

BICYCLE ADVISORY COUNCIL 2015 ELECTIONS - OCTOBER 20, 2015

CANDIDATES

- | | |
|--|---------------------------------|
| 1. Ashok Chandra-9 [78701] | 13. Miller Nuttle-1 [78702] |
| 2. Bryan Christen-7 [78757] | 14. Patricia Lavieri-9 [78705] |
| 3. Bryan Fermino-9 [78741] | 15. Patricia Schaub-3 [78702] |
| 4. Carine Choubassi-9 [78701] | 16. Peter Wall-1 [78702] |
| 5. Clark Shaffer-1 [78754] | 17. Rebecca Brenneman-6 [78750] |
| 6. David Orr-4 [78751] | 18. Rebecca Gallogly-5 [78704] |
| 7. Hillary Anderson-1 [78702] | 19. Richard Maness-3 [78745] |
| 8. Jesse Adler-1 [78723] | 20. Rick Schwertfeger-8 [78749] |
| 9. Josh Miller-1 [78702] | 21. Sarah Lum-1 [78702] |
| 10. Kouros Maghsoudi-9 [78705] | 22. Sophia Benner-3 [78702] |
| 11. Marcus Horton – 9 [works in 78702, lives in 78728] | 23. Tara Mather-1 [78702] |
| 12. Michael Sledge-9 [78741] | 24. Thomas Butler-3 [78702] |
| | 25. Todd Kaiser-7 [78757] |

APPLICATION FOR MEMBERSHIP

CITY OF AUSTIN BICYCLE ADVISORY COUNCIL

Name: Patricia Schaub

Address: [REDACTED]

City: Austin

State: Texas Zip: [REDACTED]

Preferred Phone: [REDACTED]

Other Phone:

E-mail Address: [REDACTED]

Date of Birth (must be at least 18): [REDACTED]

Occupation: University program coordinator/small business owner

Employer: [REDACTED]

1. Do you reside or work within City of Austin boundaries? ☒ Yes ☐
(Only those that live or work within the City of Austin are eligible for membership.)

2. Education (Schools attended, degrees earned, training received):

UT-Austin, History doctoral program, DNF

Marquette University, MA, History, 1995

Lawrence University, BA, Psychology, 1990 ☐ ☐ ...

3. Do you currently hold elective office? ☒ No

☐ ☒ ☐ ☐

4. Affirmative Action information: This information is voluntary, and is being collected both for statistical reporting purposes and to assure diversity on the Bicycle Advisory Council.

☒ Female Racial/Ethnic Background: White

5. List any major paid employment and volunteer activities, which may relate to service on the Bicycle Advisory Council: Dates (from/to) Employer/Volunteer Activities

Responsibilities

- 2010-present: Bike Austin volunteer and Board member/Treasurer
- 2015-present: Pedestrian Advisory Council alternate member
- 2015-present: Vision Zero Task Force

6. Do you have any special skills or experience that will help you as a member of the Bicycle Advisory Council?

- 19 years of administrative experience working as university staff. I'm at home with university offices and processes, and advocating for student and faculty interests within university and state regulations (1996-present)
- 8 years of experience as a pedicabber in Downtown Austin, helped with drafting of the "Pedicab Ordinance" (Section 13-2-316) in 2012 (2007-present)
- I didn't have a driver's license or a car until age 25 and lived car-free for most of my early adult years. Even after getting my car, my lifestyle has always been based on being able to walk, bike, or use transit for most of my transportation.

7. Why do you want to serve on the Bicycle Advisory Council?

I want to serve on the BAC to help expand biking as a form of mobility. I believe mobility is a basic human right but is too often limited to having to use a car. As a venue for direct input to transportation officials about connectivity, safety, comfort, education and all matters related to riding bikes, the BAC can help make it easier for more people to get around by bike. I'm excited to continue my participation with the BAC and look forward to encouraging others to take part in making Austin safe and accessible to anyone who wants to ride, regardless of age or ability.

8. List names, addresses, and phone numbers of two people who may be contacted as references:

[REDACTED]
[REDACTED]

9. Describe your bicycle use (check all that applies):

- ☒ I bike for transportation year-round
- ☒ I bike for transportation in all weather
- ☒ I sometimes am a regular recreational rider
- ☒ I always ride for fun and/or exercise
- ☐ I bike with my family
- ☐ I seldom ride my bike
- ☒ Other: pedicabber and pedicab shop owner.
- ☒ Sometimes I'm a triathlete.

10. Additional comments:

**Please return completed application form either by email,
mail or in person by 5:00 PM WEDNESDAY SEPTEMBER 30TH**

Marissa Monroy
Public Information Specialist, Active Transportation Program
City of Austin, Transportation Department
3701 Lake Austin Boulevard
Austin, TX 78704
Office: 512-974-6584
marissa.monroy@austintexas.gov

APPLICATION FOR MEMBERSHIP CITY OF AUSTIN BICYCLE ADVISORY COUNCIL

Name: Peter Wall

Address: [REDACTED]

City: Austin

State: TX

Zip: [REDACTED]

Preferred Phone: [REDACTED]

Other Phone: [REDACTED]

E-mail Address: [REDACTED]

Date of Birth (must be at least 18): [REDACTED]

Occupation: Bicycle Mechanic

Employer: [REDACTED]

1. Do you reside or work within City of Austin boundaries? ☐ No ☒ Yes
(Only those that live or work within the City of Austin are eligible for membership.)

