

# CURRICULUM VITAE

## LAINY BAIRD DAY

Dept. of Biology, University of Mississippi  
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### EDUCATION

- 1999 PhD University of Texas, Austin Behavioral Neuroscience  
Advisors: Walter Wilczynski & David Crews
- 1994 MA University of Texas, Austin Cognition and Perception  
Advisor: Peter MacNeillage
- 1992 BA New College of Florida Evolutionary Psychology  
Advisor: David Smillie

### PROFESSIONAL EXPERIENCE

- 2006 - Assistant Professor Biology Department  
2010 - Neuroscience Minor Director University of Mississippi
- 2004 - 2006 Postdoctoral Fellow (2004) Dept. of Physiological Science  
Research Associate (2005) University of California, Los Angeles  
Advisor: Barney Schlinger
- 1999 – 2004 Postdoctoral Fellow Depts. of Psychology and Ecology and Evolution  
University of California, Santa Barbara  
Advisor: John Endler and Deborah Olster

### RESEARCH FUNDING

- 2011-2012 Univ. of Mississippi, College of Liberal Arts Summer Research Grant \$7500  
“Investigating estrogen effects on motor and cognitive recovery after cerebellar lesions” PI.
- 2010-2012 NSF, Course Curriculum and Learning Improvement Grant \$199,674 “Class  
Generated Community Clicker Cases: testing a novel pedagogic approach  
connecting science and non-major students in large introductory biology classes”  
Senior Personnel, Tamar Goulet PI.
- 2007-2011 NSF \$300,000 “Hormonal Control of an Avian Neuromuscular System” Significant  
Contributor, PI Barney Schlinger.
- 2010-2011 Univ. of Mississippi, College of Liberal Arts Summer Research Grant \$7500 “The  
Role of Estrogen in Recovery of Function after Cerebellar Lesions” PI.
- 2008 NIH Centers of Research Excellence in Natural Products Neuroscience \$11,682  
“Behavioral Neuroscience (Research Core D) representative”. Funding to set up  
cognitive tasks in Core D.

- 2008-2009 Univ. of Mississippi College of Liberal Arts Summer Research Grant \$7200 "Neural and Endocrine Basis of Acrobatic Sexual Display in Manakins" PI.
- 2007-2008 Univ. of Mississippi Office of Research and Sponsored Programs, Faculty Research Program Grant \$7495 "The Role of Hormones in Recovery of Function Neural Protection, and Neurogenesis after Cerebellar Lesions in Zebra Finch"
- 2007 Univ. of Mississippi Office of the Provost, \$10,000. Utilizing the Vicon Bodybuilder Suite to Develop 3D Movement Models in Human and Animal Populations. Co-PI. Dwight Waddell PI.
- 2001 – 2004 NSF \$305,892 "Visual Signal Design, Perception and Mating Success in Bowerbirds", co-written and developed with PI, John Endler.
- 1999 - 2002 NIH Postdoctoral National Research Service Award \$89,868 "Perceptual and Neural Aspects of Visual Displays" PI.
- 1997 - 1999 NIH Predoctoral National Research Service Award ~\$69,000, "Medial Cortex Function and Foraging Strategy in Lizards" PI.

### **RESEARCH FUNDING: PENDING AND UNFUNDED**

- 2011 NSF, Transforming Undergraduate Education in STEM \$199,999 "Evolution in Education: A Top Down Approach To Fundamentally Improving Science Education" PI. Pending.
- 2011 NSF \$762,584 "Cerebellar Specializations for Non-Vocal Avian Courtship Displays" PI. Pending.
- 2011 American Association of University Women \$6491 "Artistic Visions of Science: A Summer Camp to Empower Girls in the Sciences" PI.
- 2010 NSF, CAREER \$1,036,125 "Cerebellar Specializations for Non-Vocal Avian Courtship Displays" PI.
- 2010 NSF, Major Research Instrumentation \$226,316 "Acquisition of Integrated Tools to Bridge the Divide from Populations, to Proteins, to Genes" PI.
- 2010 Office of Research and Sponsored Programs, Teaching mini-grant, Univ. of Mississippi \$1000 "Evolution in Education: Using Science Lesson Plan Development as A Bridge between Education Students and Science Students" PI.
- 2009 NSF, CAREER \$852,839 "The Role of the Cerebellum in Non-Vocal Avian Courtship Displays: Ultimate and Proximate Perspectives" PI.
- 2009 Office of Research and Sponsored Programs, Teaching mini-grant, Univ. of Mississippi \$1000 Novel Methods for Development of Lesson Plans and Groundwork to Formulate a Research Study Comparing the Success of Hands-On Lessons to Virtual Lessons PI.
- 2008 NSF, CAREER \$609,441 "The Role of the Cerebellum in Non-Vocal Avian Courtship Displays: Ultimate and Proximate Perspectives" PI.
- 2007 Sloan Research Fellowship, Nominated by Barney Schlinger, John A. Endler, and Walter Wilczynski.
- 2007 Searle Scholars Program, Chicago, IL. Concept paper solicitation. The Role of Hormones in Recovery of Function Neural Protection, and Neurogenesis after Cerebellar Lesions.

