

Bethany Catherine Reeb

University of New Mexico
Department of Psychology
Logan Hall
Albuquerque, NM 87131
breeb@unm.edu
Tel: 505 277-4931 lab

Education

Ph.D. in Psychology, University of New Mexico, 2006.

M.S. in Psychology, University of New Mexico, 2003.

B.S. in Psychology and Biology (Cum Laude), University of New Mexico, 2000.

Research Experience

Fall 1999-Spring 2000: Research in Dr. Kathy Stansbury's lab. Data collection. Conducted research in an experiment examining the effects of stress on children's spatial memory.

Summer 2000-Present: Research in Dr. Akaysha Tang's lab. Examining the effects of early life stimulation via neonatal novelty exposure on the hypothalamic-pituitary-adrenal axis and how this may modulate both behavioral and anatomical lateralization and performance in multiple learning tasks, including social recognition memory and Morris water maze. More specific interest in how early life stimulation interacts with maternal behavioral and physiological stress and how this may affect males and females differentially. I have had complete involvement in project development, data collection, data coding, and statistical analysis of all projects.

Summer 2004-Spring 2005: Collaborative research with Dr. Tang and Dr. Jerome Kagan, emeritus professor at Harvard University. Specific task included analyzing existing EEG data collected from 11 year old children with SOBI, signal processing tool development in Dr. Tang's lab. Interested in recovering sources from underlying brain regions that may be indicative of biological differences in temperament development.

Teaching Experience

Spring 2005/Fall 2005/Spring 2006: Learning & Memory

Summer 2005: Brain & Behavior

Publications (published)

2002

A.C. Tang, B.A. Pearlmutter, N.A. Malaszenko, D.B. Phung, and B.C. Reeb (2002). Independent Components of Magnetoencephalography: Localization. *Neural Computation*, 14:1827-1858.

2003

Akaysha C. Tang, Masato Nakazawa, and Bethany C. Reeb (2003). Neonatal Novelty Exposure Affects Sex Difference in Open Field Disinhibition. *NeuroReport*, 14:1553-1556.

Akaysha C. Tang, Bethany C. Reeb, Russell D. Romeo, and Bruce S. McEwen (2003). Modification of Social Memory, HPA Axis, and Brain Asymmetry by Neonatal Novelty Exposure. *Journal of Neuroscience*, 23:8254-8260.

2004

A.C. Tang and B.C. Reeb (2004). Neonatal Novelty Exposure, Dynamics of Brain Asymmetry, and Social Recognition Memory. *Developmental Psychobiology*, 44:84-93.

K.G. Akers, B.C. Reeb, and A.C. Tang (2004). Developmentally Stable Sex-Dependent Modulation of Turning Asymmetry by Neonatal Novelty Exposure. *Behavioural Brain Research*, 155: 257-263.

2005

B.C. Reeb and A.C. Tang (2005). Sex Difference in Temporal Patterns of Social Interaction and Its Dependence upon Neonatal Novelty Exposure. *Behavioural Brain Research*, 158: 359-365.

A.C. Tang, M. Nakazawa, R.D. Romeo, B.C. Reeb, H. Sisti, and B.S. McEwen (2005). Effects of Long-Term Estrogen Replacement on Social Investigation and Social Memory in Ovariectomized C57BL/6 Mice. *Hormones & Behavior*, 47: 350-357.

2006

B.C. Reeb and K.G. Akers (2006). Is neuroplasticity of the hypothalamic-pituitary-adrenal axis maternally mediated? *Journal of Neuroscience*, 26: 5589-5590.

Publications (in preparation)

A.C. Tang, B.D. Zou, B.C. Reeb, and J.A. Connor. Asymmetry in hippocampal synaptic plasticity – an epigenetic induction by neonatal novelty exposure. In preparation.

A.C. Tang, K.G. Akers, B.C. Reeb, R.D. Romeo, and B.S. McEwen. What makes an adaptive rat— “better” mothers or early exposure to novelty? In preparation.

A.C. Tang, K.G. Akers, B.C. Reeb, J. Kagan, and R.J. Dolan. Modifying adult dyadic interaction by neonatal novelty exposure. In preparation.

B.C. Reeb and D.C. Witherington. Temperament and experience – an individual developmental approach. In preparation.