2. Education (Schools attended, degrees earned, training received):

Bachelor Degree, History Univ. of Massachusetts

3. Do you currently hold elective office? ☐ No ☒ Yes: BAC alternate member

4. Affirmative Action information: This information is voluntary, and is being collected both for statistical reporting purposes and to assure diversity on the Bicycle Advisory Council.

☒ Male ☐ Female Racial/Ethnic Background:

5. List any major paid employment and volunteer activities, which may relate to service on the Bicycle Advisory Council: Dates (from/to) Employer/Volunteer Activities Responsibilities

Volunteer at Yellow Bike Project Jan 1997 - present

Employee at YBP Oct 2013 - present

6. Do you have any special skills or experience that will help you as a member of the Bicycle Advisory Council?

20 years of cycling in Austin, 18 years of attending meetings using the consensus process. Former member, and Chair of BAC.

7. Why do you want to serve on the Bicycle Advisory Council?

As a Coordinator at Yellow Bike Project I meet lots of new people interested in cycling. By staying involved with the BAC I can inform them about what the City is doing and help

8. List names, addresses, and phone numbers of two people who may be contacted as references:

build public support for the Bike Program.



9. Describe your bicycle use (check all that applies):

- ☒ I bike for transportation year-round
- ☐ I bike for transportation in good weather
- ☐ I am a regular recreational rider
- ☒ I occasionally ride for fun and/or exercise
- ☐ I bike with my family
- ☐ I seldom ride my bike
- ☐ Other: _____

10. Additional comments:

Having been a part of the BAC for years I'd like to run for an alternate position, unless there are not enough applicants.

**Please return completed application form either by email,
mail or in person by 5:00 PM MONDAY SEPTEMBER 30TH**

Marissa Monroy
Public Information Specialist, Active Transportation Program
City of Austin, Transportation Department
505 Barton Springs Rd., 8th Floor, Suite 850
Austin, TX 78704
Office: 512-974-6584
marissa.monroy@austintexas.gov

APPLICATION FOR MEMBERSHIP CITY OF AUSTIN BICYCLE ADVISORY COUNCIL

Name: Rebecca Brenneman

Address: [REDACTED]

City: Austin State: TX Zip: [REDACTED]

Preferred Phone: [REDACTED] Other Phone: [REDACTED]

E-mail Address: [REDACTED]

Date of Birth (must be at least 18):

Occupation: Mechanical Engineer Employer: [REDACTED]

1. Do you reside or work within City of Austin boundaries? ☐ No ☒ Yes
(Only those that live or work within the City of Austin are eligible for membership.)

2. Education (Schools attended, degrees earned, training received):
University of Tulsa, B.S. Mechanical Engineering
LSU, Post-Baccalaureate Certificate in Construction Management, in progress

3. Do you currently hold elective office? ☐ No ☒ Yes: BAC Alternate

4. Affirmative Action information: This information is voluntary, and is being collected both for statistical reporting purposes and to assure diversity on the Bicycle Advisory Council.

☐ Male ☒ Female Racial/Ethnic Background:

5. List any major paid employment and volunteer activities, which may relate to service on the Bicycle Advisory Council: Dates (from/to) Employer/Volunteer Activities Responsibilities
— BAC Alternate member for 1 year
— Liveable City Transportation Committee 2008-2012 - Research Assistant, worked with John Michael Vincent Cortez, Mark Yznaga, David Foster and Danny Roth
— Clean Water Action 2008-2012- Research Assistant for David Foster

6. Do you have any special skills or experience that will help you as a member of the Bicycle Advisory Council?

- I have a degree and experience as a mechanical engineer, so I know how stakeholders and technical requirements affect solutions.
- I have also been a BAC alternate for a year, so I am getting more familiar with the relationships between the city and state agencies, the BAC, the city council and the community.

7. Why do you want to serve on the Bicycle Advisory Council?

I am passionate about intelligently grown, livable cities. I have traveled around Europe and fell in love with cities and the ease of traveling within the cities as well as between cities and between countries! The most notable were Copenhagen and Amsterdam. I think Austin is a forward thinking city that WANTS to be on par with the European cities, and to be the best in the U.S.. The rapid growth of Austin makes now the time to make biking pathways a priority.

8. List names, addresses, and phone numbers of two people who may be contacted as references:

[REDACTED]
[REDACTED]

9. Describe your bicycle use (check all that applies):

- ☐ I bike for transportation year-round
- ☐ I bike for transportation in good weather
- ☐ I am a regular recreational rider
- ☒ I occasionally ride for fun and/or exercise
- ☒ I bike with my family
- ☐ I seldom ride my bike
- ☐ Other: _____

10. Additional comments:

**Please return completed application form either by email,
mail or in person by 5:00 PM WEDNESDAY SEPTEMBER 30TH**

Marissa Monroy
Public Information Specialist, Active Transportation Program
City of Austin, Transportation Department
3701 Lake Austin Boulevard
Austin, TX 78704
Office: 512-974-6584
marissa.monroy@austintexas.gov

APPLICATION FOR MEMBERSHIP CITY OF AUSTIN BICYCLE ADVISORY COUNCIL

Name: REBECCA GALLOGLY
Address: [REDACTED]
City: AUSTIN State: TX Zip: [REDACTED]
Preferred Phone: [REDACTED] Other Phone: [REDACTED]
E-mail Address: [REDACTED]
Date of Birth (must be at least 18): [REDACTED]
Occupation: NONE / WRITER / SCIENTIST Employer: [REDACTED]

1. Do you reside or work within City of Austin boundaries? ☐ No ☒ Yes
(Only those that live or work within the City of Austin are eligible for membership.)