**STUDENT RESEARCH FUNDING**

- 2011 NIH-NCRR, MS-IDeA Network of Biomedical Research Excellence \$ 4000 “The Effects Of Estrogen Versus Phytoestrogen On Spatial Learning In Zebra Finches” Megumi Mathis.
- 2010 Univ. of Mississippi, Division of Student Life, Student Development Grant, \$300, Awarded to present at the Society for Neuroscience meeting, Brittany Simpson
- 2009 NIH-NCRR, MS Functional Genomics Research Network \$ 4000 “The Role of Estrogen in Recovery of Motor Function after Cerebellar Lesions in Zebra Finch” Joshua Hamer.
- 2009 NIH-NCRR, MS Functional Genomics Research Network \$ 4000 “The Role of Estrogen in Recovery of Spatial Function after Cerebellar Lesions in Zebra Finch” Gerald Stinson.
- 2009 University of Mississippi, Division of Student Life, Student Development Grant, \$300, Awarded to present at the Society for Neuroscience meeting, Gerald Stinson.
- 2009 University of Mississippi, Biology Department, Shoemaker Award, Meritorious and Need Based Tuition Waiver, Gerald Stinson.
- 2009 NIH-COBRE: Natural Products Research Summer Undergraduate Research Program \$4000, Brittany Simpson.
- 2008 NIH-NCRR, MS Functional Genomics Research Network \$ 4000 “The Role of Estrogen in Recovery of Function after Cerebellar Lesions in Zebra Finch” Joshua Hamer.

**FELLOWSHIPS, AWARDS AND HONORS**

- 2010 Univ. of Mississippi Office of Research and Sponsored Programs, Travel Award \$1500 “Society for Neuroscience”.
- 2009 Univ. of Mississippi Office of Research and Sponsored Programs, Travel Award \$500. Travel to Society for Neuroscience Meeting, Chicago.
- 2009 Univ. of Mississippi Office of Research and Sponsored Programs, Travel Award \$750. Fieldwork and Field course in Panama.
- 2008 Univ. of Mississippi Office of Research and Sponsored Programs, Travel Award \$1500. Fieldwork in Panama.
- 2007 Univ. of Mississippi Office of Research and Sponsored Programs, Travel Award \$1000. Society for Neuroscience Meeting, San Diego.
- 2007 Univ. of Mississippi Office of Research and Sponsored Programs, Travel Award \$1200. Attend Society for Behavioral Neuroendocrinology, Asilomar, Visit Collaborators.
- 2006 Univ. of Mississippi Office of Research and Sponsored Programs, Travel Award, \$1500. Fieldwork in Panama.
- 2002 Travel and Registration Award for Karger Symposium Speaker
- 1996 - 1998 National Institute of Mental Health Predoctoral Training Grant, Univ. of Texas

- 1996 - 1999 University of Texas Tuition Fellowship  
 1995 University of Texas Research Institute Grant, \$1000, with Walter Wilczynski  
 1991 New College Travel Grant  
 1988 - 1992 New College Foundation Scholarship

## **PUBLICATIONS** (\*students)

### ***Refereed manuscripts***

- Day LB**, Hernandez E\*, Feng H\*, Brensinger J\*, Wilkening SR\*, Schlinger BE. The Role of Testosterone and its Metabolites in Activation of the Courtship Display of Golden-Collard Manakins (*Manacus vitellinus*). Submitted to *Hormones and Behavior*, declined. In revision for resubmission.
- Bodony DJ, Kharon A, Swenson GW, Wikelski M, **Day LB**, Fusani L, Schlinger BA. On the Sonation Mechanism of the Golden-Collared Manakin (*Manacus vitellinus*). Submitted to *Journal of the Royal Society: Interface*, in revision for resubmission.
- Day LB**, Fusani L, Kim C\*, Schlinger BE 2011. Sexually dimorphic neural phenotypes in golden-collared manakins (*Manacus vitellinus*). *Brain, Behavior and Evolution*, 77(3), 77-90.
- Feng N\*, Katz A, **Day LB**, Schlinger BA. Limb Muscles are androgen targets in an acrobatic tropical bird. *Endocrinology*, 151(3), 1042-1049.
- Kunstner A, Wolf JB, Backstrom N, Whitney O, Balakrishnan CN, **Day LB**, et al. 2010. Comparative genomics based on massive parallel transcriptome sequencing reveals patterns of substitution and selection across 10 bird species. *Molecular Ecology*, 19 Suppl 1, 266-276.
- Vaka SRK\*, Sammeta SM\*, **Day LB** & Murthy SN 2009. Delivery of nerve growth factor to brain via intranasal administration and enhancement of brain uptake. *Journal of Pharmaceutical Sciences*, 98(10), 3640-3646.
- Spence RD\*, Zhen Y\*, White S, Schlinger BA & **Day LB** 2009. Recovery of motor and cognitive function after cerebellar lesions in a songbird role of estrogens. *European Journal of Neuroscience*, 29, 1225-1234.
- Vaka SRK\*, Sammeta SM\*, **Day LB** & Murthy SN 2008. Transcorneal iontophoresis for delivery of ciprofloxacin hydrochloride. *Current Eye Research*, 33(8), 661-667.
- Schlinger BA, **Day LB**, & Fusani L. 2008. Natural history, behavior and neuroendocrinology of a tropical bird. *General and Comparative Endocrinology*. 157(3), 254-258.
- Day LB**, Guerra M\*, Schlinger BA, Rothstein SI 2008. Sex differences in the effects of captivity on hippocampus size in brown-headed cowbirds (*Molothrus ater obscurus*). *Behavioral Neuroscience*, 122(3), 527-534.
- Schlinger BA, Fusani L, & **Day LB** 2008. Hormonal control of courtship in male golden collared manakins (*Manacus vitellinus*). *Ornitologia Neotropical*, 19 (Suppl.), 229-239.
- Peterson RS\*, Fernando G, **Day L**, Allen TA, Chapleau JD, Menjivar J, Schlinger BA, Lee DW 2007. Aromatase expression and cell proliferation following injury of the adult zebra finch hippocampus. *Developmental Neurobiology*, 67(14), 1867-1878.

