Curriculum Vitae
John H. Freeman

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Address

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Educational and Professional History

1. Higher Education

1994	Ph.D., Psychology, University of North Carolina at Chapel Hill
1989	B.A., Psychology, University of California at Berkeley

2. Professional and Academic Positions

2012-	Chair, Institutional Animal Care and Use Committee, The University of Iowa
2010 -	Stuit Faculty Fellow
2007-	Professor, Department of Psychological and Brain Sciences, The University of Iowa
2007-2013	Associate Editor, *Behavioral Neuroscience*
2002-2007	Associate Professor, Department of Psychological and Brain Sciences, The University of Iowa
1998-2002	Assistant Professor, Department of Psychological and Brain Sciences, The University of Iowa
1997-1998	Postdoctoral Fellow, National Institutes of Health
1995-1997	Postdoctoral Fellow, University of Illinois at Urbana/Champaign

3. Honors and Awards

Pavlovian Research Award, Pavlovian Society, 2009
Career Development Award, 2009
Developmental Leave Award, 2003
David Kucharski Young Investigator Award, International Society for Developmental Psychobiology, 2000.
Old Gold Fellowship, University of Iowa, 1998
NIH Intramural Research Training Award, 97-98
New Investigator Award from the Neurobehavioral Teratology Society**,** 1996
NRSA postdoctoral fellowship, 95-97
NRSA predoctoral fellowship 92-94

4. Memberships

Society for Neuroscience (Society Journal = *The Journal of Neuroscience*)
International Society for Developmental Psychobiology (Society Journal = *Developmental Psychobiology*)
Pavlovian Society (Society Journal = *Integrative Physiological & Behavioral Science*)

Teaching

1. Courses

Introduction to Behavioral Neuroscience
Neuroscience of Learning and Memory
Behavioral Neuroscience (Neuroethology)
Psychology of Learning
Senior Seminar
Foundations of Behavioral and Cognitive Neuroscience (Graduate)
Advanced Topics in BCN (Graduate)

2. Ph.D. Theses Supervised

Daniel A. Nicholson. The Development of Olivocerebellar Interactions: Implications for the Ontogeny of Eyeblink Conditioning. Psychology, 2003. (NRSA, Lewis Award, Gormezano Award). Associate Professor, Rush University College of Medicine.
Brian C. Nolan. Neurobiological Mechanisms of Conditioned Excitation and Conditioned Inhibition of the Eyeblink Response in Rats. Neuroscience, 2004. Associate Professor, Missouri Valley College.
Hunter E. Halverson. Auditory and Visual Conditioned Stimulus Pathways for Eyeblink Conditioning. Psychology, 2008. (Gormezano Award). Research Assistant Professor, University of Texas – Austin.
Matthew M. Campolattaro. Cross-Modal Savings of the Classically Conditioned Eyeblink Response. Psychology, 2009. (Lewis Award, Gormezano Award). Assistant Professor, Christopher Newport University.
Adam B. Steinmetz. Role of Central Cannabinoid Receptors in Cerebellum Dependent Learning. Psychology, 2014 (Simon Award, APA Dissertation Award, Lewis Award). National Institute on Aging, National Institutes of Health.
Mary Goldsberry. Sensory System Contributions to the Development of Trace and Delay Eyeblink Conditioning. Psychology, 2016. (Simon Award).

3. Current Ph.D. Students
Sean Farley, **Matthew Broschard**

4. M.S. Thesis Supervised
Lara Cemo, 2016.

5. Postdoctoral Trainees
Alireza Kashef, PhD, Research Fellow, Nanyang Technological University, Singapore.
Kevin Brown, PhD, Assistant Professor, Drake University.

Jangjin Kim, PhD, current.

6. Research Advisory Committees
Brandon Schmidt (Luck), Gale Kleven (Robinson), Shujing Shu (Wasserman), Angela Grippo (Johnson), Shawn Lewis (Blumberg), Norma DiPietro (Wasserman, Freeman, Poremba), Andrea Frank (Wasserman), Karl Karlsson (Blumberg), Michele Brumley (Robinson), Daniel Nicholson (Freeman), Elisa Na (Johnson), Michael Morris (Johnson), Emrah Aktunc (Poremba), Matthew Campolattaro (Freeman), Brad Hurst (Johnson), Mark Maher (Freeman), Adele Seelke (Blumberg), Ethan Mohns (Blumberg), Bethany Plakke (Poremba), Damon Ng (Poremba), Philomina Varghese (Johnson), Amy Jo Marcano-Reik (Blumberg), Hunter Halverson (Freeman), Kathryn Devine (Robinson), William Todd (Blumberg), Ryan Opheim (Poremba), Jang Jin Kim (Lee), Mary Goldsberry (Freeman), Adam Steinmetz (Freeman), James Bigelow (Poremba), Alex Tiriac (Blumberg), Tobin Davis (Freeman), Breein Rossi (Poremba), Brandt Uitermarkt (Blumberg), Mary Huff (Lalumiere), Sean Farley (Freeman), Carlos del Rio Bermudez (Blumberg), Darin Casler (Wasserman), Jessica Bowden (Poremba), Ryan Lingg (Radley), Matt Broschard (Freeman).

