

## CURRICULUM VITAE

**Anne Roush Gaillard, Ph.D.**  
Department of Biological Sciences  
Sam Houston State University  
Huntsville, TX 77341-2116  
(936) 294-1549  
[argaillard@shsu.edu](mailto:argaillard@shsu.edu)

### EDUCATION

**Ph.D., Cell Biology** 2001  
Emory University, Atlanta, Georgia

Dissertation: "Characterization of A-Kinase Anchoring  
Proteins from *Chlamydomonas* Flagellar Axonemes"

**B.S., Genetic Biology** 1996  
Purdue University, West Lafayette, Indiana

### PROFESSIONAL EXPERIENCE

2004-present **Assistant Professor**, Department of Biological Sciences  
Sam Houston State University, Huntsville, Texas

2004 **Lecturer**, Department of Biology  
Texas A&M University, College Station, Texas

2001-2003 **Assistant Professor**, Department of Biology  
North Georgia College and State University, Dahlonega, Georgia

1998-1999 **Graduate Teaching Assistant**, Department of Biology  
Emory University, Atlanta, Georgia

1993-1996 **Undergraduate Teaching Assistant**  
Purdue University, West Lafayette, Indiana

## **MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

American Society for Cell Biology  
Sigma Xi Scientific Research Society  
Genetics Society of America  
Beta Beta Beta Biological Honor Society

## **GRANTS RECEIVED**

- Gaillard, A.R. 2008. A pharmacological study of protein kinase G (PKG) in flagellar motility of *Chlamydomonas*. SHSU Enhancement Grant for Research. \$17,840
- Randle, C.P., S. Bucheli, R. Deaton, A. Gaillard, and T. Primm. 2008. Genomics Educational Grant, Beckman-Coulter. \$50,000
- Loft, Brian M., Melinda A. Holt, and Anne R. Gaillard. 2007. Peers Enhancing their Education through Research and Scholarship (PEERS). National Science Foundation. \$599,980
- Gaillard, A.R. 2006. The characterization of PKG in cilia and flagella. SHSU Faculty Research Council. \$5,000
- Gaillard, A.R. 2006. Water toxicity of the Rio Grande basin (\$29,000). Contracted from J.K. Williams and W.I. Lutterschmidt (PI's), Land use practices and its effect on ecosystem dynamics along the Rio Grande. Sustainable Agricultural Water Conservation, USDA-CSREES grant. \$156,000.
- Gaillard, A.R. 2005. Characterization of a cGMP-dependent protein kinase from *Chlamydomonas* flagellar axonemes. Texas Excellence Fund. \$15,000

## **GRANTS PENDING**

- Gaillard, A.R. 2009. Analysis of a cGMP-dependent protein kinase (PKG) signaling complex in a *Chlamydomonas* model of ciliary structure and function. National Institutes of Health R-15. \$125,000

## **GRANTS SUBMITTED BUT NOT FUNDED**

- Gaillard, A.R. 2007. Characterization of a PKG protein complex in the motility of *Chlamydomonas* flagella. Advanced Research Program, Texas Higher Education Coordinating Board. \$50,540.

## AWARDS AND HONORS

<b>Invited Speaker</b> , International Conference on the Cell and Molecular Biology of <i>Chlamydomonas</i> Hyères-les-Palmiers, France	2008
<b>Who's Who Among America's Teachers</b>	2007
<b>Invited Speaker</b> , American Society for Cell Biology Conference San Francisco, California	2000
<b>Invited Speaker</b> , International Conference on the Cell and Molecular Biology of <i>Chlamydomonas</i> Amsterdam, The Netherlands	2000
<b>Genetics Society of America Travel Award</b> , International Conference on the Cell and Molecular Biology of <i>Chlamydomonas</i>	2000
<b>American Society for Cell Biology Travel Award</b> , American Society for Cell Biology Conference	1998