- Fusani L, Giordano M\*, **Day LB**, Schlinger BA 2007. High-speed video analysis reveals individual variability in the courtship displays of male Golden-collared manakins. *Ethology*, 113, 964-972.
- Fusani L, **Day LB**, Canoine V, Reinemann D\*, Hernandez E\*, Schlinger BA 2007. Androgen and the elaborate courtship behavior of a tropical lekking bird. *Hormones and Behavior*, 51, 62-68.
- Day LB**, Fusani L, Hernandez E\*, Billo TJ\*, Sheldon KS, Wise PM, Schlinger BA 2007. Testosterone and its effects on courtship in Golden-Collared Manakins (*Manacus vitellinus*): Seasonal, sex, and age differences. *Hormones and Behavior*, 51, 69-76.
- Endler, JA and **Day LB** 2006. Ornament colour selection, visual contrast, and the shape of colour preference functions in great bowerbirds (*Chlamydera nuchalis*). *Animal Behavior*, 72, 1405-1416.
- Day LB**, McBroom JT\*, Schlinger BA 2006. Testosterone increases display behaviors but does not stimulate growth of adult plumage in male golden-collared manakins (*Manacus vitellinus*). *Hormones and Behavior*, 49, 223-232.
- Day LB**, Westcott DA & Olster DH 2005. Evolution of bower complexity and cerebellum size in bowerbirds. *Brain, Behavior and Evolution*, 66, 62-72.
- Day LB**, Ismail N\* & Wilczynski W 2003. Use of position and feature cues in discrimination learning by the lizard *Cnemidophorus inornatus*. *Journal of Comparative Psychology*, 117, 440-448.
- Day LB** 2003. The importance of hippocampal-dependent non-spatial tasks in analyses of homology and homoplasy. *Brain, Behavior and Evolution*, 62, 96-107.
- Day LB**, Crews D & Wilczynski W 2001. Effects of medial and dorsal cortex lesions on spatial memory in lizards. *Behavioural Brain Research*, 118 (1), 27-42.
- Bilbo S\*, **Day LB** & Wilczynski W 2000. The effects of anticholinergics on a visual and hidden platform analog of the Morris water task in frogs. *Physiology and Behavior*, 69(3), 351-357.
- Day LB**, Crews D & Wilczynski W 1999. Relative medial and dorsal cortex volume in relation to foraging strategy in congeneric lizards. *Brain, Behavior and Evolution*, 54, 314-322.
- Day LB**, Crews D & Wilczynski W 1999. Spatial and reversal learning in congeneric lizards with different foraging strategies. *Animal Behaviour*, 57, 395-407.
- Day LB**, Weisend M, Sutherland RJ & Schallert T 1999. The hippocampus is not necessary for a place response but may be necessary for pliancy. *Behavioral Neuroscience*, 133(5), 914-924.
- Day EB** & MacNeilage PF 1996. Limb preference and cerebral hemispheric specializations. *Journal of Comparative Psychology*, 110(1), 88-96.
- Day LB** & Schallert T 1996. Anticholinergic effects on place learning in the Morris Water Task: Spatial mapping deficit or inability to inhibit nonplace strategies. *Behavioral Neuroscience*, 110(5), 998-1005.

### ***Non-refereed publications***

- Powers AS and **Day LB** 2003. Perspectives on the evolution of cognition. Karger Symposium Special Issue. *Brain, Behavior and Evolution*, 62.

**Day EB** 1999. Medial and dorsal cortex function and foraging strategy in lizards. Ph.D. dissertation, The University of Texas at Austin.

**Day EB** 1994. Limb preference and cerebral hemispheric specializations. MA Theses. The University of Texas at Austin.

### ***Popular press coverage***

Wolpert S 2011. "The spectacular courtship dance of a tiny bird"  
[http://www.usnews.com/mobile/articles\\_mobile/the-spectacular-courtship-dance-of-a-tiny-bird](http://www.usnews.com/mobile/articles_mobile/the-spectacular-courtship-dance-of-a-tiny-bird).

Dolittle 2011. "Athletic courtship in birds" Life Lines: A Podcast of the American Physiological Society. [http://scienceblogs.com/lifelines/2011/03/post\\_1.php](http://scienceblogs.com/lifelines/2011/03/post_1.php)

Basskiller 2004. Post of "Limb muscles are androgen targets in an Acrobatic Tropical Bird"  
<http://www.worldclassbodybuilding.com/forums/f225/limb-muscles-are-androgen-targets-in-an-acrobatic-tropical-bird-72055/>

Shields J 2000. "Bachelor pads for the birds". James Cook University Publications.

Australian Broadcasting Company 2000. Radio news report on color choice in great bowerbirds.