7. Dissertation Committees
Greta Sokoloff (Blumberg), Jessie Peissig (Wasserman), Joy Kreider (Blumberg), Xiaotian Zhong (Wu, Biology), Brian Nolan (Freeman, Neuroscience), Dan Nicholson (Freeman), Angela Grippo (Johnson), Anne Shutte (Spencer), Anna Hutton (Pantazis, Neuroscience), Ross McKim (Pantazis, Neuroscience), Karl Karlsson (Blumberg), Michele Brumley (Robinson), Gale Kleven (Robinson), Andrea Frank (Wasserman), Adele Seelke (Blumberg), Elisa Na (Johnson), Michael Morris (Johnson), Hunter Halverson (Freeman), Matthew Coryell (Wemmie, Neuroscience), Ethan Mohns (Blumberg), Daniel Brooks (Wasserman), Bethany Plakke (Poremba), Chi-Wing Ng (Poremba), Valerie Mendez-Gallardo (Robinson), Matthew Campolattaro (Freeman), Donald Lamkin (Lutgendorf/Johnson), William Todd (Blumberg), Andy Gall (Blumberg), Adam Steinmetz (Freeman), Rebecca Taugher (Wemmie, Neuroscience), Alex Tiriac (Blumberg), Mary Huff (LaLumiere), Mary Goldsberry (Freeman), Cate Cosme (LaLumiere), Rachel Anderson (Radley), Alan Plumeau (Blumberg, Neuroscience), Carlos del Rio Bermudez (Blumberg), Sean Farley (Freeman), Victoria Muller-Ewald (LaLumiere).

8. Undergraduate ICRU Fellows
Eric Buss, Thomas Harmon, Magdalyn Elkin, Jonathan Schacherer

9. Summer Research Fellowship (Medical Student Research Program)
Heba Albazboz

10. Honors Theses Supervised
Kimberly Loftus, Adam Muckler, Joshua Lukenbill, Christine Rabinak, Eric Buss, Thomas Harmon, Magdalyn Elkin, Jonathan Schacherer

Research

1. Publications

A. Refereed

Steinmetz, A.B., Ng, K.H., & Freeman, J.H. (2017). Memory consolidation within the central amygdala is not necessary for modulation of cerebellar learning. *Learning & Memory*, in press.

Goldsberry, M.E., Kim, J., & Freeman, J.H. (2017). Sensory system development influences the ontogeny of hippocampal associative coding and trace eyeblink conditioning. *Neurobiology of Learning and Memory*, in revision.

Goldsberry, M.E., & Freeman, J.H. (2017). Sensory system development influences the ontogeny of trace eyeblink conditioning. *Developmental Psychobiology*, 59, 70-76.

Steinmetz, A.B., & Freeman, J.H. (2016). Cannabinoid modulation of memory consolidation within the cerebellum. *Neurobiology of Learning and Memory*, 136, 228-235.

Kim, J., Goldsberry, M.E., Harmon, T.C., & Freeman, J.H. (2016). Developmental changes in hippocampal CA1 single neuron firing and theta activity during associative learning. *PloS One*, 11, 1-22.

Brown, K.L., & Freeman, J.H. (2016). Retention of eyeblink conditioning in periweanling and adult rats. *Developmental Psychobiology*, 58, 1055-1065.

Farley, S.J., Radley, J.J., & Freeman, J.H. (2016). Amygdala modulation of cerebellar learning. *The Journal of Neuroscience*, *36*, 2190 –2201. PMC4756154

Kim, J., Wasserman, E.A., Castro, L., & Freeman, J.H. (2016). Anterior cingulate cortex inactivation impairs rodent visual selective attention and prospective memory. *Behavioral Neuroscience*, 130, 75-90. PMC4738143

Campolattaro, M.M., Buss, E.W., & Freeman, J.H. (2015). Cross-modal savings in the contralateral eyelid conditioned response. *Behavioral Neuroscience*, 129, 683-691. PMC4658293

Halverson, H.E., Poremba, A., & Freeman, J.H. (2015) Medial auditory thalamus is necessary for acquisition and retention of eyeblink conditioning to cochlear nucleus stimulation. *Learning & Memory, 22*, 258-266. PMC4408770

Goldsberry, M.E., Kim, J., & Freeman, J.H. (2015). Developmental changes in hippocampal associative coding. *The Journal of Neuroscience, 35*, 4238-4247. PMC4355197

Harmon, T.C., & Freeman, J.H. (2015). Ontogeny of septohippocampal modulation of delay eyeblink conditioning. *Developmental Psychobiology, 57*, 168-176. PMC4336210