2. Education (Schools attended, degrees earned, training received):

SEE CV ATTACHED TO EMAIL VIA WHICH THIS APPLICATION IS SENT

3. Do you currently hold elective office? ☒ No ☐ Yes:

4. Affirmative Action information: This information is voluntary, and is being collected both for statistical reporting purposes and to assure diversity on the Bicycle Advisory Council.

☐ Male ☒ Female Racial/Ethnic Background:

5. List any major paid employment and volunteer activities, which may relate to service on the Bicycle Advisory Council: Dates (from/to) Employer/Volunteer Activities Responsibilities

SEE # 2

6. Do you have any special skills or experience that will help you as a member of the Bicycle Advisory Council?

I DO NOT OWN A CAR. I TRAVEL EVERYWHERE ON MY MOTORIZED BIKE IN THE URBAN CORE. BEEN DOING THIS SINCE APRIL 2014.

7. Why do you want to serve on the Bicycle Advisory Council? I AM MATURE AND REASONABLE, AND HAVE PLENTY OF INSIGHT AND

EXPERIENCE TO CONTRIBUTE. ALSO, FEMALE REPRESENTATION IS KEY.
8. List names, addresses, and phone numbers of two people who may be contacted as references:

[REDACTED]

9. Describe your bicycle use (check all that applies):

- ☒ I bike for transportation year-round
- ☒ I bike for transportation in good weather
- ☒ I am a regular recreational rider
- ☒ I occasionally ride for fun and/or exercise
- ☐ I bike with my family
- ☐ I seldom ride my bike
- ☐ Other: _____

10. Additional comments:

**Please return completed application form either by email,
mail or in person by 5:00 PM WEDNESDAY SEPTEMBER 30TH**

Marissa Monroy
Public Information Specialist, Active Transportation Program
City of Austin, Transportation Department
3701 Lake Austin Boulevard
Austin, TX 78704
Office: 512-974-6584
marissa.monroy@austintexas.gov

CURRICULUM VITAE

Rebecca H. Gallogly, Ph.D.

BIOGRAPHICAL INFORMATION

Name changed from Rebecca G. Markham in 2010. All instances of Markham refer to me, except M. R. Markham in the 1997 publication.

Mailing Address:

[REDACTED]

Phone:

[REDACTED]

Email:

[REDACTED]

Web:

[REDACTED]

EMPLOYMENT AND SERVICE

Science Writer and Postdoctoral Advocate

May 2009 to
present

Consulting with entities including the National Postdoctoral Association, The University of Texas at Austin, University of Texas System, Texas State Employees' Union, The National Institutes of Health in the U.S. Department of Health and Human Services, The Office of Civil Rights in the U.S. Department of Education. Writing peer-reviewed publications; continually using social media to inform the general public about neuroscience and science generally, as well as public policy and health.

Vice President

January 2013 to
January 2015

Barton Hills Neighborhood Association
Maintenance of ~700 membership database and listserv.
Enforcement of parliamentary procedure, and maintaining order and structure.

Volunteer Coordinator

August 2011 to
March 2012

Austin Parks Foundation
816 Congress Avenue, Suite 1680
Austin, TX 78701

Volunteer

September 2010 to
March 2011

Dell Children's Medical Center of Central Texas
Pediatric Neurosurgery Center of Central Texas
Seton Healthcare Family

Park Volunteer

March 2010 to
September 2013

Pease Park Conservancy
1419 Preston Avenue
Austin, TX 78703

Postdoctoral Training

July 2008 to
November 2009

NRSA F32 Postdoctoral Fellowship
The University of Texas at Austin
College of Natural Sciences
School of Biological Sciences
Section of Neurobiology
Austin, TX 78712

Postdoctoral Training

September 2006 to
June 2008

American Heart Association Postdoctoral Fellowship
NRSA F32 Postdoctoral Fellowship
The University of Texas at Austin
College of Liberal Arts
Department of Psychology
Behavioral Neuroscience Section
Austin, TX 78712

HIGHER EDUCATION

Predoctoral Training

June 2005 to
August 2005

NIH Grant for Neural Systems and Behavior Course
Neural Systems and Behavior Course Endowed Scholarship
Marine Biological Laboratory
Woods Hole, MA 02543

Graduate Studies

2001 to 2006

Florida International University
Psychology Department
Miami, FL 33199
Doctoral Degree: specialization in Developmental Science,
emphasis in perinatal neurodevelopment
Doctoral Dissertation Title: Prenatal augmented auditory
stimulation and visual system development: Effects of timing
on intersensory organization.
Committee Chair: Robert Lickliter, Ph.D.

Qualifying Examinations: Passed August 2002

Dissertation Proposal Date: January 2004

Defense Date: June 2006

Doctor of Philosophy Awarded: August 2006

1997 to 2001

Florida International University

Psychology Department

Miami, FL 33199

Master's Degree: Experimental Analysis of Behavior

Thesis Title: The role of covarying functions in stimulus class formation and transformation of function.

Committee Chair: Jonathan Tubman, Ph.D.