## **TEACHING EXPERIENCE AND MENTORSHIP**

### ***University of Mississippi (Teaching Load is Three Courses a Year)***

#### *Graduate-Undergraduate Courses*

Sp07, Sp08, F 9, Sp10    Advanced Neuroscience: Lecture and Journal Reading/ Presentation/ Discussion course covering basic and current research in neuroscience

F07, S09                    Functional Neuroanatomy: Architectural and functional organization of the vertebrate nervous system.

Sp 2010                    Microtechniques: Theory and practice of histological techniques including methods for fixation, processing, and labeling of cell types, proteins and enzymes and application of these skills to research.

#### *Undergraduate Courses*

Su09, F07, F08            Introductory Neuroscience: comparative approach to understand how the nervous system has evolved to guide animal behavior.

F08, Sp09, F10, F10      Inquiry Into Life Human Biology: Basic human bodily functions and how biology relates to health.

#### *Additional Teaching*

Su 09                        Field course for high-school students taught in Gamboa, Panama.

#### *Advising*

The Department of Biology has no undergraduate advisor. Each professor advises ~30 undergraduates every semester.

### ***Prior to University of Mississippi Appointment***

Dec 2000,'01            Guest Lecturer: Field Biology and Animal Adaptation, James Cook University, Townsville, Queensland, AUS

- Oct 2000,'01,'03 Guest Lecturer: Tropical Australian Herpetology, James Cook University, Townsville, Queensland, AUS.
- Spring 1998 Assistant Instructor: Biopsychology, Univ. of Texas, Austin
- 1993 - 1998 Undergraduate Research Courses: Univ. of Texas, Austin  
Advised over 40 undergraduates individually or in small groups.
- 1992 – 1997 Teaching Assistant, Univ. of Texas, Austin, 13 Semesters

### ***Ph.D. Student***

- Current Amy Hribar, Ph.D. candidate. Department of Biology, University of Mississippi. “The role of the cerebellum in observational learning.”

### ***Master’s Students***

- Current Madeline Coltharp, MS candidate, Department of Biology, University of Mississippi. “The role of estrogen replacement therapy in cognitive and motor improvements in post-menopausal women.”
- Current Jack Pement, MS candidate, Department of Biology, University of Mississippi. “The role of the amygdala in long-term memory.”
- 2011 Steven Wilkening, M.S. Department of Biology, University of Mississippi. “Avian cerebellum specialization in relation to acrobatic courtship displays in manakins (Pipridae).”

### ***Honors Thesis Advised***

- 2011 Brittany Simpson, Department of Biology, University of Mississippi “Effects Of Anticholinergics And Cholinergic Enhancers On Spatial Learning And Locomotion In Mice.”
- 2011 Matthew DiGuisto, Department of Biology, University of Mississippi “The Role of the Cerebellum in the Zebra Finch Song Circuit.”
- 2010 Gerald Stinson, Department of Biology, University of Mississippi “Effects of estrogen on recovery of spatial function after cerebellar lesion.”
- 2006 Estefanía Hernández, Department of Biology, Universidad de Panama, Panama “The Effects of vasotocin and vasotocin antagonist on manakin display behavior”.
- 1998 Staci Bilbo, Department of Psychology, University of Texas at Austin “Effects of anticholinergics in frogs.”

### ***Graduate Committees***

- Current Hoda M. Gebril, Ph.D. Department of Biology, University of Mississippi, Not yet determined.
- Current Christi Brewer Ph.D. Department of Exercise Science, University of Mississippi “The Effects of Chronic Prophylactic Naproxen Sodium on Skeletal Muscle Adaptation to Resistance Exercise in Recreationally-Trained College- Aged Males.”
- Current Harry Speaker, Ph. D. Experimental Psychology, University of Mississippi “The effects of specific types of environmental enrichment on neurochemical measures in the mature rat after high-dose methamphetamine.”
- 2007 Amanda Melton, Ph.D. Clinical Psychology, University of Mississippi “Influence of COMT Gene Variant on Working Memory in Survivors of Childhood Brain

Tumors.”

***Undergraduate Research Advisor****University of Mississippi*

Su11	Jacob Elrod	Effects of estrogen on recovery of spatial and motor functions after cerebellar lesions
Su11	Clotha Taylor	Effects of estrogen on recovery of spatial and motor functions after cerebellar lesions, The McNair Scholar
Sp10, F10-Su11	Megumi Mathis	A comparison of the effects of estrogen and phytoestrogens on spatial learning in zebra finch, MS Idea Network of Biomedical Research Scholar
Sp10-Sp11	Diarrria Williams	Sex differences in action of cholinergic antagonists on spatial learning in zebra finch, Increasing Minority Access to Graduate Education Scholar
F09-Sp 11	Matthew DiGuisto	The role of the cerebellum in zebra finch song production.
F09-Su10 Su09, F09	Patrick Ayers Brittany Simpson	The distribution of aromatase in the manakin brain The effects of cholinergic enhancers and antagonist on spatial ability in mice
Su09-Sp10	John Ball	Species differences in cerebellar size related to mating complexity in manakins
Sp09, Su09	William Sobecki	Use of Dartfish software to track motor deficits in zebra finches
Su09	Jed Brensinger	Field Assistant in Panama, Gwynedd-Mercy College student
Sp09, F09, Sp10	Madeline Coltharp	The effects of cholinergic enhancers and antagonist on spatial ability in zebra finches
Sp09- F09	Nathan Parrott	Use of Dartfish software to measure escape patterns of birds in the “day escape maze”
Sp09-Su09 Su08-F09	Richard Tramel Gerald Stinson	Mouse strain differences in the Morris water maze Effects of estrogen on recovery of spatial function after cerebellar lesions, MS Functional Genomics Network Scholar
Su 08 Su08, Su09-Sp10	Sonja Gaessler Josh Hamer	Field Assistant in Panama, German volunteer Effects of estrogen on recovery of motor function after cerebellar lesions, MS Functional Genomics Network Scholar, Summer Research Institute for Undergraduates
Su07, F08 F07-Su08	Aaron Pool Amber Hancock	Effects of cerebellar lesions on spatial and motor task Neuroprotective and neurogenerative effects of estrogen in the cerebellum
Su08 F07, Sp08 Su07-F07 Su07 Su07	Jorge Herrera Asheley Emerson Geoffrey Kennedy Amanda Denton Amarachi Imediogwu	Field assistant in Panama, Panamanian volunteer Development of spatial and motor task for zebra finches Development of spatial and motor task for zebra finches Web-based neuroethology lesson plans Antibodies for detection of cell type in cerebellum, Summer Research Institute for Undergraduates