Freeman, J.H. (2015). Cerebellar learning mechanisms. *Brain Research Special Issue. Brain and Memory: Old Arguments and New Perspectives. Brain Research, 1621*, 260-269. PMC4385749

Brown, K.L., & Freeman, J.H. (2014). Extinction, reacquisition, and rapid forgetting of eyeblink conditioning in developing rats. *Learning & Memory, 21*, 696-708. PMC4236410

Kashef, A., Campolattaro, M.M., & Freeman, J.H. (2014). Learning-related neuronal activity in the ventral lateral geniculate nucleus during associative cerebellar learning. *Journal of Neurophysiology*, 112, 2234-2250. PMC4274918

Steinmetz, A.B., & Freeman, J.H. (2014). Localization of the cerebellar cortical zone mediating acquisition of eyeblink conditioning in rats. *Neurobiology of Learning and Memory*, 114, 148-154. PMC4143471

Freeman, J.H. (2014). The ontogeny of associative cerebellar learning. *International Review of*

Neurobiology, 117, 53-72. PMID: 25172629
Goldsberry, M.E., Elkin, M.E., & Freeman, J.H. (2014). Sensory system developmental influences the ontogeny of eyeblink conditioning. *Developmental Psychobiology*, 56, 1244-1251. PMC4119521
Ng, K., & Freeman, J.H. (2014). Amygdala inactivation impairs eyeblink conditioning in developing rats. *Developmental Psychobiology*, 56, 999-1007. PMC4032812
Parker, K.L., Andreasen, N.C., Liu, D., Freeman, J.H., & O'Leary, D.S. (2013). Eyeblink conditioning in unmedicated schizophrenia patients: A positron emission tomography study. *Psychiatry Research*, 214, 402-409. PMC3980571
Steinmetz, A.B., Harmon, T.C., & Freeman, J.H. (2013). Visual cortical contributions to associative cerebellar learning. *Neurobiology of Learning and Memory*, 104, 103-109. PMC3753663
Steinmetz, A.B., Buss, E.W., & Freeman, J.H. (2013). Inactivation of the ventral lateral geniculate and nucleus of the optic tract impairs retention of visual eyeblink conditioning. *Behavioral Neuroscience*, 127, 690-693. PMC3967585
Steinmetz, A.B., & Freeman, J.H. (2013). Differential effects of the cannabinoid agonist WIN55,212-2 on delay and trace eyeblink conditioning. *Behavioral Neuroscience*, 127, 694-702. PMC3963426
Brooks, D.I., Ng, K.H., Buss, E.W., Marshall, A.T., Freeman, J.H., & Wasserman, E.A. (2013). Categorization of photographic images by rats using shape-based image dimensions. *Journal of Experimental Psychology Animal Behavior Processes*, 39, 85-92.
Ng, K., & Freeman, J.H. (2012). Developmental changes in medial auditory thalamic contributions to associative motor learning. *The Journal of Neuroscience*, 32, 6841-6850. PMC3362655
Parker, K.L., Andreasen, N.C., Liu, D., Freeman, J.H., Boles Ponto, L.L., & O'Leary, D.S. (2012). Eyeblink conditioning in healthy adults: a positron emission tomography study. *The Cerebellum*, 11, 946-956. PMC3835594
Wasserman, E.A., Castro, L., & Freeman, J.H. (2012). Same-different categorization in rats. *Learning & Memory*, 19, 142-145.
Freeman, J.H., and Steinmetz, A.B. (2011). Neural circuitry and plasticity mechanisms underlying delay eyeblink conditioning. *Learning & Memory*, 18, 666–677. PMC3861981
Steinmetz, A.B., & Freeman, J.H. (2011). Retention and extinction of delay eyeblink conditioning are modulated by central cannabinoids. *Learning & Memory*, 18, 634–638. PMC3256566
Campolattaro, M.M., Kashef, A., Lee, I., & Freeman, J.H. (2011). Neuronal correlates of cross-modal transfer in the cerebellum and pontine nuclei. *The Journal of Neuroscience*, 31, 4051– 4062. PMC3069920
Steinmetz, A.B., & Freeman, J.H. (2010). Central cannabinoid receptors modulate acquisition of eyeblink conditioning. *Learning & Memory*, 17, 571-576. PMC2981415
Halverson, H.E., Lee, I., & Freeman, J.H. (2010). Associative plasticity in the medial auditory thalamus and cerebellar interpositus nucleus during eyeblink conditioning. *The Journal of Neuroscience*, 30, 8787-8796. PMC2914487
Halverson, H.E., & Freeman, J.H. (2010).Ventral lateral geniculate input to the medial pons is necessary for visual eyeblink conditioning in rats. *Learning & Memory*, 17, 80-85. PMC2825698
Halverson, H.E., Poremba, A. & Freeman, J.H. (2010). Medial auditory thalamic input to the lateral pontine nuclei is necessary for auditory eyeblink conditioning. *Neurobiology of Learning and Memory*, 93, 92-98. PMC2815143
Campolattaro, M.M., & Freeman, J.H. (2009). Examination of bilateral eyeblink conditioning in rats. *Behavioral Neuroscience*, 123, 1346-1352. PMC2830096