Defense Date: March 2001

Master of Science Awarded: April 2001

Undergraduate Studies

1993 to 1995

Florida International University

Miami, FL 33199

Major: Psychology

Bachelor of Arts Awarded: August 1995

1990 to 1992

Miami-Dade Community College

Miami, FL 33176

Major: Psychology

Associate in Arts Awarded: June 1993

PROFESSIONAL AFFILIATIONS (past and present*)

American Association for the Advancement of Science (AAAS)*

Association for Behavior Analysis (ABA)

International Society for Developmental Psychobiology (ISDP)

International Society for Neuroethology (ISN)

National Postdoctoral Association (NPA)*

Society for Neuroscience (SfN)

HONORS AND AWARDS

2006

Developmental Science Program Graduate Student Award,
Psychology Department, College of Arts and Sciences, Florida
International University

2005

Sandra G. Wiener Dissertation Award, International Society for
Developmental Psychobiology

2005

Extended Research Award, Institute for Neuroscience, Grass
Laboratory, Marine Biological Laboratory

2005	National Institutes of Health Grant for Neural Systems and Behavior Course, Marine Biological Laboratory
2005	Neural Systems and Behavior Course Endowed Scholarship Fund, Marine Biological Laboratory
2005	Phi Kappa Phi Member
2001 to 2006	Graduate Scholarship, Faculty and Graduate Studies, College of Arts and Sciences, Florida International University
2001	Certificate of Achievement, The Academy for the Art of Teaching, Florida International University
1995	Outstanding Achievement Award, Psychology Department, College of Arts and Sciences, Florida International University

PROFESSIONAL SERVICE

2009	Ad Hoc Reviewer, <i>Brain Research Bulletin</i>
2005 to 2006	Graduate Student Organization Representative, Molecular and Cellular Biology Club, Department of Biological Sciences, College of Arts and Sciences, Florida International University
2003 to 2004	Founding President, Developmental and Mental Health Graduate Student Association, Department of Psychology, College of Arts and Sciences, Florida International University
2001 to 2003	Biology / Psychology Dual Honor's Thesis Co-Advisor; minority student accepted into Purdue Veterinary School
1995 to 1996	Editorial Assistant, <i>Behavioral Development</i>

GRANTS AWARDED

F32 NS060437-05	Markham (PI)	09/01/08-10/31/09
NINDS		
Neurobiological mechanisms of perinatal brainstem plasticity.		
This grant involved NINDS-approved sponsor transfer of the F32 listed below. The award supported research examining the electrophysiological mechanisms of neuronal development in the gerbil auditory brainstem medial superior olive near hearing onset, just days after birth.		
F32 NS060437-01	Markham (PI)	02/01/08-09/01/08
NINDS		
Use-dependent modulation of neural and behavioral function after cortical infarct.		
This grant provided the stipend for work on the behavioral effects and neural correlates of reach recovery following unilateral stroke in adult rat sensorimotor cortex.		
AHA Postdoctoral Fellowship	Markham (PI)	07/01/07-01/31/08
American Heart Association		
This grant funded the awardee to begin conducting research on behavioral mechanisms of adult unilateral sensorimotor stroke recovery.		

PUBLICATIONS

Gallogly, R.H. Translational challenges for preterm infant treatment. In progress.

Markham, R.G. (2009). The optic tectum: A model neural system for comparative neuroethology. *International Society for Neuroethology Newsletter*, 11, 3-4.

Markham, R.G., Shimizu, T., & Lickliter, R. (2008). Extrinsic embryonic sensory stimulation alters multimodal behavior and cellular activation. *Developmental Neurobiology*, 68, 1463-1473.

Markham, R.G., Toth, G., & Lickliter, R. (2006). Perinatally elevated physiological arousal alters perceptual learning in bobwhite quail. *Behavioral Neuroscience*, 120, 1315-1325.

Lickliter, R., Bahrick, L.E., & Markham, R.G. (2006). On the role of intersensory redundancy in educating attention and memory to amodal information during prenatal development. *Developmental Science*, 9, 604-615.

Markham, R.G., & Markham, M.R. (2002). On the role of covarying functions in stimulus class formation and transfer of function. *Journal of the Experimental Analysis of Behavior*, 78, 509-525.

Markham, M.R. & Gallogly, R.H. (1997). Does language make humans more than clever apes? A review of Bickerton's *Language and Human Behavior*. *Journal of Applied Behavior Analysis*, 30, 185-186.

ORAL PRESENTATIONS

- Markham, R.G. (2007, April). Translational models for system plasticity. Presented in Principles of Neuroscience II, a graduate course in neuroscience at the University of Texas at Austin.
- Markham, R.G. (2007, February). Translational model for preterm infants: Experience matters. Presented in the Behavioral Neuroscience Seminar series, Psychology Department, University of Texas at Austin.
- Markham, R.G. (2006, April). Sensational experience: Prenatal sound affects postnatal sight in birds. Presented at the East Coast Nerve Net Conference at The Marine Biological Laboratory in Woods Hole, MA.
- Markham, R.G. (2005, November). Differently timed prenatal auditory stimulation alters postnatal visual system organization in bobwhite quail chicks. Presented at the International Society for Developmental Psychobiology in Washington, DC.
- Markham, R.G. (2005, January). Effects of differently timed augmented auditory stimulation on visual system development in bobwhite quail embryos. Presented at the FIU Annual Biology Symposium held at Fairchild Tropical Botanic Garden.