Sp07	Chelsea Campbell	Manakin Population Survey
Sp07-F07	Bobby Tullos	Sex differences in manakin entopallium
Sp07, F07	Hillary Taylor	Effect of steroid hormones on manakin displays

*University of California Los Angeles*

W06-Su08	Ni Feng	Neural distribution of sex steroids in manakins
W06-Su06	Jason G. Fuhrman	Sex differences in manakin mvl
F05, W05, Sp06	Marjorie Guerra	Brain sex differences in cowbirds
F05, W05, Sp06	Carol Kim	Sex differences in manakin archstriatum
F05, W05, Sp06	Crystal Tseng	Neural distribution of side chain cleavage and vasotocin in manakins

*University of California Santa Barbara*

Su01, F02	Thomas Pilsbury	Neural correlates of bowerbuilding
Sp01, Su01	Zoe Lieberman	Age-related changes in cowbird song nuclei
Sp01, Su01	Rachel Pauley	Age-related changes in cowbird song nuclei

***Other Student Assistance****Letters of Recommendation*

2006-2007	Three Letters: Chelsea Campbell, Amber Hancock, Rory Spence
2007-2008	Eight Letters: Ashley Emerson, Jenny Feng, Katlin Gilham, Joshua Hamer, Estefania Hernandez, Gerald Stinson, Hilary Taylor, Crystal Tseng
2008-2009	Sixteen Letters: John Ball, Roseanne Berry, Jed Brensinger, Chelsea Cambell, Madeline Coltharp, Jenny Feng, Joshua Hamer, Estefania Hernandez, Kevin Randolph, Gerald Stinson, Richard Tramel
2009-2010	Twenty Seven Letters: Cody Amason, Patrick Ayers, John Ball, Roseanna Berry, Ryan Davidovich, Matthew DiGuisto, Amy Hribar, Josh Hamer, Blake Jones, Megumi Mathis, Jack Pemment, Alyssa Penny, Kevin Randolph, Sara Sigler, Brittany Simpson, William Sobecki, Gerald Stinson, Diarra Williams, Steven Wilkening

*Escorted Undergraduates to Scientific Meetings*

2008	Joshua Hammer to Mississippi Academy of Science, Olive Branch, MS, February.
2009	Joshua Hamer and Gerald Stinson to the Society for Neuroscience Meeting in Chicago, IL, October.
2010	Gerald Stinson, Josh Hamer, Brittany Simpson, and Madeline Coltharp to the Association of South Eastern Biologist.
2010	Josh Hamer, Brittany Simpson, Diarra Williams to the Society for Neuroscience meeting in November.