## REFEREED PUBLICATIONS

\* denotes undergraduate authors

- Wirschell, M., F. Zhao\*, C. Yang, P. Yang, D. Diener, A.R. Gaillard, J. L. Rosenbaum, and W. S. Sale. 2008. Building a radial spoke: flagellar radial spoke protein 3 is a dimer. *Cell Motility and the Cytoskeleton*. 65: 238-248.
- Gaillard, A.R., L.A. Fox, J.M. Rhea\*, B. Craige, and W.S. Sale. 2006. Disruption of the A-kinase anchoring domain in flagellar radial spoke protein 3 results in unregulated axonemal PKA activity and abnormal flagellar motility. *Molecular Biology of the Cell*. 17: 2626-2635.
- Gaillard, A. Roush, D. Diener, J. Rosenbaum, and W. Sale. 2001. Radial spoke protein 3 is an A-kinase anchoring protein (AKAP). *Journal of Cell Biology*. 153: 443-448.
- Roush, A., M. Suarez, E.C. Friedberg, M. Radman, and W. Siede. 1998. Deletion of the *Saccharomyces cerevisiae* gene RAD29 encoding an *Escherichia coli* *dinB* homolog confers UV radiation sensitivity and altered mutability. *Molecular and General Genetics*. 257: 686-692.

## SELECTED PROFESSIONAL PRESENTATIONS

\* denotes undergraduate authors

Victoria Alfaro\*, Joshua D. Farthing\*, Ashley D. Solmonson\*, Vincent Maresca\*, Crystal Liles\*, and Anne R. Gaillard. Phenotypic Analysis of a *Chlamydomonas reinhardtii* Double Mutant. Beta Beta Beta Regional Conference, Lake Texoma, OK, April 2009.

Shakila K. Evans\*, Todd P. Primm, and Anne R. Gaillard. Acetophenones Inhibit Phototaxis in *Chlamydomonas reinhardtii*. Beta Beta Beta Regional Conference, Lake Texoma, OK, April 2009.

Joshua D. Farthing\*, Ashley D. Solmonson\*, and Anne R. Gaillard. cAMP-Dependent Protein Kinase (PKA) Signaling in *Chlamydomonas* Flagellar Axonemes. Beta Beta Beta Regional Conference, Lake Texoma, OK, April 2009.

Terah L. McClendon, Aurora M. Nedelcu, and Anne R. Gaillard. Analysis of Programmed Cell Death in *Chlamydomonas reinhardtii*. Beta Beta Beta Regional Conference, Lake Texoma, OK, April 2009.

Shakila K. Evans\* and Anne R. Gaillard. Testing acetophenones as novel inhibitors of flagellar motility in *Chlamydomonas reinhardtii*. Texas Branch Meeting of the American Society for Microbiology, New Braunfels, TX, March 2009.

Joshua Farthing\*, Ashley Solmonson\*, Vincent Maresca\*, and Anne R. Gaillard. Analysis of a cAMP-dependent protein kinase (PKA) signaling pathway in *Chlamydomonas* flagella. Texas Branch Meeting of the American Society for Microbiology, New Braunfels, TX, March 2009.

Shakila K. Evans\*, Prudence Ibezim\*, Todd P. Primm, and Anne R. Gaillard. Phototaxis-based screening of acetophenones as novel inhibitors of flagellar motility in *Chlamydomonas reinhardtii*. Texas and South Central Branch Meeting of the American Society of Microbiology, Austin, TX, November 2008.

Joshua D. Farthing\*, Vince Maresca\*, and Anne R. Gaillard. Dissection of a protein kinase A (PKA)-mediated signaling pathway in *Chlamydomonas reinhardtii* flagella. Texas and South Central Branch Meeting of the American Society of Microbiology, Austin, TX, November 2008.

Terah L. McClendon\* and Anne R. Gaillard. Pharmacological analysis of cGMP-dependent protein kinase (PKG) inhibition on flagellar motility. Texas and South Central Branch Meeting of the American Society of Microbiology, Austin, TX, November 2008.

Belen-Rivera, J., A. Solmonson\*, V. Maresca\*, T. McClendon\*, J. Farthing\*, V. Alfaro\*, and A.R. Gaillard. Dissection of cyclic nucleotide signaling pathways in flagellar axonemes of *Chlamydomonas*. EMBO Workshop on the Cell and Molecular Biology of *Chlamydomonas*, Hyères-les-Palmiers, France, May 2008.

Williams, J. K., A. Gaillard, C. Hargrave, and W. I. Lutterschmidt. Multi-variant analysis of invasive plants and land condition on the biodiversity of fish assemblages with the Rio Grande. Southwestern Association of Naturalists, Memphis, TN, April 2008.