Halverson, H.E., Hubbard, E.M., & Freeman, J.H. (2009). Stimulation of the lateral geniculate, superior colliculus, or visual cortex is sufficient for eyeblink conditioning in rats. *Learning & Memory*, 16, 300-307. PMC2683004

Plakke, B., Freeman, J.H., & Poremba, A. (2009). Metabolic mapping of the rat forebrain and midbrain during delay and trace eyeblink conditioning. *Neurobiology of Learning and Memory*, 92, 335-344. PMC3630995

Campolattaro, M.M., & Freeman, J.H. (2009). Cerebellar inactivation impairs cross modal savings of eyeblink conditioning. *Behavioral Neuroscience*, 123, 292-302. PMC2679372

Freeman, J.H., & Campolattaro, M.M. (2008). Ontogenetic change in the auditory conditioned stimulus pathway for eyeblink conditioning. *Learning & Memory*, 15, 823-828. PMC2632811

Freeman, J.H., & Duffel, J. (2008). Eyeblink conditioning using cochlear nucleus stimulation as a conditioned stimulus in developing rats. *Developmental Psychobiology*, 50, 640-646. PMC2637147

Campolattaro, M.M., & Freeman, J.H. (2008). Eyeblink conditioning in 12-day-old-rats using pontine stimulation as the conditioned stimulus. *Proceedings of the National Academy of Sciences (USA)*, 105, 8120-8123. PMC2430369

Halverson, H.E., Poremba, A., & Freeman, J.H. (2008). Medial auditory thalamus inactivation prevents acquisition and retention of eyeblink conditioning. *Learning & Memory*, 15, 532-538. PMC2505321

Campolattaro, M.M., Schnitker, K.M., & Freeman, J.H. (2008). Changes in inhibition during differential eyeblink conditioning with increased training. *Learning & Behavior*, 36, 158-164. PMC2556363

Freeman, J.H., Halverson, H.E., & Hubbard, E.M. (2007). Inferior colliculus lesions impair eyeblink conditioning in rats. *Learning & Memory*, 14, 842-846. PMC2151021

Plakke, B., Freeman, J.H., & Poremba, A. (2007). Metabolic mapping of the rat cerebellum during delay and trace eyeblink conditioning. *Neurobiology of Learning and Memory*, 88, 11-18. PMC2556373

Campolattaro, M.M., Halverson, H.E., & Freeman, J.H. (2007). Medial auditory thalamic stimulation as a conditioned stimulus for eyeblink conditioning in rats. *Learning & Memory*, 14, 152-159. PMC1838556

Hunt, P.S., Fanselow, M.S., Richardson, R., Mauk, M.D., Freeman, J.H., and Stanton, M.E. (2007). Synapses, Circuits and the Ontogeny of Learning. *Developmental Psychobiology*, 49, 649-663.

Campolattaro, M.M., & Freeman, J.H. (2006). Perirhinal cortex lesions impair feature-negative discrimination. *Neurobiology of Learning and Memory*, 86, 205-213. PMC2556371

Halverson, H.E., & Freeman, J.H. (2006). Medial auditory thalamic nuclei are necessary for eyeblink conditioning. *Behavioral Neuroscience*, 120, 880-887. PMC2556365

Campolattaro, M.M., & Freeman, J.H. (2006). Perirhinal cortex lesions impair simultaneous but not serial feature-positive discrimination learning. *Behavioral Neuroscience*, 120, 970-975. PMC2556364

Nolan, B.C., & Freeman, J.H. (2006). Purkinje cell loss by OX7-saporin impairs acquisition and extinction of eyeblink conditioning. *Learning & Memory*, 13, 359-365. PMC1475818

Freeman, J.H., Jr., Rabinak, C.A., & Campolattaro, M. (2005). Pontine stimulation overcomes developmental limitations in the neural mechanisms of eyeblink conditioning. *Learning & Memory*, 12, 255-259. PMC1142453

Nolan, B.C., & Freeman, J.H., Jr. (2005). Purkinje cell loss by OX7-saporin impairs excitatory and inhibitory eyeblink conditioning. *Behavioral Neuroscience*, 119, 190-201. PMC1393287

Freeman, J.H., Jr., Halverson, H.E., & Poremba, A. (2005). Differential effects of cerebellar inactivation on eyeblink conditioned excitation and inhibition. *The Journal of Neuroscience*, 25, 889-895. PMC1249522

Freeman, J.H., Jr., & Rabinak, C.A. (2004). Eyeblink conditioning in rats using pontine stimulation as a conditioned stimulus. *Integrative Physiological & Behavioral Science*, 39, 180-191. PMC1249521

Lim, R., Zaheer, A., Khosravi, H., Freeman, J.H., Jr., Halverson, H.E., Wemmie, J.A., & Yang, B. (2004). Impaired motor performance and learning in glia maturation factor-knockout mice. *Brain Research*, 1024, 225-232.

