

Ryan G. Parsons

University of Wisconsin-Milwaukee * Department of Psychology *

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Educational History

1. University of North Dakota
Major: Psychology
Degree: B. S. 1999
2. University of Wisconsin-Milwaukee
Current Status: Ph. D. Student
Major Professor: Fred Helmstetter, Ph.D.
Major: Behavioral Neuroscience
Minors: Cognition, Learning, and Biology.
Projected Graduation Date: 2008

Awards and Honors

UWM – Graduate School Dissertation Fellowship	2007-2008
National Institutes of Health – Ruth L. Kirschstein Individual Predoctoral National Research Service Award (3 year Fellowship)	2004-2007
UWM - Graduate Research Symposium Presentation Award (2 nd Place)	2005
UWM - Graduate Student Travel Award.	2003
UWM - Student Association Committee Travel Award	2001-2003
University of North Dakota - Graduated <i>Magna Cum Laude</i>	1999

Publications

Helmstetter, F.J., Parsons, R.G., & Gafford, G.M. (in press). Macromolecular synthesis, distributed synaptic plasticity, and fear conditioning. *Neurobiology of Learning and Memory*

Gafford, G.M. Parsons, R.G., & Helmstetter, F.J. (submitted). Translational control by mTOR contributes to the formation and stability of memory in the hippocampus.

Parsons, R.G., Gafford, G.M., & Helmstetter, F.J. (2006). Translational control via the mammalian target of rapamycin (mTOR) pathway is critical for the formation and stability of long term fear memory in amygdala neurons. *Journal of Neuroscience*, 26, 12977-12983.

Parsons, R.G., Riedner, B.A., Gafford, G.M. & Helmstetter, F.J. (2006). The Formation of Auditory Fear Memory Requires the Synthesis of Protein and mRNA in the Auditory Thalamus. *Neuroscience*, 141, 1163-1170.

Parsons, R.G., Gafford, G.M., Baruch, D.E., Riedner, B.A., & Helmstetter, F.J. (2006). Long Term Stability of Fear Memory Depends on the Synthesis of Protein but not mRNA in the Amygdala. *European Journal of Neuroscience*, 23, 1853-1859.

Gafford, G.M., Parsons, R.G., & Helmstetter, F.J. (2005). Effects of post-training hippocampal injections of midazolam on fear conditioning. *Learning and Memory*, 12, 573-578.

Abstracts

Parsons, R.G., Gafford, G.M., Helmstetter, F.J. (2006). Blockade of Protein Synthesis in the Ventrolateral Periaqueductal Gray Attenuates the Formation of Fear Memory in Rats. Program No. 575.21. *2006 Abstract Viewer/Itinerary Planner*. Washington, D.C: Society for Neuroscience

Gafford, G.M., Parsons, R.G., Lonergan, M. E., & Helmstetter, F.J. (2005). Intra-amygdala Infusion of Rapamycin Blocks the Time-dependent Increase in Phosphorylation of p70 S6 Kinase after Fear Learning. Program No. 575.22. *2006 Abstract Viewer/Itinerary Planner*. Washington, D.C: Society for Neuroscience

Helmstetter, F.J., Parsons, R.G., & Gafford, G.M., (2006). Plasticity in the Auditory Thalamus is Necessary for the Consolidation of Auditory Fear Memory. Program No. 575.20. *2006 Abstract Viewer/Itinerary Planner*. Washington, D.C: Society for Neuroscience

Parsons, R.G., Riedner, B.A., Gafford, G.M., & Helmstetter, F.J. (2006). The Formation of Auditory Fear Memory Requires the Synthesis of mRNA in the Medial Geniculate Nucleus of the Thalamus. Poster presented at NIMH DIRP Pre-doctoral Research Festival in Bethesda, MD.

Gafford, G.M., Parsons, R.G., Lonergan, M. E., & Helmstetter, F.J. (2005). The Role of the Mammalian Target of Rapamycin (mTOR) Kinase Pathway in Consolidation of Contextual Fear Memory. Program No. 649.6. *2005 Abstract Viewer/Itinerary Planner*. Washington, D.C: Society for Neuroscience

Parsons, R.G., Riedner, B.A., Gafford, G.M., & Helmstetter, F.J. (2005). The Formation of Auditory Fear Memory Requires the Synthesis of mRNA in the Medial Geniculate Nucleus of the Thalamus. Program No. 415.15. *2005 Abstract Viewer/Itinerary Planner*. Washington, D.C: Society for Neuroscience.

Parsons, R.G., Riedner, B.A., Gafford, G.M., & Helmstetter, F.J. (2005). The Formation of Auditory Fear Memory Requires the Synthesis of Protein and mRNA in the Medial Geniculate Nucleus of the Thalamus. *Poster presented at the Pavlovian Society meeting in Anaheim, CA.*

Parsons, R.G., Gafford, G.M., & Helmstetter, F.J. (2004). Consolidation of Fear Memory depends on a Rapamycin Sensitive Pathway in the Amygdala. Program No. 327.5. *2004 Abstract Viewer/Itinerary Planner*. Washington, D.C: Society for Neuroscience.