SELECT POSTER PRESENTATIONS

- Markham, R.G., Shimizu, T., & Lickliter, R. (November 2008). Extrinsic embryonic sensory stimulation alters multimodal behavior and cellular activation. Presented at the Society for Neuroscience in Washington, DC.
- Markham, R.G., Tennant, K.A., Kleim, J.A., Thomas, N., & Jones, T.A. (November 2007). Training the less-affected forelimb after SMC unilateral infarct alters motor cortical representations among the two hemispheres. Presented at the Society for Neuroscience in San Diego, CA.
- Allred, R., Adkins D.L., Maldonado, M.A., Husbands, L.C., Markham, R.G., & Jones, T.A. (November 2007). The pasta handling test: a simple quantitative measure of forepaw dysfunction in rats. Presented at the Society for Neuroscience in San Diego, CA.
- Markham, R.G., Shimizu, T., & Lickliter, R. (April 2007). Prenatal stimulation affects multisensory function. Presented at the bi-annual Reprogramming the Human Brain Symposium at the University of Texas - Dallas.
- Markham, R.G., & Lickliter, R. (October 2006). Prenatally elevated physiological arousal interferes with perceptual learning in bobwhite quail. Presented at the Society for Neuroscience in Atlanta, GA.

- Markham, R.G., & Lickliter, R. (October 2006). Prenatal auditory stimulation modifies ZENK protein expression in telencephalic regions in bobwhite quail chicks. Presented at the annual convention of the International Society for Developmental Psychobiology in Atlanta, GA.
- Markham, R.G., & Lickliter, R. (November 2005). Effects of prenatally augmented auditory stimulation on postnatal visually-directed filial behavior in bobwhite quail. Presented at the Society for Neuroscience in Washington, DC.
- Markham, R.G., Lickliter, R., & Bahrick, L.E. (March 2005). Intersensory redundancy guides selective attention during prenatal development. Presented at the Comparative Cognition Conference in Melbourne, FL.
- Lickliter, R., Carlsen, R., & Markham, R.G. (June 2004). Amount of prenatal visual experience affects neural plasticity and postnatal visual responsivity in bobwhite quail chicks. Presented at the annual convention of the International Society for Developmental Psychobiology in Aix, France.
- Toth, G., Markham, R.G., & Lickliter, R. (May 2004). Effects of prenatal arousal level on selective attention and perceptual learning in bobwhite quail embryos. Presented at the biannual convention of the International Conference for Infant Studies, Chicago, IL.
- Bahrick, L.E., Lickliter, R., & Markham, R.G. (May 2004). Intersensory redundancy can educate selective attention during prenatal development. Presented at the biannual convention of the International Conference for Infant Studies, Chicago, IL.
- Lickliter, R.L., Bahrick, L.E., & Markham, R.G. (November 2003). Intersensory redundancy educates attention to amodal information during prenatal development. Presented at the annual convention of the International Society for Developmental Psychobiology, New Orleans, LA.
- Markham, R.G. (May 2001). The role of covarying functions in stimulus class formation and transformation of function. Presented at the annual convention of the Association for Behavior Analysis, New Orleans, LA.

POSTDOCTORAL RESEARCH EXPERIENCE

Extrinsic Effects on Developing Auditory Neurons

NRSA F32 Postdoctoral Fellowship

Adviser: Nace Golding, Ph.D.

Placement: Neurobiology

Here, I received membrane biophysics training using slice physiology to examine effects of neonatal extrinsic experience on auditory brainstem plasticity. I developed plans to investigate the developmental trajectory of ion channel characteristics in auditory

brainstem medial superior olive (MSO) neurons near hearing onset. The MSO is responsible for auditory spatial localization in the horizontal plane via detection of interaural time differences (ITDs), temporal differences in the range of microseconds, in the arrival of a sound to each of the two ears. Potassium current maturation in MSO neurons is tightly correlated in time with hearing onset. However, it is unknown if this maturation is a function of an intrinsic developmental program that unfolds in the absence of sound exposure changes, or if it is dependent on extrinsic stimulation. I devised protocols and procedures to induce mild neonatal conductive hearing loss (CHL) using surgical atresia, and to examine intrinsic and synaptic properties of MSO neurons after hearing onset. Here, I planned to compare MSO electrophysiology parameters between monaural, binaural, and no CHL animals. Because MSO neurons are responsible for binaural detection, I predicted unique potassium channel kinetics in monaural CHL animals. I honed the skills to reliably record intrinsic and synaptic properties of mammalian MSO neurons. I also developed a detailed IACUC protocol for atresia induction, as well as multiple hardware-software configurations and surgical procedures for hearing assessment using cochlear microphonic recordings. I used scavenged tissue to teach myself middle and inner ear anatomy.

Recovery from Cortical Ischemia

AHA Postdoctoral Fellowship
NRSA F32 Postdoctoral Fellowship

Adviser: Theresa Jones, Ph.D.
Placement: Behavioral Neuroscience

For my first postdoctoral fellowship, I received extensive training in grant writing, for investigating the effects of experience-dependent motor recovery after unilateral stroke. Here, I trained animals to criterion in a single-pellet reaching task, performed craniotomies, induced focal unilateral stroke in the caudal forelimb area by topically applying a vasoconstrictive peptide to sensorimotor cortex, and assessed the amount of cortical territory controlling forelimb movements using intracortical microstimulation mapping (ICMS). ICMS involves *in vivo* surgeries, in which Layer V motor cortex is stimulated at equidistant points in the transverse plane, and corresponding limb movements are recorded. After behavioral and *in vivo* mapping data were collected, we performed neurohistology to assess the extent of the cortical infarct I induced earlier. Initial data seemed to indicate that training the good limb after unilateral infarct impeded reaching recovery in the impaired forelimb, and expanded the amount of motor cortical territory controlling the good limb (Markham et al., 2007). However, change to a synthetic peptide for lesion induction resulted in a floor effect. Also, data from other animals with differently treated lesions preliminarily suggested that edema probably inhibited cortical recovery in our animals. During this experience, I acquired substantial skills in animal anesthesia and stereotaxic surgery, among other things.