Nicholson, D.A., & Freeman, J.H., Jr. (2004). Selective developmental increase in the climbing fiber input to the cerebellar interpositus nucleus in rats. *Behavioral Neuroscience*, 118, 1111-1116. PMC2546608

Freeman, J.H., Jr., & Nicholson, D.A. (2004). Developmental changes in the neural mechanisms of eyeblink conditioning. *Behavioral and Cognitive Neuroscience Reviews*, 3, 3-13. PMC2556367

Nicholson, D.A., & Freeman, J.H., Jr. (2004). Developmental changes in eyeblink conditioning and simple spike activity in the cerebellar cortex. *Developmental Psychobiology*, 44, 45-57.

Freeman, J.H., Jr., & Muckler, A.S. (2003). Developmental changes in eyeblink conditioning and neuronal activity in the pontine nuclei. *Learning & Memory*, 10, 337-345.

Nicholson, D.A., & Freeman, J.H., Jr. (2003). Developmental changes in evoked Purkinje cell complex spike responses. *Journal of Neurophysiology*, 90, 2349-2357.

Wemmie, J.A., Askwith, C.C., Lamani, E., Cassell, M.D., Freeman, J.H., Jr., & Welsh, M.J. (2003). Acid-sensing ion channel 1 is localized in brain regions with high synaptic density and contributes to fear conditioning. *The Journal of Neuroscience*, 23, 5496-5502.

Nicholson, D.A., Sweet, J.A., & Freeman, J.H., Jr. (2003). Long-term retention of the classically conditioned eyeblink response in rats. *Behavioral Neuroscience*, 117, 871-875.

Nicholson, D.A, & Freeman, J.H. Jr. (2003). Addition of inhibition in the olivocerebellar system and the ontogeny of a motor memory. *Nature Neuroscience*, 6, 532-537.

Freeman, J.H. Jr., Nicholson, D.A., Muckler, A., Rabinak, C., & DiPietro, N.T. (2003). Ontogeny of eyeblink conditioned response timing in rats. *Behavioral Neuroscience*, 117, 283-291.

Nolan, B.C., Nicholson, D.A., & Freeman, J.H., Jr. (2002). Blockade of $GABA_A$ receptors in the interpositus nucleus modulates expression of conditioned excitation but not conditioned inhibition of the eyeblink response. *Integrative Physiological & Behavioral Science*, 37, 293-310.

Kleim*, J.A., Freeman*, J.H., Jr., Bruneau, R., Nolan, B.C., Cooper, N.R., Zook, A., & Walters, D. (2002). Synapse formation is associated with memory storage in the cerebellum. *Proceedings of the National Academy of Sciences (USA)*, 99, 13228-13231. (* equal contribution)

Smith, D.M., Freeman, J.H., Jr., Nicholson, D.A., & Gabriel, M. (2002). Limbic thalamic lesions, appetitively motivated discrimination learning, and training-induced neuronal activity in rabbits. *The Journal of Neuroscience*, 22, 8212-8221.

Wemmie, J.A., Chen, J., Askwith, C.C., Hruska-Hageman, A.M., Price, M.P., Nolan, B.C., Yoder, P.G., Lamani, E., Hoshi, T., Freeman, J.H., Jr., & Welsh, M.J. (2002). The acid-activated ion channel ASIC contributes to synaptic plasticity, learning, and memory. *Neuron*, 34, 463-477.

Nicholson, D.A., & Freeman, J.H., Jr. (2002). Medial dorsal thalamic lesions impair latent inhibition and blocking of the conditioned eyeblink response in rats. *Behavioral Neuroscience*, 116, 276-285.

Nicholson, D.A., & Freeman, J.H., Jr. (2002). Neuronal correlates of conditioned inhibition of the eyeblink response in the anterior interpositus nucleus. *Behavioral Neuroscience*, 116, 22-36.

Smith, D.M., Monteverde, J., Schwartz, E., Freeman, J.H., Jr., & Gabriel, M. (2001). Lesions in the central nucleus of the amygdala: effects on discriminative avoidance learning, discriminative approach learning and cingulothalamic training-induced neuronal activity. *Neurobiology of Learning & Memory*, 76, 403-425.

Freeman, J.H., Jr., & Nicholson, D.A. (2001). Ontogenetic changes in the neural mechanisms of eyeblink conditioning. *Integrative Physiological and Behavioral Science*, 36, 15-35.

Nicholson, D.A. & Freeman, J.H., Jr. (2000). Developmental changes in eye-blink conditioning and neuronal activity in the inferior olive. *The Journal of Neuroscience*, 20, 8218-8226.

