David B. T. McMahon
Postdoctoral Fellow,
Unit on Cognitive Neurophysiology and Imaging
Laboratory of Neuropsychology
National Institute of Mental Health
Building 49, Room B2J-45, MSC-4400
49 Convent Dr., Bethesda, MD 20892 USA

Contact information

email:mcmahond@mail.nih.gov
phone: 301(301) 594-1269
fax: 301-480-1644

Education

1997 - 2005 Ph.D., Department of Neuroscience and
Center for the Neural Basis of Cognition,
University of Pittsburgh, Pittsburgh, PA

1997 - 2000 M.S., Department of Neuroscience,
University of Pittsburgh, Pittsburgh, PA

1987 -1997 B.A., Ancient Greek,
School of Arts and Sciences,
University of Pennsylvania, Philadelphia, PA

Research experience

2007 – present Postdoctoral Fellow
Advisor: David A. Leopold, Ph.D.
Plasticity of object representations in visual cortex
Laboratory of Neuropsychology
National Institute of Mental Health, Bethesda, MD

2006 – 2007 Postdoctoral Fellow
Advisor: Robert Desimone, Ph.D.
Neural mechanisms of attention in visual cortex
McGovern Institute for Brain Research
Massachusetts Institute of Technology, Cambridge, MA

2000 - 2005 Dissertation Research
Advisor: Carl R. Olson, Ph.D.
Visual object recognition and primate cortical physiology
Department of Neuroscience and Center for the Neural Basis of Cognition,
University of Pittsburgh, Pittsburgh, PA

1997 - 2000 Masters Research

Advisor: German Barrionuevo, M.D.
Hippocampal cellular neurophysiology and synaptic plasticity
Department of Neuroscience and Center for the Neural Basis of Cognition,
University of Pittsburgh, Pittsburgh, PA

1996 - 1997 Research Associate
Advisor: Paul A. S. Breslin, Ph.D.
Human taste psychophysics and sensory localization
Monell Chemical Senses Center, Philadelphia, PA

Honors and awards
2007 - present Postdoctoral National Research Service Award
Title: Neural mechanisms of spatial attention in extrastriate visual cortex
NEI F32 EY018028

2002 - 2005 Predoctoral National Research Service Award
Title: Figure-Ground Organization in Monkey Area IT
NIMH 1 F31 NS43876

2000 - 2001 Predoctoral Training Grant in the Neurosciences
NIMH T32 MH18273-16

1998 - 1999 Predoctoral Training Grant in the Neurosciences
NINDS T32 NS07433

1999 - 2004 University Scholar,
University of Pittsburgh

1997 Student Travel Grant,
Association for Chemoreceptive Sciences

Positions held
1999 - 2001 Colloquium Series Chairman,
Center for the Neural Basis of Cognition

1999 - 2000 Graduate Students Organization President,
Department of Neuroscience

1998 - 1999 Department Representative,
Faculty of Arts and Sciences Graduate Students Organization

List of publications

Journal Articles

1. McMahon, D.B.T., Olson, C.R. Linearly Additive Shape and Color Signals in Monkey Inferotemporal Cortex: No Binding, No Problem. (submitted)
2. McMahon, D.B.T., Olson, C.R. Repetition Suppression in Monkey Inferotemporal Cortex: Relation to Behavioral Priming. *Journal of Neurophysiology*, 97:3532-3543, 2007.
3. McMahon, D.B.T., Barrionuevo, G. Short-and long-term plasticity of the perforant path synapse in hippocampal area CA3. *Journal of Neurophysiology*, 88:528-533, 2002.
4. Henze, D.A., McMahon, D.B.T., Harris, K.M., Barrionuevo, G. Giant miniature EPSCs at the hippocampal mossy fiber to CA3 pyramidal cell synapse are monoquantal. *Journal of Neurophysiology*, 87:15-29, 2002.
5. McMahon, D.B.T., Shikata, H., Breslin, P.A.S. Are human taste thresholds similar on the right and left sides of the tongue? *Chemical Senses*, 26:875-883, 2001.
6. Shikata, H., McMahon, D.B.T., Breslin, P.A.S. Psychophysics of taste lateralization on the anterior tongue. *Perception and Psychophysics*, 62(4):684-694, 2000.
7. Kanterewicz, B.I., Urban, N.N, Norman, E.D., McMahon, D.B.T., Favata, M.F., Scherle, P.F., Trzaskos, J.M., Barrionuevo, G., Klann, E. The extracellular signal-regulated kinase cascade is required for NMDA receptor-independent LTP in area CA1 but not area CA3 of hippocampus. *Journal of Neuroscience*, 20:3057-3066, 2000.

Conference Abstracts

1. McMahon, D.B.T., Olson, C.R. Neural correlates of perceptual discrimination and repetition priming in monkey inferotemporal cortex. Society *for Neuroscience Abstracts*, 2004.
2. McMahon, D.B.T., Olson, C.R. Neural activity corresponding to repetition priming in monkey inferotemporal cortex. *Society for Neuroscience Abstracts*, 2003.
3. McMahon, D.B.T., Olson, C.R. Linearly independent selectivity for shape and color in single neurons in monkey inferotemporal cortex. *Society for Neuroscience Abstracts*, 2002.
4. McMahon, D.B.T., Olson, C.R. Neural activity corresponding to figure-ground organization in monkey inferotemporal cortex. *Society for Neuroscience Abstracts*, 2001.
5. McMahon, D.B.T., Urban, N.N., Barrionuevo, G. Mossy fiber contribution to plasticity of the perforant path synapse in hippocampal area CA3. *Society for Neuroscience Abstracts*, 1998.
6. Breslin, P.A.S., McMahon, D., Shikata, H., Delwiche, J.F. Spatial discrimination of NaSaccharin and NaGlutamate tastes on the different sides of anterior tongue. *Association for Chemoreceptive Sciences XX*, 1998.
7. McMahon, D., Shikata, H., Breslin, P.A.S. Lateral detection thresholds on left and right anterior tongue for four stimuli. *International Symposium on Olfaction and Taste XIX*, 1997.
8. Shikata, H., McMahon, D., Breslin, P.A.S. Spatial discrimination of NaCl and citric acid tastes on different sides of the anterior tongue. *International Symposium on Olfaction and Taste XIX*, 1997.
9. Breslin, P.A.S., Shikata, H., McMahon, D. Psychophysics of taste lateralization on the anterior tongue. *International Symposium on Olfaction and Taste XIX*, 1997.