GRADUATE RESEARCH EXPERIENCE

Dissertation

Published Title: Extrinsic embryonic sensory stimulation alters multimodal behavior and cellular activation.

Committee: Robert Lickliter, Ph.D. (Chair), Philip Stoddard, Ph.D., Lorraine Bahrack, Ph.D., Lidia Kos, Ph.D., Bennett Schwartz, Ph.D.

Proposal Date: January 2004

Defense Date: June 2006

Published Abstract: Embryonic vision is generated and maintained by spontaneous neuronal activation patterns, yet extrinsic stimulation also sculpts sensory development. Because the sensory and motor systems are interconnected in embryogenesis, how extrinsic sensory activation guides multimodal differentiation is an important topic. Further, it is unknown whether extrinsic stimulation experienced near sensory sensitivity onset contributes to persistent brain changes, ultimately affecting postnatal behavior. To determine the effects of extrinsic stimulation on multimodal development, we delivered auditory stimulation to bobwhite quail groups during early, middle, or late embryogenesis, and then tested postnatal behavioral responsiveness to auditory or visual cues. Auditory preference tendencies were more consistently toward the conspecific stimulus for animals stimulated during late embryogenesis. Groups stimulated during middle or late embryogenesis showed altered postnatal species-typical visual responsiveness, demonstrating a persistent multimodal effect. We also examined whether auditory-related brain regions are receptive to extrinsic input during middle embryogenesis by measuring postnatal cellular activation. Stimulated birds showed a greater number of ZENK-immunopositive cells per unit volume of brain tissue in deep optic tectum, a midbrain region strongly implicated in multimodal function. We observed similar results in the medial and caudomedial nidopallia in the telencephalon. There were no ZENK differences between groups in inferior colliculus or in caudolateral nidopallium, avian analog to prefrontal cortex. To our knowledge, these are the first results linking extrinsic stimulation delivered so early in embryogenesis to changes in postnatal multimodal behavior and cellular activation. The potential role of competitive interactions between the sensory and motor systems is discussed.

Neural Systems and Behavior Course

Marine Biological Laboratory, Woods Hole, MA

Course Directors: Sarah Bottjer, Ph.D., Michael Dickinson, Ph.D.

Successful Completion Date: August 2005

This is an intensive eight-week electrophysiology laboratory and lecture course focusing on the neural basis of behavior. The course is intended for graduate students, postdoctoral researchers, and independent investigators. Limited to 20 participants. This course provides broad training in modern approaches to the study of neural mechanisms underlying behavior, perception, and cognition. Through a combination of lectures, exercises, and projects, students investigate neural systems at the molecular, cellular, and

organismal levels using state-of-the-art techniques. The eight weeks are divided into two-week cycles, providing participants with an in-depth familiarity with several different experimental model systems. In the first cycle, students study a simple invertebrate model system to develop general experimental skills in electrophysiology, neuroanatomy, and quantitative analysis of physiological and behavioral data. In subsequent cycles, students work on a series of different preparations, providing them with a breadth of knowledge in the field. The list of experimental model systems includes a diverse array of vertebrate and invertebrate preparations, chosen to illustrate key concepts and novel techniques in the field. The goal of the course is to expose students to diverse approaches to the investigation of the neural basis of behavior. Each experimental preparation is taught by a team of leading experts, and topics include: the cellular basis of pattern generation, the development and neuromodulatory control of cell and circuit specificity, learning and plasticity, sensory processing and feature detection, sensory-motor integration, spatial memory, and social communication. The laboratory provides access to many complementary methods including intracellular recording; single-cell dye-injection; patch-clamp; whole-cell voltage and current clamp; analysis of synaptic transmission and plasticity; cell culture; neural genetics; quantitative behavioral methods; and computational analysis. Although students will use and be exposed to many different techniques, this is not a course for learning particular techniques. Students spend a portion of each cycle designing, performing, and analyzing the results of their own project. These projects offer an exceptional opportunity to combine newly learned skills in a creative manner. In addition to the daily course lecture, the course sponsors a weekly seminar, given by invited lecturers and distinguished Visiting Scholars.

Laboratory Coordinator (August 2001 to August 2006)

Developmental Psychobiology Laboratory

Psychology Department, Florida International University

Laboratory funded by NIMH

Principle Investigator: Robert Lickliter, Ph.D.

For my Ph.D., I was incredibly fortunate to build the laboratory from the ground up, under the light-handed supervision of an experienced mentor with a track record of over two decades of continuous NIH funding. My mentor, Robert Lickliter, moved from Virginia Tech to Florida International University with tenure, the year I started the program. My graduate research included mastery of basic molecular biological and immunocytochemical techniques, and my undertakings were heavily physiological, psychoacoustic, neuroscientific, and behavioral in nature, including programming for a variety of applications (data collection, signal processing, data analysis and display) in both VisualBasic and MATLAB. Because we were rebuilding the laboratory completely anew, I had a great deal of freedom to improve upon previously established techniques. I changed embryonic heart rate recordings from invasive to non-invasive; automated, standardized, and evaluated the reliability of data collection; automated stimulus delivery to include a great many permutations of multisensory exposures; and organized testing to exclude human artifact. I was heavily involved in managerial operations, including personnel recruiting, management, and design of personnel infrastructure at a diverse institution; apparatus construction; experimental design and troubleshooting; data

acquisition, management, and analysis; and IACUC / animal husbandry. Finally, I extended collaborations between my Ph.D. research laboratory and many others, both at my home institution and elsewhere. Thus, I have had the opportunity to engage in many different techniques, research platforms, and training environments across disciplines.