Gafford, G.M., Parsons, R.G., & Helmstetter, F.J. (2004). Consolidation, but not reconsolidation, of contextual fear memory is disrupted by rapamycin and an inhibitor of mRNA synthesis in the dorsal hippocampus. Program No. 327.6. *2004 Abstract Viewer/Itinerary Planner*. Washington, D.C: Society for Neuroscience.

Helmstetter, F.J., Riedner, B.A., Baruch, D.E., & Parsons, R.G. (2004). Trace Fear Conditioning Requires Hippocampal Protein Synthesis. Program No. 773.7. *2004 Abstract Viewer/Itinerary Planner*. Washington, D.C: Society for Neuroscience.

Parsons, R.G., Gafford, G.M., & Helmstetter, F.J. (2003) Reconsolidation of Auditory Fear Memory is Independent of Transcription in the Amygdala. Program No. 290.17. *2003 Abstract Viewer/Itinerary Planner*. Washington, D.C: Society for Neuroscience.

Gafford, G.M., Parsons, R.G., & Helmstetter, F.J. (2003) Post-Training Manipulations of $\alpha 5$ Subunit Containing GABA_A Receptors In Contextual Fear Conditioning. Program No. 426.11. *2003 Abstract Viewer/Itinerary Planner*. Washington, D.C: Society for Neuroscience.

Baruch, D.E., Parsons, R.G., Gafford, G.M., & Helmstetter, F.J. (2003) The Role Of Hippocampal Protein Synthesis In The Acquisition And Consolidation Of Contextual Fear Memory. Program No. 938.14. *2003 Abstract Viewer/Itinerary Planner*. Washington, D.C: Society for Neuroscience.

Parsons, R.P., Gafford, G.M., & Helmstetter, F.J. (2003). Stability of Fear Memory After Retrieval is Independent of mRNA Synthesis in the Amygdala. *Poster presented at the Pavlovian Society Meeting in Bloomington, IN*.

Parsons, R.G., Gafford, G.M., & Helmstetter, F.J. (2002) The Effects of mRNA Synthesis Inhibition in the Amygdala on the Acquisition and Reconsolidation of Pavlovian Fear Conditioning. *Poster presented at Midwestern Psychological Association meeting in Chicago, IL*.

Parsons, R.G., Gafford, G.M., & Helmstetter, F.J. (2002) Consolidation and Reconsolidation of Contextual Fear Memory: Different Requirements for Protein and mRNA Synthesis. Program No. 83.7. *2002 Abstract Viewer/Itinerary Planner*. Washington, D.C: Society for Neuroscience.

Gafford, G.M., Parsons, R.G., Powell, S.K., Swain, R.A., & Helmstetter, F.J. (2002) Down Regulation of $\alpha 5$ Containing GABA Receptors Results in Contextual Fear Conditioning Deficits. Program No. 84.18. *2002 Abstract Viewer/Itinerary Planner*. Washington, D.C: Society for Neuroscience.

Colloquia and Symposia

Consolidation and Reconsolidation of Fear Memory. Cognitive Neuroscience Brown Bag, University of Wisconsin-Milwaukee. April 2003.

Molecular Mechanisms of Fear Memory Formation in the Amygdala. Neuroscience and Physiology Brown Bag, University of Wisconsin-Milwaukee. March 2004.

Contribution of Protein and mRNA Synthesis to Different Stages of Fear Memory in the Rat. Graduate Research Symposium, University of Wisconsin-Milwaukee. April 2005.

The Role of the Auditory Thalamus in Fear Memory Formation in Rats. Neuroscience and Physiology Brown Bag, University of Wisconsin-Milwaukee. February 2006.

Membership in Professional Associations

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| 1. Society for Neuroscience (Student Member) | 2000 - present |
| 2. Midwestern Psychological Association (Student Member) | 2001 - present |
| 3. Psi Chi – National Honor Society in Psychology | 1998 - present |
| 4. Molecular and Cellular Cognition Society | 2004 - present |
| 5. Pavlovian Society | 2004 - present |

Professional Positions

1. Teaching Assistant, University of Wisconsin-Milwaukee, Half-time position

Fall 2000 – Introductory Psychology (Dr. Douglas Woods)
Spring 2001 – Introductory Psychology (Dr. Bruce Nerenberg)
Fall 2001 – Physiological Psychology (Dr. Rodney Swain)
Spring 2002 – Introductory Psychology (Dr. Douglas Woods)
Fall 2002 – Physiological Psychology (Dr. Fred Helmstetter)

2. Research Assistant, University of Wisconsin-Milwaukee

Summer 2001 – Graduate Research Assistant (Dr. Fred Helmstetter)

Summer 2002 – Graduate Research Assistant (Dr. Fred Helmstetter)

Spring 2003 – Graduate Research Assistant (Dr. Fred Helmstetter)

Fall 2003 – Graduate Research Assistant (Dr. Fred Helmstetter)

Spring 2004 – Graduate Research Assistant (Dr. Fred Helmstetter)

3. National Institutes of Health Predoctoral Fellow

Summer 2004 - Current