**PRESENTATIONS*****Contributed Papers with published Abstracts where Available (\*students)***

2011	Goulet TL, <b>Day LB</b> , Byler KA* and Sullivan K. Class Generated Community Clicker Cases: Testing a Novel Pedagogic Approach Connecting Science and Non-Major Students. CCLI/TUES Principal Investigators (PI) Conference, Washington, D.C.
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- 2010 Wilkening SR\*, b. Avian Cerebellum specialization in relation to acrobatic courtship displays in manakins (Pipridae). J. B. Johnston Society Meeting, San Diego, CA. *Brain, Behavior and Evolution* 2010, 75, p315.
- 2010 Coltharp M\*, Simpson B\*, Williams D\*, **Day LB**. Schizandrin and scopolamine effect on spatial learning in zebra finches. Program No. 611.2. Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010. Online.
- 2010 Wilkening SR\*, Ayers PR\*, **Day LB**. Aromatase distribution in the brain of the golden-collared manakin (Aves: Pipridae). Program No. 206.9. Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010. Online.
- 2010 Simpson B\*, Coltharp M\*, El-Alfy A, **Day LB**. Schizandrin effects on mice treated with Scopolamine in the Morris water maze and open field task. Program No. 611.1. Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010. Online.
- 2010 Goulet TL, **Day LB**, Byler KA\* and Sullivan K. Class Generated Community Clicker Cases: Testing a Novel Pedagogic Approach Connecting Science and Non-Major Students. National Association of Biological Teachers, Minneapolis, MN.
- 2009 Simpson BN\*, Tramel B\*, **Day LB**. Comparison of spatial learning in CD1 and C57Bl6 mice strains using the Morris water maze. *Southeastern Biology*, 57(2), p156.
- 2009 Coltharp MS\*, Simpson B\*, El-Alfy A, **Day LB**. schizandrin effects on mice treated with scopolamine in the Morris water maze. *Southeastern Biology*, 57(2), p154.
- 2009 Stinson G\*, Hamer J\*, **Day LB**. Effects of estrogen on recovery of spatial function after cerebellar lesion. *Southeastern Biologist* 57(2), p156.
- 2009 Hamer J\*, Stinson G\*, Sobecki W\*, **Day LB**. Estradiol does not produce coordination improvements after cerebellar lesions. *Southeastern Biologist* 57(2), p158.
- 2009 Wilkening S\*, Ball J\*, **Day LB**. Avian cerebellum specialization in relation to acrobatic courtship displays in manakins (Pipridae). *Southeastern Biologist* 57(2), p130.
- 2009 **Day LB**, Wilkening SR\*, Brensinger J\*, Schlinger BA. Estradiol plays a role in activating the courtship display of Golden-Collared Manakins (*Manacus vitellinus*). *Southeastern Biologist* 57(2), p133.
- 2009 Wilkening SR\*, **Day LB**. The cerebellum and acrobatic non-vocal courtship displays in manakins( Aves: Pipridae): Intraspecific variation in degree of subfoliation. Program No. 483.1. Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2009. Online.
- 2009 Stinson Jr GW\*, Hamer J\*, Coltharp M\*, Parrott N\*, **Day LB**. Effects of estrogen on recovery of spatial function after cerebellar lesion. Program No. 786.14. Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2009. Online.
- 2009 **Day LB**, Tramel B\*, Garner III JC, Waddell DE. A novel method for demonstrating motor impairments in birds: Cerebellar involvement in balance. Program No.786.12. Neuroscience Meeting Planner. Chicago, IL: Society for Neuroscience, 2009. Online.
- 2008 Hamer J \*and **Day LB**. Estrogen improves spatial memory after cerebellar lesions. Mississippi Academy of Science. Olive Branch, MS. *Journal of the Mississippi Academy of Science*, 54(1),111
- 2008 Fusani L., Day L. B., and Schlinger B. A. Dynamic coupling and uncoupling between androgen and courtship behavior in male manakins. Paper presented at Steroids and the Nervous System Meeting, Turin, Italy.

- 2008 Spence R\*, Schlinger BA, **Day LB**. Recovery of motor and cognitive cerebellar deficits is enhanced by estradiol. Behavioral Neuroendocrinology Meeting, Groningen, The Netherlands. Program Online. <http://www.rug.nl/bcn/sbn/scientificProgram>
- 2007 Spence R\*, Day L, Schlinger B. The songbird cerebellum: A model for hormonal involvement in cognition and neural repair. Society for Behavioral Neuroendocrinology Meeting, Asilomar, CA. Program P3.62. Online <http://www.sbne.org/meetings/Meeting%20Archives/2007/posters.php>
- 2007 **Day LB**, Feng N\*, Hernandez E\*, Taylor H\*, Schlinger BA. Effects Of estradiol (E2) and dihydrotestosterone (DHT) on courtship display of male golden-collared manakins (*Manacus vitellinus*). Society for Behavioral Neuroendocrinology Meeting, Asilomar, CA. Program P2.61. Online <http://www.sbne.org/meetings/Meeting%20Archives/2007/posters.php>
- 2007 Schlinger BA, Fusani L, **Day LB**. Neural and hormonal control of elaborate courtship in a neotropical manakin. Sociedad de Ornitología Neotropica, Maturín, Venezuela.
- 2006 Wise PM, **Day LB**, Kim C\*, Tseng C\*, London SE, Schlinger BA, Side-chain cleavage in the songbird brain revealed with a songbird-specific antibody. Program No. 660.5. 2006 Neuroscience Meeting Planner. Atlanta, GA: Society for Neuroscience. Online
- 2006 **Day LB**, Guerra M\*, Kim C\*, Fuhrman JG, Schlinger BA, Rothstein SI. Sex differences in the effects of captivity on hippocampal size in brown-headed cowbirds. Program No. 269.10. 2006 Neuroscience Meeting Planner. Atlanta, GA: Society for Neuroscience. Online
- 2005 **Day LB**, McBroom JT\*, Schlinger BA. Testosterone increases courtship behavior but does not stimulate growth of adult plumage pattern in male golden-collared manakins (*Manacus vitellinus*). Hormones and Behavior, 48(1) 96, 2005.
- 2005 **Day LB**, Fusani L, Schlinger BA. Sex differences in brain areas related to courtship display in manakins Program No. 762.9. Neuroscience Abstracts. Washington, DC: Society for Neuroscience, 2005. Online.
- 2003 **Day LB**, Olster DH. Androgen receptor distribution and seasonal brain volume changes in great bowerbirds. Program No. 200.7. Neuroscience Abstracts. New Orleans: Society for Neuroscience, 2003. Online
- 2002 **Day LB**, Westcott D, Ewen J, Wingfield J, Endler J, Olster DH. Neural and hormonal correlates of display in bowerbirds, *Ptilonorhynchidae*. Program No. 877.1. Neuroscience Abstracts. Orlando: Society for Neuroscience, 2002. Online.
- 1998 **Day LB**, Kapila R\*, Johnson A\*, Crews D & Wilczynski W. Foraging ecology predicts medial and dorsal cortex volume and behavior in lizards. San Diego: International Congress of Neuroethology, 1998.
- 1998 **Day LB**, Crews D & Wilczynski W. Medial and dorsal cortex function in non-spatial solutions to a spatial maze in lizards. Los Angeles: Society for Neuroscience. Society for Neuroscience Abstracts, 24(2) 1258, 1998.
- 1997 **Day LB**, Crews D & Wilczynski W. Hippocampal cortex volume is related to foraging strategy and behavioral flexibility but not spatial memory in lizards. New Orleans: Society for Neuroscience. Society for Neuroscience Abstracts, 23(2), 2134, 1997.
- 1996 Schallert T, **Day LB**, Weisend M & Sutherland RJ. Spatial learning by hippocampal rats in the Morris Water Task. Washington, D.C.: Society for Neuroscience. Society for Neuroscience Abstracts, 22(1), 678, 1996.