Freeman, J.H., Jr., & Nicholson, D.A. (2000). Developmental changes in eye-blink conditioning and neuronal activity in the cerebellar interpositus nucleus. *The Journal of Neuroscience*, 20, 813-819.

Nicholson, D.A., & Freeman, J.H., Jr. (2000). Lesions of the perirhinal cortex impair sensory preconditioning in rats. *Behavioural Brain Research*, 112, 69-75.

Stanton, M.E. & Freeman, J.H., Jr. (2000). Developmental studies of eyeblink conditioning in a rat model. In D.S. Woodruff-Pak and J.E. Steinmetz (Eds.) Eyeblink classical conditioning: Animal. Amsterdam: Kluwer Academic Publishers.

Freeman, J.H., Jr., & Nicholson, D.A. (1999). Neuronal activity in the cerebellar interpositus and lateral pontine nuclei during inhibitory classical conditioning of the eyeblink response. *Brain Research*, 833, 225-233.

Freeman, J.H., Jr., & Gabriel, M. (1999). Changes of cingulothalamic topographic excitation patterns and avoidance response incubation over time following initial discriminative conditioning in rabbits. *Neurobiology of Learning and Memory*, 72, 259-272.

Taylor, C.L., Freeman, J.H., Jr., Holt, W., & Gabriel, M. (1999). Impairment of cingulothalamic learning-related neuronal coding in rabbits exposed to cocaine *in utero*: general and sex-specific effects. *Behavioral Neuroscience*, 113, 62-77.

Freeman, J.H., Jr., Shi, T., & Schreurs, B.G. (1998). Pairing-specific long-term depression prevented by blockade of PKC or intracellular CA^{2+}. *NeuroReport*, 9, 2237-2241.

Freeman, J.H., Jr., Scharenberg, A.M., Olds, J.L., & Schreurs, B.G. (1998). Classical Conditioning increases membrane-bound protein kinase C in rabbit cerebellum. *NeuroReport, 9*, 2669-2673.

Freeman, J.H., Jr., Weible, A., Rossi, J., & Gabriel, M. (1997). Lesions of the entorhinal cortex disrupt behavioral and neuronal responses to context change during extinction of discriminative avoidance behavior. *Experimental Brain Research*, 115, 445-457.

Freeman, J.H., Jr., Cuppernell, C., Flannery, K., & Gabriel, M. (1996). Limbic thalamic, cingulate cortical and hippocampal neuronal correlates of discriminative approach learning in rabbits. *Behavioural Brain Research*, 80, 123-136.

Freeman, J.H., Jr., Cuppernell, C., Flannery, K., & Gabriel, M. (1996). Context-specific multi-site cingulate cortical, limbic thalamic and hippocampal neuronal activity during concurrent discriminative approach and avoidance training in rabbits. *The Journal of Neuroscience*, 16, 1538-1549.

Freeman, J.H., Jr., Barone, S., Jr., & Stanton, M.E. (1995). Disruption of cerebellar maturation by an antimitotic agent impairs the ontogeny of eyeblink conditioning in rats. *The Journal of Neuroscience*, 15, 7301-7314.

Freeman, J.H., Jr., Carter, C.S., & Stanton, M.E. (1995). Early cerebellar lesions impair eyeblink conditioning in developing rats: differential effects of unilateral lesions on postnatal day 10 or 20. *Behavioral Neuroscience*,109, 893-902.

Andrews, S.J., Freeman, J.H, Jr., Carter, C.S., & Stanton, M.E. (1995). Ontogeny of eyeblink conditioning in the rat: Auditory frequency and discrimination learning effects. *Developmental Psychobiology,* 28, 307-320.

Carter, C.S., Freeman, J.H., Jr., & Stanton, M.E. (1995). Neonatal medial prefrontal lesions and recovery of spatial delayed alternation in the rat: effects of delay interval. *Developmental Psychobiology,* 28, 269-279.

Freeman, J.H., Jr., Barone, S., Jr., & Stanton, M.E. (1994). Cognitive and neuroanatomical effects of triethyltin in developing rats: role of age of exposure. *Brain Research,* 634, 85-95.

Stanton, M.E., & Freeman, J.H., Jr. (1994). Eyeblink conditioning in the developing rat: an animal model of learning in developmental neurotoxicology. *Environmental Health Perspectives*, 102, 131-139.

Freeman, J.H., Jr., Spencer, C.O., Skelton, R.W., & Stanton, M.E. (1993). Ontogeny of eyeblink conditioning in the rat: effects of US intensity and interstimulus interval on delay conditioning. *Psychobiology,* 21, 233-242.

Stanton, M.E., Freeman, J.H., Jr., & Skelton, R.W. (1992). Eyeblink conditioning in the developing rat. *Behavioral Neuroscience*, 106, 657-665.

Freeman, J.H., Jr., & Stanton, M.E. (1992). Medial prefrontal cortex lesions and spatial delayed alternation in the developing rat: recovery or sparing? *Behavioral Neuroscience,* 106, 924-932.