Belen-Rivera, J., B. Verhalen\*, A.D. Solmonson\*, and A.R. Gaillard. Biochemical analysis of an axonemal cGMP-dependent protein kinase (PKG) in *Chlamydomonas reinhardtii*. Texas Branch Meeting of the American Society of Microbiology, New Braunfels, TX, March 2008.

Farthing, J.\*, A. Solmonson\*, V. Maresca\*, and A.R. Gaillard. Motility analysis of a *Chlamydomonas reinhardtii* double mutant. Texas Branch Meeting of the American Society of Microbiology, New Braunfels, TX, March 2008.

Belen-Rivera, J., B. Verhalen\*, A.D. Solmonson\*, and A.R. Gaillard. Characterization of an axonemal cGMP-dependent protein kinase (PKG) in *Chlamydomonas reinhardtii*. 47<sup>th</sup> Annual Meeting of the American Society for Cell Biology, Washington, DC, December 2007.

Williams, J. K., A.R. Gaillard and W. I. Lutterschmidt. Effects of invasive plants on the biodiversity of fish assemblages with the Rio Grande. Invasive Plants of Texas Conference, Lady Bird Wildflower Research Center, TX, November 2007.

Williams, J. K., A.R. Gaillard and W. I. Lutterschmidt. Land use practices and its effect on ecosystem dynamics along the Rio Grande. SAWC Conference, South Padre Island, TX, May 2007.

Solmonson, A.D.\* Verhalen, B.\*, and A.R. Gaillard. Biochemical Characterization of cGMP-dependent Protein Kinase (PKG) in *Chlamydomonas reinhardtii* flagellar axonemes. Beta Beta Beta Regional Conference, Lake Texoma, OK, March 2007.

Verhalen, B.\*, A.D. Solmonson\*, and A.R. Gaillard. The flagellar axoneme of *Chlamydomonas* contains a cGMP-dependent protein kinase (PKG) that regulates axonemal motility. 12<sup>th</sup> International Conference on the Cell and Molecular Biology of *Chlamydomonas*, Portland, OR, May 2006.

Verhalen, B.\* and A.R. Gaillard. The *Chlamydomonas* flagellar axoneme contains a cGMP-dependent protein kinase that regulates axonemal motility. 45<sup>th</sup> Annual Meeting of the American Society for Cell Biology, San Francisco, CA, December 2005.

Wirschell, M., F. Zhao\*, D. Diener, A.R. Gaillard, C. Yang, P. Yang, J. Rosenbaum, W. S. Sale. The flagellar A-Kinase Anchoring Protein, RSP3, is a Dimer. 45<sup>th</sup> Annual Meeting of the American Society for Cell Biology, San Francisco, CA, December 2005.

Gaillard, A.R., J.M. Rhea\*, M. Shaw, and W.S. Sale. RSP3-anchoring of PKA in *Chlamydomonas* axonemes is required for the regulation of PKA activity and normal flagellar motility. 43<sup>rd</sup> Annual Meeting of the American Society for Cell Biology. San Francisco, CA, December, 2003.

Rhea, J.M.\* and A.R. Gaillard. PKI restores motility to *Chlamydomonas* cells defective in a flagellar AKAP. Georgia Academy of Science Annual Meeting, Waleska, GA, 2003.

Gaillard, A.R., J.M. Rhea\*, and W.S. Sale. Anchoring of axonemal PKA is required for regulation of flagellar motility in *Chlamydomonas*. 42<sup>nd</sup> Annual Meeting of the American Society for Cell Biology, San Francisco, CA, December, 2002.

### **Undergraduate Lab Members (past and present)**

Jeanne Rhea	Ph.D. Program in Genetics, University of Georgia
Brandy Verhalen	Ph.D. Program in Cell and Developmental Biology, SUNY Upstate
Ashley Solmonson	Laboratory Research Technician, University of Minnesota
Vince Maresca	Employed by Kelly Scientific
Brenda Gutierrez	
Joshua Farthing	
Terah McClendon	M.S. Program in Biology, SHSU
Prudence Ibezim	
Sonia Gonzales	
Crystal Liles	
Victoria Alfaro	
Simon Christie	University of Florida, Law School
Shakila Evans	

### **Graduate Lab Members (past and present)**

Jessica Belen-Rivera	Employed by Lexicon Pharmaceuticals
Terah McClendon	

Travis Hardcastle