- 1996 **Day LB**, Wilczynski W, Crews D. Foraging strategy and spatial memory in lizards. Washington, D.C.: Society for Neuroscience, Society for Neuroscience Abstracts, 22(1), 448, 1996.
- 1995 **Day LB**, Crews D & Wilczynski W. Hemispheric lateralization of the lateral cortex in lizards, *Cnemidophorus inornatus* and *C. uniparens*. San Diego: Society for Neuroscience. Society for Neuroscience Abstracts, 21 (1), 432, 1995.
- 1997 **Day LB**. The effects of ecology on path integration abilities: A cognitive adaptation exemplified by Aboriginal Australians. Human Behavior and Evolution Society, Tucson, AZ.
- 1992 **Day LB**. The effects of eco-cultural variables on spatial orientation. Carolinas Psychology Conference, Raleigh, NC.

### ***Invited Papers at International Meetings***

- 2006 **Day LB**, Spence R, Schlinger BA. Ultimate and Proximate Aspects of Cerebellar Plasticity in Birds. The 14<sup>th</sup> Biennial Scientific Meeting of the International Society for Comparative Psychology. Symposium: Learning and Evolution of the Vertebrate Brain. Sociedad Científica Argentina, Buenos Aires, Argentina.
- 2006 **Day LB**, Spence R, Schlinger BA. The Avian Cerebellum: Neuroanatomical and Hormonal Adaptations for Complex Mating Displays. J. B. Johnston Society Meeting, Abstract in Brain Behavior and Evolution, 68, p 111, 2006.
- 2002 **Day LB**. Evolution of neural systems for spatial cognition: foraging ecology in lizards and bower complexity in bowerbirds. J. B. Johnston Society's Karger Symposium on Evolutionary Perspectives in Cognition. Orlando, November.

### ***Invited Departmental and Institutional Seminars***

- 2010 Neural and Hormonal Adaptation for Complex Avian Displays, Department of Biology, Mississippi State University, Starkville, MS.
- 2009 Ultimate and Proximate Aspects of Cerebellar Plasticity in Birds, Biology Department, University of Mississippi, Oxford.
- 2007 University of Southern Mississippi, Turned down due to scheduling conflict.
- 2007 Cerebellar Function and Neuroplasticity in an Avian Species. Department of Exercise Science, University of Mississippi, Oxford.
- 2006 Hormonal and Neural Adaptations for Complex Avian Courtship Displays. Department of Psychology, University of Tennessee, Knoxville
- 2006 Hormonal and Neural Adaptations for Complex Avian Courtship Displays. Department of Biology, University of Mississippi, Oxford, MS.
- 2005 Neural and Hormonal Adaptations for Complex Displays. Department of Psychology, SUNY, Buffalo, NY.
- 2004 Sex in the tropics: Hormonal regulation of mating displays in tropical birds. Song Bird Luncheon, University of California, Los Angeles, CA.
- 2004 Neural and Hormonal Adaptations for Complex Displays. Western Kentucky University, Bowling Green, KY.
- 2003 Behavior, Brain, and Evolution in Bowerbirds. Neuroendocrine and Behavior Group, University of California, Los Angeles, CA.

- 2003 Behavior, Brain, and Evolution in Bowerbirds. Department of Psychology, Texas Christian University, Fort Worth, TX.
- 2003 Behavior, Brain, and Evolution in Bowerbirds. Department of Biology, Lehigh University, Bethlehem, PA.
- 2003 Behavior, Brain, and Evolution in Bowerbirds. Department of Biology, University of Cincinnati, Cincinnati, OH.
- 2003 Behavior, Brain, and Evolution in Bowerbirds. Department of Zoology, Texas A&M University, College Station, TX.
- 2002 Behavioural and neural adaptations for bower building in bowerbirds. Cerebellar Neural Plasticity Seminar, James Cook University, Townsville, QLD, Australia, April.
- 2002 Evolution of neural systems for spatial cognition. Department of Psychology, University of Washington, Seattle, WA.
- 2002 Evolution of neural systems for spatial cognition. Department of Psychology, University of Pennsylvania, Philadelphia, PA.
- 2001 A birds eye view of color space. Department of Zoology and Tropical Biology, James Cook University, Townsville, QLD, Australia.
- 1999 Lizards in space: Foraging ecology and the function of cortical brain regions. Department of Zoology and Tropical Biology, James Cook University, Townsville, QLD, Australia.
- 1999 Medial and dorsal cortex function and foraging strategies in lizards. Neuroscience and Behavior Seminar, University of California, Santa Barbara, CA
- 1998 Medial and dorsal cortex function and foraging strategy in congeneric lizard species. Reproductive Biology Seminar, Austin, TX
- 1997 The effects of ecology on path integration abilities: A cognitive adaptation exemplified by Aboriginal Australians. Behavioral Neuroscience Seminar, Austin, TX.
- 1997 Hippocampal discourse without neocortical dialogue. Behavioral Neuroscience Seminar, Austin, TX.
- 1996 Lizard cognition and other obscene thoughts: behavioral correlates of medial cortex function and foraging strategies in lizards. Physiology and Behavior Seminar, Austin, TX.
- 1995 Structural and functional homologies between the lizard medial cortex and the avian and mammalian hippocampus. Reproductive Biology Seminar, Austin, TX, March.
- 1995 Fluid intelligence in the Morris Water Maze displayed by atropine treated rats. Behavioral Neuroscience Seminar, Austin, TX, September.