All studies conducted in Bob's laboratory had conceptual underpinnings in developmental psychobiology, and investigated the effects of prenatal sensory stimulation on postnatal perception. We used bobwhite quail as an animal model for preterm infants because acoustic stimulation is easily delivered to embryos through the eggshell, and precocial birds can readily locomote immediately after hatching - affording a testable behavior for choice. Our studies showed that synchronized, multisensory stimulation can facilitate young organisms' subsequent selective attention to identical stimulus presentations delivered through only one sense (Lickliter et al., 2006); prenatal physiological arousal affects perinatal cognition (Markham et al., 2006); and prenatal augmented auditory stimulation affects postnatal visual system function (Markham et al., 2008). Finally, although I was not awarded the Fellowship, I had my first NIH grant writing experience (NRSA F31) while in Bob's lab.

Graduate Research Assistant (January 2001 to August 2001)

Women's Studies Center, College of Arts and Sciences, Florida International University
Supervisor: Suzanna Rose, Ph.D.

Performed statistical analyses on a large data set for investigating same-sex domestic violence using SPSS; prepared presentations on gender issues and academia at Florida International University delivered to the President; evaluated grant applications.
Supervisor: Suzanna Rose, Ph.D.

Master's Thesis

Published Title: On the role of covarying functions in stimulus class formation and transfer of function.

Committee: Jonathan Tubman, Ph.D. (Chair), Marilyn Montgomery, Ph.D., Robert Lickliter, Ph.D.

Defense Date: March 2001

Published Abstract: This experiment investigated whether directly trained covarying functions are necessary for stimulus class formation and transfer of function in humans. Initial class training was designed to establish two respondent-based stimulus classes by pairing two visual stimuli with shock and two other visual stimuli with no shock. Next, two operant discrimination functions were trained to one stimulus of each putative class. The no-shock group received the same training and testing in all phases, except no stimuli were ever paired with shock. The data indicated that skin conductance response conditioning did not occur for the shock groups or for the no-shock group. Tests showed transfer of the established discriminative functions, however, only for the shock groups, indicating the formation of two stimulus classes only for those participants who received respondent class training. The results suggest that transfer of function does not depend on first covarying the stimulus class functions.

ADDITIONAL EDUCATIONAL EXPERIENCE

Spring 2014	Various seminars as applicable to my field of study and listed through Neuroreporter at The University of Texas at Austin, including talks in the Department of Neuroscience, The Department of Biomedical Engineering, The Institute for Cellular and Molecular Biology, The Department of Integrative Biology, The College of Pharmacy, and Grand Rounds at Dell Children's.
Fall 2013	Neuroscience Seminar Series, Department of Neuroscience, College of Natural Sciences, The University of Texas at Austin.
Fall 2013	Behavioral Neuroscience Seminar Series, Psychology Department, College of Liberal Arts, The University of Texas at Austin.
Fall 2013	Various other seminars as applicable to my field and listed through Neuroreporter at The University of Texas at Austin, including talks in the Department of Neuroscience, The Department of Biomedical Engineering, The Institute for Cellular and Molecular Biology, The Department of Integrative Biology, and The College of Pharmacy.
Spring 2010	Physiology and Behavior Seminar Series, School of Biological Sciences, College of Natural Sciences, University of Texas at Austin. Hosted and taught by David Crews, Ph.D.
October 2009	The Microcircuitry of Autism. Society for Neuroscience Minisymposium, Chicago, IL. Chair: Joshua Trachtenberg, Ph.D.
October 2009	Finding Your Way: The Brain's Mechanisms for Mapping External Space. Society for Neuroscience Special Lecture, Chicago, IL. Speaker: May-Britt Moser, Ph.D.
October 2009	Brain Systems of Learning and Memory. Society for Neuroscience Presidential Special Lecture, Chicago, IL. Speaker: Richard Morris, Ph.D.
October 2009	From Synapses to Autism – Neurexins, Neuroligins, and More. Society for Neuroscience Special Lecture, Chicago, IL. Speaker: Thomas Sudhof, Ph.D.
October 2009	Surviving as a Junior Faculty, Society for Neuroscience Short Course, Chicago, IL. Organizer / Moderator: Diana L. Pettit, Ph.D.
October 2009	The Change We Need: New Frontiers in Live-Cell Imaging, Society for Neuroscience Short Course, Chicago, IL. Organizers / Moderators: Scott M. Thompson, Ph.D., Thomas A. Blanpied, Ph.D.
June 2009	To Academia and Beyond: The Search for a Tenure Track Job, College of Natural Sciences, University of Texas at Austin. Hosted by Lynne McAnelly, Ph.D.
Spring 2009	Systems Neurobiology Journal Club, Section of Neurobiology, School of Biological Sciences, College of Natural Sciences, University of Texas at Austin. Hosted by Nicholas Priebe, Ph.D., Helmut Koester, Ph.D.