A.C. Tang, M. Caplan, and B.C. Reeb. Neonatal novelty exposure attenuates the interfering effects of surprise on spatial working memory. In preparation.

A.C. Tang, M. Caplan, and B.C. Reeb. Induced differences in navigational strategies in the Morris water task by neonatal novelty exposure. In preparation.

A.C. Tang, M. Nakazawa, B.C. Reeb, K.G. Akers, R.D. Romeo, and B.S. McEwen. Neonatal novelty exposure modulates adult corticosterone stress response elicited by the Morris water task. In preparation.

B.C. Reeb, R.D. Romeo, B.S. McEwen, and A.C. Tang. Maternal modulation hypothesis as an alternative to maternal mediation hypothesis. In preparation.

Conferences

2000

“Can Mom Tell Whether You’ve Left Home?-- Evidence From Maternal Observations of the Rat” B. Zou, B. Reeb, T. Verstynen, and A. Tang. *Abs. International Society for Developmental Psychobiology, 2000.*

2001

“Neonatal Novelty Exposure Enhances Social Recognition Memory in Adult Rats” B. Reeb, B. Brown, and A. Tang. *Abs. International Society for Developmental Psychobiology, 2001.*

2002

“Neonatal Novelty Exposure Attenuates the Interfering Effects of Surprise/Uncertainty on Spatial Working Memory” M. Caplan, B. Reeb, and A.C. Tang. *Abs. International Society for Developmental Psychobiology, 2002.*

“Dynamics of Functional Brain Asymmetry Predict Changes in Social Investigation and Is Modulated by Neonatal Novelty Exposure” A.C. Tang and B. Reeb. *Abs. International Society for Developmental Psychobiology, 2002.*

“Neonatal Novelty Exposure Enhances Sex Difference in Social Interaction” B. Reeb, M. Nakazawa, and A.C. Tang. *Abs. International Society for Developmental Psychobiology Annual Conference 2002.*

“Neonatal Novelty Exposure Induces Long Lasting Enhancement in Long Term Depression (LTD) in the Right Hippocampus of Adult Rats” B.D. Zou, B. Reeb, and A.C. Tang. *Abs. Society for Neuroscience, 2002.*

2003

“Source Localization from High Density EEG Data During a Real World Task” A.C. Tang, C.J. McKinney, M.T. Sutherland, L. Parra, B.C. Reeb, N.A. Malaszenko, A. Gerson, and P. Sajda. *Abs. Society for Neuroscience, 2003.*

“SOBI Analysis of Electroencephalographic Data and Exploration of Critical Parameters” C.J. McKinney, M.T. Sutherland, N.A. Malaszenko, B.C. Reeb, and A.C. Tang. *Abs. Society for Neuroscience, 2003.*

“Effects of Estrogen Replacement on Hypothalamic-Pituitary-Adrenal (HPA) Axis, Social Recognition, and Open Field Behavior” M. Nakazawa, A.C. Tang, B.C. Reeb, H.M. Sisti, R.D. Romeo, and B.S. McEwen. *Abs. Society for Neuroscience, 2003*

“Neonatal Novelty Exposure Modulates Sex Differences in Turning Bias” K.G. Akers, B.C. Reeb, and A.C. Tang. *Abs. Society for Neuroscience, 2003*

“Daily Changes in the Rat's Spontaneous Turning Behavior During the First Three Weeks of Post-Natal Life” M. Nakazawa, B. Reeb, A. Murley, and A.C. Tang. *Abs. International Society for Developmental Psychobiology, 2003.*

“Sex Differences in Social Recognition Memory in a Longitudinal Study of the Rat” B.C. Reeb and A.C. Tang. *Abs. International Society for Developmental Psychobiology, 2003.*

“Neonatal Novelty Exposure Modulates Adult Corticosterone Stress Response Elicited by the Morris Water Maze Test” A.C. Tang, B. Reeb, M. Nakazawa, R.D. Romeo, K.G. Akers, and B.S. McEwen. *Abs. International Society for Developmental Psychobiology, 2003.*

2004

“Modification of Social Memory and Brain Asymmetry by Neonatal Novelty Exposure” A.C. Tang and B.C. Reeb. *Abs. American Psychological Society, 2004.*

“Neonatal Stimulation and Adult Social Control” K.G. Akers, M. Nakazawa, B.C. Reeb, A.C. Tang, R.D. Romeo, and B.S. McEwen. *Abs. Society of Behavioral Neuroendocrinology, 2004.*

2006

“Maternal modulation hypothesis as an alternative to maternal mediation hypothesis”
B.C. Reeb, R.D. Romeo, K.G. Akers, B.S. McEwen, and A.C. Tang. *Abs. International Congress of Neuroendocrinology*, 2006.