Freeman, J.H., Jr., & Stanton, M.E. (1991). Fimbria-fornix transections disrupt the ontogeny of delayed alternation but not position discrimination in the rat. *Behavioral Neuroscience*, 105, 386-395.

B. Book Chapters

Freeman, J.H. (2015). Eye-blink Conditioning. In Jung, R., & Jaeger, D. (Eds.), *Encyclopedia of Computational Neuroscience.* Springer-Verlag.

Brown, K.L., & Freeman, J.H. (2015). Eyeblink Classical Conditioning. Kolb, B. (Ed.). *International Encyclopedia of Social and Behavioral Sciences, 2nd Edition*. Elsevier Press.

Freeman, J.H. (2010). Developmental neurobiology of cerebellar learning. In Blumberg, M.S., Freeman, J.H., & Robinson, S.R. (Eds.). *Oxford Handbook of Developmental Behavioral Neuroscience*. Oxford University Press.

C. Edited Volume

Blumberg, M.S., Freeman, J.H., & Robinson, S.R. (Eds.). *Oxford Handbook of Developmental Behavioral Neuroscience*. Oxford University Press, 2010.

2. Grants

Principal Investigator (with Ed Wasserman, Project Leader) NIH P01 Project II: *Comparative and Neurobiological Influences on Categorization Behavior*. (P01-HD080679, $1,337,945 total direct costs for Project II). Grant period: 05/25/2016 - 04/30/2021

Principal Investigator, NIH R01: *Amygdala-Cerebellum Interactions during Associative Learning* (R01-NS088567, $1,093,750 total direct costs). Grant period: 02/01/2015 – 01/31/2020

Principal Investigator, NIH R01: *Neural Pathways for Conditioned Stimuli in Eyeblink Conditioning* (R01-NH080005, $750,000 total direct costs for renewal). Grant period: 04/01/2007 – 04/30/2016.

Principal Investigator, NIH R01: *Neural Mechanisms of Inhibitory Classical Conditioning* (R01-MH065483, $500,000 total direct costs). Grant period: 12/01/2002 – 11/30/2007.

Principal Investigator, NIH R01: *Neural Basis of the Ontogeny of Eyeblink Conditioning* (R01-NS038890, $1,093,750 total direct costs for 2nd renewal). Grant period: 04/01/2000 – 04/30/2015.

Co-Investigator (PI, N.C. Andreasen), NIH R01: Brain Imaging in the Major Psychoses: Functional Imaging Studies (R01-MH060990, $2,127,800 total direct costs). Grant period: 03/05/2005 – 02/28/2010.

4. Invited lectures and conference presentations (since 2005)

Halverson, H.E., & Freeman, J.H. *Medial Geniculate Lesions Impair Eyeblink Conditioning*. Pavlovian Society, 2005.

Freeman, J.H., Jr. *Auditory Conditioned Stimulus Pathways in Eyeblink Conditioning*. Iowa State University, 2005.

Freeman, J.H. *Developmental Changes in the Neural Circuitry Underlying Eyeblink Conditioning.* Symposium, "Developmental Psychobiology of Pavlovian Conditioning." Pavlovian Society, 2006.

Freeman, J. H. *Neural Pathways for Conditioned Stimuli in Eyeblink Conditioning*. The University of Iowa, SpenceFest, 2007.

Freeman, J.H. *Sensory Inputs to the Pontine Nuclei that are Necessary for Cerebellar Learning.* International Symposium on Learning, Memory, and Cognitive Function, Valencia, Spain, 2008.

Freeman, J.H. *Development of Cerebellar Learning*. Winter Conference on Neural Plasticity, 2009.

Freeman, J.H. *Sensory Inputs to the Pontine Nuclei that are Necessary for Cerebellar Learning.* University of Medicine and Dentistry of New Jersey, 2010.

Freeman, J.H. *Sensory Inputs to the Cerebellum that are Necessary for Eyeblink Conditioning*. Symposium, "Recent Advances in the Neurobiology of Associative Learning", APA, 2010.

Freeman, J.H. *Neural Circuitry Underlying Associative Motor Learning.* West Virginia University, Neuroscience Program, 2011.

Freeman, J.H. *Neural Mechanisms Underlying Associative Motor Learning*. The University of Iowa, Neuroscience Program, 2011.

Freeman, J.H. *Distributed Plasticity in the Neural Circuitry Underlying Cerebellar Learning*. Northwestern University, Department of Physiology, 2011.

Freeman, J.H. *Neural Circuitry Underlying Eyeblink Conditioning*. International Symposium on Learning, Memory, and Cognitive Function, Valencia, Spain, 2011.

Freeman, J.H. *Distributed Plasticity in the Neural Circuitry underlying Associative Motor Learning*. Cornell University, Department of Psychology, 2012.

Freeman, J.H. *Development of Eyeblink Conditioning*. Chair and speaker for symposium at the Pavlovian Society Conference, 2012.

