MICHAEL J. JUTRAS

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Education

Sep 2004 – present — Ph.D. (expected), Program in Neuroscience, Emory University, Atlanta, Georgia
- Advisor: Elizabeth Buffalo, Ph.D.

Sep 1999 – May 2003 — B.S. with Honors, Brown University, Providence, Rhode Island
- Concentration: Behavioral Neuroscience
- Honors Thesis: "A Behavioral Analysis of the Connexin36 Knockout Mouse;" Advisors: Rebecca Burwell, Ph.D. & Barry Connors, Ph.D.

Research Experience

Oct 2005 – present — Emory University, Atlanta, Georgia
Advisor: Elizabeth Buffalo, Ph.D.
- Combining behavioral techniques with *in vivo* electrophysiology to investigate the neurophysiological mechanisms underlying learning and memory in nonhuman primates.

Aug 2006 — Neuroinformatics Course, Marine Biological Laboratory, Woods Hole, Massachusetts
- Intensive two-week course focusing on issues related to the analysis of time-series data gathered in a neuroscientific context.

Neuroscience Graduate Program Rotations, Emory University, Atlanta, Georgia:

Aug 2005 – Sept 2005 — Rotation advisor: Michael Mustari, Ph.D.
- Investigated physiological properties of neurons in primate brain areas MT and MST.

Jan 2005 – July 2005 — Rotation advisor: Dieter Jaeger, Ph.D.
- Investigated cortical response properties and cortical-striatal interactions during high-frequency stimulation of subthalamic nucleus in rodents.

Sept 2004 – Dec 2004 — Rotation advisors: Michael Owens, Ph.D. & Charles Nemeroff, Ph.D.
- Studied fluctuations in the level of erythropoietin gene expression in rodent hippocampus in response to a stressor, using corticosterone injections as a model.

Jun 2002 – Aug 2004 — Brown University, Providence, Rhode Island;
Advisor: Rebecca Burwell, Ph.D.

- Carried out research for undergraduate honors thesis characterizing the motor behavior and circadian rhythms of the connexin36 knockout mouse.
- Took part in a study investigating the time-dependent role of the hippocampus, perirhinal cortex and postrhinal cortex in contextual memory in rodents.
- Learned statistical analysis and computer programming for behavioral neuroscience research.

Jun 2001 – May 2003 Brown University, Providence, Rhode Island;
Advisor: Barry Connors, Ph.D.

- Took part in a study investigating the development of cortical interneurons in rodent barrel cortex.
- Took part in a collaborative study investigating the role of electrical synapses in the suprachiasmatic nucleus in the generation of circadian rhythms.
- Used histological techniques to examine brain tissue.
- Bred transgenic mice for use in experiments, and genotyped them using PCR.

Teaching Experience

Fall 2005 Teaching Assistant for Introduction to Neurobiology (NBB 301/BIOL 360), Emory University

Aug 2005 Completed Emory University's Teaching Assistant Training and Teaching Program

Awards

July 2007 Society for Neuroscience Chapters Graduate Student Travel Award

Sept 2004 – Aug 2006 NIH Training Grant: Training in Systems and Integrative Biology: Neuroscience (5T32GM008605-10).

May 2003 Richard E. Whalen Award for Undergraduate Research Excellence in Neuroscience and Behavioral Biology, Department of Psychology, Brown University.

May 2001 Undergraduate Teaching and Research Award, Brown University

Publications

Li, S., Arbuthnott, G.W., **Jutras, M.J.**, Goldberg, J., and Jaeger, D. Resonant antidromic cortical circuit activation as a consequence of high-frequency subthalamic deep-brain stimulation. In review.

Long, M.A., Cruikshank, S.J., **Jutras, M.J.**, and Connors, B.W. (2005). Abrupt Maturation of a Spike-Synchronizing Mechanism in Neocortex. *Journal of Neuroscience* 25: 7309-7316.

Long, M.A.*, **Jutras, M.J.***, Connors, B.W., and Burwell, R.D. (2005). Electrical synapses coordinate activity in the suprachiasmatic nucleus. *Nature Neuroscience* 8: 61-66.

Burwell, R.D., Bucci, D.J., Sanborn, M.R., and **Jutras, M.J.** (2004). Perirhinal and Postrhinal Contributions to Remote Memory for Context. *Journal of Neuroscience* 24: 11023-11028.

* *co-first authors*

Abstracts

Jutras, M.J., Fries, P., and Buffalo, E.A. Hippocampal Gamma-Band Synchronization During Encoding Predicts Successful Recognition Memory. Society for Neuroscience Abstract 2006.

Li, S., Arbuthnott, G.W., **Jutras, M.J.**, Goldberg, J., and Jaeger, D. Resonant antidromic cortical circuit activation during subthalamic deep-brain stimulation. Society for Neuroscience Abstract 2006.

Jutras, M.J., Fries, P., and Buffalo, E.A. Gamma-Frequency Synchronization in the Hippocampus Predicts Successful Recognition Memory. Statistical Analysis of Neural Data Abstract 2006.

Hanson, N.D., **Jutras, M.J.**, Plotsky, P.M., Nemeroff, C.B., and Owens, M.J. Short-Term Corticosterone Administration Does Not Change Erythropoietin Receptor Expression in the Rat Hippocampus. Society of Biological Psychiatry Abstract 2005.

Burwell, R.S., Lester-Coll, N.H., and **Jutras, M.J.** The Effects of Combined Perirhinal and Postrhinal Damage on a Serial Feature Positive and Feature Negative Discrimination Task. Society for Neuroscience Abstract 2004.

Jutras, M.J., Long, M.A., Burwell, R.D., and Connors, B.W. Electrical Synapses in the Suprachiasmatic Nucleus. Society for Neuroscience Abstract 2004.

Long, M.A., **Jutras, M.J.**, and Connors, B.W. Abrupt Developmental Onset of Synchronous Activity Mediated by Electrically Coupled Inhibitory Interneurons in Rat Neocortex. Society for Neuroscience Abstract 2002.

Professional Memberships

Sept 2003 – present	Member, Society for Neuroscience
Aug 2006 – present	Graduate Member, Center for Behavioral Neuroscience, Atlanta, Georgia