“Maternal modulation hypothesis as an alternative to maternal mediation hypothesis”
B.C. Reeb, R.D. Romeo, K.G. Akers, B.S. McEwen, and A.C. Tang. *Abs. Society for Neuroscience*, 2006.

“Explaining early stimulation effect: maternal mediation or maternal modulation?” B.C. Reeb, R.D. Romeo, B.S. McEwen, A.C. Tang. *Abs. International Society for Developmental Psychobiology*, 2006.

“Negative maternal behavior predicts offspring’s spatial cognition” A.M. Korzekwa, E. Jaetao, B.C. Reeb, A.C. Tang. *Abs. International Society for Developmental Psychobiology*, 2006.

“What makes an adaptive rat – “better” mothers or early exposure to novelty?” A.C. Tang, K.G. Akers, B.C. Reeb, A.M. Korzekwa, L.N. Rogers. *Abs. International Society for Developmental Psychobiology*, 2006.

“‘Social control’ between two strangers – impact of neonatal novelty exposure on adult social interaction” K.G. Akers, B.C. Reeb, R.D. Romeo, B.S. McEwen, J. Kagan, R.J. Dolan, A.C. Tang. *Abs. International Society for Developmental Psychobiology*, 2006.

Professional Associations

International Society of Developmental Psychobiology Graduate Student Affiliate, 2000-Present
Society for Neuroscience Graduate Student Affiliate, 2000-Present
Association for Psychological Science Graduate Student Affiliate, 2003-Present
International Congress for Neuroendocrinology Graduate Student Affiliate, 2005-Present
Women In Neuroscience, 2004-Present

Awards and Honors

Student Travel Award from the International Society for Developmental Psychobiology to attend and present at their annual conference, 2000-2002.

Symposium Fellowship Award from the Health and Emotions Research Institute to attend their annual symposium, 2004 & 2006.

Young Investigators Student Travel Award to attend and present at the International Congress for Neuroendocrinology, 2006

Young Investigators Poster Award, International Congress for Neuroendocrinology, 2006.

Grants Received

“Effects of Maternal Stress on Offspring’s Learning”, Student Research Allocations Committee (SRAC) grant: \$255, given to conduct research at The University of New Mexico, 2002.

“Effects of Maternal Stress on Offspring Development”, Research, Projects, and Travel (RPT) grant: \$975, given to conduct research at The University of New Mexico, 2005.

“Effects of Maternal Stress on Offspring Development”, Student Research Allocations Committee (SRAC) grant: \$500, given to conduct research at The University of New Mexico, 2006.

“Asymmetric frontal activation and reactivity to novelty in inhibited and uninhibited children”, Large Research Allocations Committee (RAC) grant: \$7,325, given to Dr. Akaysha Tang and Bethany Reeb to conduct research at Harvard University and The University of New Mexico, 2004.

Student Involvement

Graduate Association of Students in Psychology, President, 2004-2006

Graduate Association of Students in Psychology, Treasurer, 2004-2006

Skills

Laboratory Skills: Behavioral data coding, handling and caring for laboratory animals, statistical analysis, histology, serology, cytology, and microbiology techniques.

Computer Skills: Use of Windows and Linux platforms; use of MS Excel, SPSS, MS Word, Pine, LaTeX, Emacs, beginner C++, MatLab; familiar with various brain imaging tools: SOBI, BESA, Neuroscan.

References

Dr. Akaysha Tang, Associate Professor
Department of Psychology
Logan Hall
University of New Mexico
Albuquerque, NM 87131
Tel: 505 277-4025 office
Tel: 505 277-5397/4931 lab
akaysha@unm.edu

Dr. David Witherington, Assistant Professor
Department of Psychology
Logan Hall
University of New Mexico
Albuquerque, NM 87131
Tel: 505 277-4805 office
dcwither@unm.edu