### **SOCIETY MEMBERSHIPS**

Animal Behavior Society, J. B. Johnston Club, Society for Neuroscience, Society for Behavioral Neuroendocrinology, Faculty for Undergraduate Neuroscience

### **SERVICE**

#### ***Service to Academic Discipline***

##### *Volume Editor*

Special Issue of Brain, Behavior and Evolution, Volume 62. Karger Symposium: Perspectives on the evolution of cognition. 2003.

*Symposium Organizer*

Karger Symposium: Evolutionary Perspectives in Cognition. Orlando, November. With Alice S. Powers. 2002

*Manuscript Reviewer*

Acta Neurobiologiae Experimentalis, Animal Behaviour, Animal Cognition, Brain Behavior and Evolution, Brain Research, Brain Research, Behavioral Ecology, European Journal of Obstetrics & Gynecology and Reproductive Biology, Hormones and Behavior, Journal of Comparative Psychology, Journal of Field Ornithology, Journal of Herpetology, The American Naturalist

*Grant Reviewer/Panelist*

National Science Foundation Grants 2008, 2009, 2010, 2011 (5 grants)  
University of Missouri Research Board Grants 2009  
Panelist for NSF Doctoral Dissertation Improvement Grants 2010  
Biotechnology and Biological Sciences Research Council (UK) Grant 2009

*Other Service*

Evaluator, teaching component of tenure and promotion package for Assistant Professor, Department of Physiological Science, University of California, Los Angeles 2007.

***Service to Department, School or College***

Member of Immunology Search Committee 2008  
Visiting Speaker for Dr. Stratton's Bisc 104: Inquiry into Life: The Environment. 2008  
Visiting Speaker for Clifford Ochs' Bisc 300: Research Methods Class 2009

***Service to the University***

Director and Developer of Interdisciplinary Neuroscience Minor 2010 - Current  
Member IACUC Committee 2008 - Current  
Member of the Honors Council 2011 – Current  
Honors Thesis Reader 2010, 2011  
Sigma Xi Science Fair Judge 2008, 2009  
Committee for Women in Science, Assisted Marge Holland with identifying issues 2009  
Member SACS QEP Site Visit Team 2009  
Scholar's Day Student Interviewer 2006

***Service to External Constituencies of the University***

Highschool Science Fair Judge 3/22/11  
Presentation to Della Davidson Elementary 5<sup>th</sup> graders: Natural Succession in Panama 1/21/10  
Presentation to Boy Scout Group: Bird Mating Behavior 10/2/09  
Elementary School Science Fair Judge 3/24/09  
Presentation to Della Davidson Elementary: Fieldwork with Tropical Birds 2008  
Presentation to Oxford Elementary 2<sup>nd</sup> grade class: Displays of Tropical Birds 2007

**PROFESSIONAL DEVELOPMENT ACTIVITIES**

University of Mississippi Medical Center. Training with Elise P Gomez-Sanchez, Intracerebral Injections in Mice 4/7/11.  
IT Training: Where Is It Now? - An Introduction to Blackboard 9.1 1/25/11.  
IT Training: Using Garage Band, 01/16/11.  
Academic Advisor Network: Student Intervention Team (SIT) and Campus Safety, 2/17/11.

Faculty Development Luncheon: e-Portfolios and Freshman Writing Program 3/1/11.

Faculty Development Luncheon: Service Learning and Service Leadership 10/19/10.

Academic Advising Network: Academic Advising for Students with Disabilities 10/13/10.

Academic Advising Network: The Registrar and the Student, 4/7/10.

Faculty Development Luncheon: The Search for Truth! (Collaborating with your Friendly Neighborhood Biostatisticians) 4/28/10.

Academic Advising Network: Challenges Facing Minority Students on Campus 3/20/10.

Faculty Development Luncheon: CIEE Presentations, 10/13/09.

Consultation on Developing Rubrics for Teaching: Writing Center Director, Dr. Cummings 9/24/09.

Incorporating writing into biology classes: Writing Center Director, Robert Cummings, 9/10/09.

Faculty Development Luncheon Workshop, Retention Issues at the University of Mississippi 12/3/08.

Faculty Development Luncheon Workshop, Measuring What Counts, Counting What is Measured. 11/3/08.

Ole Miss Academic Advising Network (AAN), National Academic Advising Association (NACADA) Executive Director Dr. Charlie Nutt 9/22/08.

Faculty Development Workshop 4/25/07.