Fall 2008 to Spring 2009	Auditory Journal Club, Section of Neurobiology, School of Biological Sciences, College of Natural Sciences, University of Texas at Austin. Hosted by George Pollak, Ph.D., Nace Golding, Ph.D.
November 2008	Neural Signal Processing: Quantitative Analysis of Neural Activity. Society for Neuroscience Short Course, Washington, DC. Organizer / Moderator: Partha P. Mitra, Ph.D.
November 2008	What Songbirds Can Teach Us About Learning and the Brain. Society for Neuroscience Presidential Special Lecture, Washington, DC. Speaker: Allison J. Doupe, M.D., Ph.D.
November 2008	Anatomy and the Problem of Behavior. Fred Kavli Distinguished International Scientist Lecture, Society for Neuroscience, Washington, DC. Speaker: Michael Bate, Ph.D.
Fall 2008	Getting Started as a Successful Grant Writer and Academician, hosted by University of Texas at Austin.
Spring 2008	Neurobiology of Synaptic Circuits Graduate Course, Section of Neurobiology, College of Natural Sciences, University of Texas at Austin. Taught by Kristen Harris, Ph.D.
Spring 2008	Professional Responsibility and Research Ethics Graduate Course, Psychology Department, College of Liberal Arts, University of Texas at Austin. Taught by Erica Lima, Ph.D.,
Fall 2007	Quantifying Brain Structure Graduate Course, Behavioral Neuroscience Section, Psychology Department, College of Liberal Arts, University of Texas at Austin. Taught by Theresa A. Jones, Ph.D.
2007 to 2010	Neurobiology Seminar Series, School of Biological Sciences, College of Natural Sciences, University of Texas at Austin.
2006 to 2008	Behavioral Neuroscience Seminar Series, Psychology Department, College of Liberal Arts, University of Texas at Austin.
Spring 2005	Multisensory Neuroethology Short Course, Department of Biology, College of Arts and Sciences, University of Miami, Miami, FL. Taught by Peter Narins, Ph.D., Distinguished Visiting Professor.
2004 to 2006	Department of Biological Sciences Seminar Series, College of Arts and Sciences, Florida International University.
2001 to 2003	Experimental Zoology Hour, Biology and Psychology Dual Seminar, College of Arts and Sciences, Florida International University. Hosted by Robert Lickliter, Ph.D., Philip Stoddard, Ph.D.

TEACHING EXPERIENCE

Research Supervisor

Undergraduate Research

Behavioral Neuroscience Section, Department of Psychology, College of Liberal Arts, University of Texas at Austin (2006 to 2008). Served as an adviser for several undergraduates and a graduate student for technical training and experimental expertise in Behavioral Neuroscience.

Developmental Psychobiology Laboratory, Psychology Department, College of Arts and Sciences, Florida International University (2001 to 2006).

Served as a mentor / adviser for over fifty undergraduates, almost all with minority status, in issues ranging from technical training and experimental expertise in Developmental Psychobiology, to educational and career counseling.

Honor's Thesis Research Project

Department of Biological Sciences, Psychology Department, College of Arts and Sciences, Florida International University (2001 to 2004).

Served in an intensive mentor / mentee relationship for a dual-major Honor's Thesis project, investigating the role of perinatal arousal in perinatal filial learning and memory, and culminating in a publication.

Graduate Research

University of Texas at Austin, Neuroscience Program (2006 to 2008).

Served as a co-mentor for a graduate student for technical training and experimental expertise in Behavioral Neuroscience.

Developmental Psychobiology Laboratory, Psychology Department, College of Arts and Sciences, Florida International University (2001 to 2006).

Served as a co-adviser for two junior-level graduate students in issues ranging from technical training and experimental expertise in Developmental Psychobiology, to educational and career counseling.

Adjunct Instructor

I taught the following courses as the sole Adjunct Instructor within the Department of Psychology, Florida International University, Miami, FL 33199. Unless otherwise noted, prep was typical for a lecture course. Teacher evaluations available on request.

Developmental Psychology Senior Laboratory (5 credits); Fall 1999; Spring 2000. Duties: Course curriculum planning and design. Duties included editing and grading individual research projects; mentoring students in data collection and statistical analyses for their research projects; lecturing; and devising and grading essay exams.

Research Methods in Psychology, Summer A 1998; Spring 2000; Summer B 2000.
Duties: Course curriculum planning and design. Duties included lecturing; devising and grading essay exams; editing and grading research proposals.

Introduction to the Experimental Analysis of Behavior, Fall 1998; Summer B 1999

Human Growth and Development, Spring 1999

Psychology of Infancy and Childhood, Summer A 1999

Introduction to Psychology, Fall 1999; Summer A 2000

APPLIED EXPERIENCE

Behavior Analyst (July 2000 to November 2000)

Therapeutic Intervention Program, ARC – Broward, Inc.

Supervisor: Wendy Roth, Ph.D., BCBA-D

Start-up of Therapeutic Intervention Program, a unit designed specifically for the behavioral training of approximately thirty children diagnosed with Autism Spectrum Disorder. Designed and implemented Behavior Support Plans, conducted assessments, trained in and monitored program implementation. Population: Children ages 7-12 years old. Children's behaviors were too severe for mainstreaming into classroom.

Senior Behavior Therapist (October 1998 to July 2000)

Behavior Solutions

Supervisor: Emily Branscum, Ph.D., BCBA-D

Conducted functional assessments and wrote plans for skill acquisition and parent training. Population: Typical children with behavior problems and their families; also, children diagnosed with Autism Spectrum Disorders.

Behavior Therapist (April 1997 to April 1999)

Behavior Therapy Group

Supervisor: David Lubin, Ph.D., BCBA-D

Implemented behavior programs for skill acquisition and behavior reduction. Population: Children diagnosed with Pervasive Developmental Disorder – Not Otherwise Specified, Autism Spectrum Disorders.