Freeman, J.H. *Cerebellar Learning Mechanisms*. Chair and speaker for symposium at the Winter

Conference on Neural Plasticity, 2013.
Freeman, J.H. *The Learning Brain*. Keynote speaker for DeLTA Day, 2014.
Freeman, J.H., *Role of Cerebellar Feedback in Associative Learning*. Gordon Research Conference – Cerebellum, 2015.
Freeman, J.H., *Cannabinoid Agonist Administration within a Critical Microzone of the Cerebellar Cortex Impairs Motor Learning and Purkinje Cell Plasticity.* NIH Marijuana and Cannabinoids: A Neuroscience Research Summit, 2016.
Freeman, J.H., *Neurobiology of Associative Learning*. Neuroscience Program, Loras College, 2016.
Freeman, J.H. *Amygdala-Cerebellum Interactions*. Speaker for symposium at the Pavlovian Society Conference, 2016.
Freeman, J.H. C*erebellar Learning*. Neurosurgery Research Conference, University of Iowa, 2016.
Freeman, J.H. *Cerebellar Learning Mechanisms*. Molecular Psychiatry, University of Iowa, 2017.

Service

Department of Psychological and Brain Sciences

Chair, Animal Care and Use Committee (1999-2010)
BCN Search Committee (2000)
Faculty Advisory Committee (2001-2003, 2013-2015)
Self-Study Committee (2001)
Coordinator, Behavioral and Cognitive Neuroscience Training Program (2002-2010)
Diversity Committee (2004-2006)
Chair, BCN Search Committee (2004-2005)
Security Contact (set up security system and procedures after break-in, 2004-2006)
C & P Promotion Committee (2005, 2014)
Chair, Facilities Committee (2006-present, renovation projects in SLP, SSH, STH)
Chair, BCN Promotion Committee (2008-2009)
Self-Study Committee (2009)
Chair, BCN Search Committee (2009-2010)
Chair, Psychology-Neurology Human Neuroscience Search Committee (2014)
Developmental Science Promotion Committee (2015-2016)
Committee for Graduate Studies (2015-present)
Extended Faculty Advisory Committee (2003-present)
Chair, Building Committee (2010-present)

College

Faculty Assembly Unit Representative (2000-2003)
Speaker, New Faculty Orientation (2001)
Internal Reviewer, Department of Exercise Science (2004)

University

Student Advisory Committee, Neuroscience Program (2000-2003, 2012-2016)
Recruitment & Admissions Committee, Neuroscience Program (2001-2003)
Curriculum Committee, Neuroscience Program (2002-2004)
Seminar Committee, Neuroscience Program (2003-2005)
Institutional Animal Care and Use Committee (2003-2008)
Animal Housing Facilities Task Force (2008)
Executive Committee, Neuroscience Program (2011-2013)
Faculty Compliance Committee (2015)
Chair, Institutional Animal Care and use Committee (2012-present)

Profession

President-Elect, Pavlovian Society, 2016

Faculty, Neural Systems & Behavior Course, Marine Biological Laboratory, Woods Hole, MA (2009-2011)

Journal Reviewing

Behavioral Neuroscience, Behavioural Brain Research, Biological Cybernetics, Biological Psychiatry, Brain Research, The Cerebellum, Developmental Neurobiology, Developmental Psychobiology, European Journal of Neuroscience, Integrative Physiological & Behavioral Science, Journal of Neurogenetics, Journal of Neurophysiology, The Journal of Neuroscience, Journal of Psychiatric Research, Learning & Behavior, Learning & Memory, Mental Retardation and Developmental Disabilities Research Reviews, Neurobiology of Learning and Memory, Psychoneuroendocrinology, PNAS, Synapse, Translational Psychiatry, Trends in Neurosciences

Associate Editor

Behavioral Neuroscience (2007-2013)

Editorial Boards

Integrative Physiological & Behavioral Science (2001-2005)
Behavioral Neuroscience (2002-2007, 2014-present)
Frontiers in Behavioral Neuroscience (2009-present)
Developmental Psychobiology (2009-present)

Grant Reviewing

Society for Neuroscience Grant Mentoring Program (for minority new investigators, 2010-2011)
Member of the Neurobiology of Learning and Memory Study Section (LAM) (2006-2010)
National Institutes of Health, ad hoc (SMI, LAM, BRLE, Special Emphasis Panels for R01s, R03s, F31s and F32s, site visit for University of Rochester GCRC)
NIH study section for BRAIN Initiative: Targeted BRAIN Circuits Projects (2017)
National Science Foundation, ah hoc

NSF Integrative Understandings of Neural and Cognitive Systems (NSF-NCS) program (2017)
Department of Veteran's Affairs
Natural Sciences and Engineering Research Council of Canada
Human Frontiers Science Program (France)
Biotechnology and Biological Sciences Research Council of the UK
Israel Science Foundation
The French National Research Agency (ANR)