research Grant
2011	Alabama Academy of Science Research Grant
2011	First place poster Alabama Academy of Science
2011	SICB Charlotte Mangum Student Support Award
2011	UAB Graduate Student Association Travel Grant
2011	Best teaching scores for the Girls in Science and Engineering Day workshops
2010	Sigma Xi Grants-in-Aid of Research
2007	Sea Turtle Symposium Travel Grant

### TEACHING EXPERIENCE

2009 – 2013	University of Alabama at Birmingham, Birmingham, AL Introduction to Biology, Principles of Human Physiology, Vertebrate Zoology
2010 – 2012	Birmingham Southern College, Birmingham, AL Organismal Biology and Physiology
2011	Alabama Governor's School, Samford University, Birmingham, AL Field Biology, Instructor of Record
2007	Indiana-Purdue University, Fort Wayne, IN Introduction to Biology, Instructor of Record
2007	Brown Mackie College, Fort Wayne, IN Anatomy and Physiology, Instructor of Record
2006 – 2007	Ivy Tech Community College, Fort Wayne, IN Anatomy and Physiology, Instructor of Record

2004 – 2006 Indiana-Purdue University, Fort Wayne, IN  
Anatomy and Physiology

### **PROFESSIONAL MEMBERSHIP**

Association of American Colleges & Universities  
Alabama Partners for Amphibian and Reptile Conservation  
Gopher Tortoise Council  
Society of Integrative and Comparative Biology  
American Society of Ichthyologists and Herpetologists  
International Sea Turtle Society

### **SERVICE TO PROFESSION**

2015 Manuscript reviewer for *Scientific Reports*  
2013 Manuscript reviewer for *Gene*

### **DEPARTMENTAL/COLLEGE SERVICE**

2016 - NSC Faculty Senate member and chair of the ByLaws committee  
2015 Biology PTI search committee member - NSC  
2015 - Biology curriculum committee member - NSC  
2015 Psychology search committee member - NSC  
2014 - 2015 Faculty Council Vice President - Northland College  
2014 STEM Conference: Taught session on Introduction to Biotechnology and DNA  
Extraction – Northland College  
2010 & 2013 Judge, University of Alabama at Birmingham Undergraduate Honor’s Expo

### **EXTRACURRICULAR SERVICE**

2016 Oaxaca work group for science education in Mexico  
2014 Workshop on Amphibians at the Chequamegon Bay Birding and Nature Festival  
2010-2013 Co-Chair Alabama Chapter of Partners for Amphibian and Reptile Conservation  
2008-2013 Director of Education Alabama Reptile Rescue Sanctuary Birmingham, AL  
2011 Created histology training videos as an undergraduate teaching tool  
\*May be accessed through Facebook: Dr. Wibbels BY 398 Research  
2011 UAB Girls in Science Day, programs on genetics and reptiles  
2010 “Labs for Kids” Guest Lecturer on reptiles, Birmingham, AL

### **MENTORING**

2017 Kimberly Miranda, Daniel Horning, and Sophia Vinci Independent Study  
2017 Sophia Vinci, Daniel Horning, Nayomi, Daniel Pinelo, Kimberly Miranda, Sarai,  
and Jennifer Kosh INBRE Student Research  
2016 Cristien Corral, Whitney Gallios, and Rachael White INBRE Student Research  
and Independent Study  
2015 Sarah Woodie Independent Research Student

2014-2015 Caitlin Ginnery and Carolyn Malecha Undergraduate Capstone Research  
2009-2013 UAB undergraduates conducting histology and diamondback terrapin rearing  
2009-2013 Gaelle Gourmelon, Courtney Conch, Shara Blackwell UAB undergraduate  
Honor's and MS students