

CURRICULUM VITAE

Signature:

Name: John E. Desmond

Date Prepared: 12/11/07

DEMOGRAPHIC INFORMATION:

Current Appointments:

University: Associate Professor
Department of Neurology
Johns Hopkins University School of Medicine

Research Scientist
Kennedy Krieger Institute

Joint Appointment, Department of Cognitive Sciences
Johns Hopkins University School of Arts and Sciences

Join Appointment, Neuroscience Program
Johns Hopkins University

Personal Data:

Business Address: 1620 McElderry Street, Reed Hall East – 2, Johns Hopkins University School of
Medicine, Baltimore, MD 21205

Phone: 410-502-3583 (office), 650-868-4296 (cell)

FAX: 410-502-2189

E-mail: dr.jdesmond@gmail.com

Education and Training:

B.A.	1978	University of South Florida (Psychology)
M.S.	1982	University of Massachusetts, Amherst (Psychology)
PhD	1985	University of Massachusetts, Amherst (Psychology)

Professional Experience:

- 07/07 – present** Joint Appointment, Neuroscience Program, Johns Hopkins University
- 07/07 – present** Joint Appointment, Cognitive Science Department, Johns Hopkins University
- 09/05 - present** Research Scientist, Kennedy Krieger Institute
- 5/05 - present** Associate Professor, Johns Hopkins University, Department of Neurology
- 7/01 – 3/05** Neuroscience Program Faculty, Stanford University, Stanford, CA
- 2/01 – 3/05** Assistant Professor, Research, Stanford University, Department of Radiology, Stanford, CA
- 7/98 - 1/01** Senior Research Scientist, Stanford University, Department of Radiology, Stanford, CA
- 5/96 - 1/01** Research Associate, Stanford University, Department of Psychology, Stanford, CA
- 4/94 - 4/96** Research Fellow, Stanford University, Department of Radiology, Stanford, CA (Supported by NIH/NIMH NRSA, Dr. Gary H. Glover preceptor)
- 1/94 – 2/01** Assistant Professor (Part-time faculty), Pacific Graduate School of Psychology, Palo Alto, CA (Instructor 5/92 - 1/94)
- 6/93 - 3/94** Visiting Scholar, Stanford University, Department of Psychology, Stanford, CA
- 1/91 - 6/93** Associate Research Scientist, EEG Systems Laboratory, San Francisco, CA
- 11/87 - 12/90** Associate Member, Neuroscience and Behavior Program, University of Massachusetts, Amherst, MA
- 9/85 - 12/90** Postdoctoral Research Associate, University of Massachusetts, Amherst, MA
- 4/83 - 4/85** Predoctoral Fellow, University of Massachusetts, Department of Psychology, Amherst, MA (Supported by NIH/NIMH NRSA, Dr. John W. Moore preceptor)
- 9/80 - 12/82** Instructor, Statistics for Psychology, University of Massachusetts, Amherst, MA

RESEARCH ACTIVITIES

Publications:

Peer Reviewed Original Research Articles:

1. Allan AM, **Desmond JE**, Stockman ER, Romano AG, Moore JW, Yeo CH, Steele-Russell I. Efficient conditioned inhibition of the rabbit's nictitating membrane response with massed training. *Bulletin of the Psychonomic Society*. 1980; 16: 321-324.
2. **Desmond JE**, Romano AG, Moore JW. Amplitude of the rabbit's nictitating membrane response in the presence of a conditioned inhibitor. *Animal Learning & Behavior*. 1980; 8: 225-230.
3. **Desmond JE**, Moore JW. A brain stem region essential for the classically conditioned but not unconditioned nictitating membrane response. *Physiology & Behavior*. 1982; 28: 1029-1033.
4. Moore JW, **Desmond JE**. Latency of the nictitating membrane response to periocular electrostimulation in unanesthetized rabbits. *Physiology & Behavior*. 1982; 28: 1041-1046.
5. **Desmond JE**, Moore JW. A supratrigeminal region implicated in the classically conditioned nictitating membrane response. *Brain Research Bulletin*. 1983; 10: 765-773.
6. **Desmond JE**, Rosenfield ME, Moore JW. An HRP study of the brainstem afferents to the accessory abducens region and dorsolateral pons in rabbit: Implications for the conditioned nictitating membrane response. *Brain Research Bulletin*. 1983; 10: 747-763.
7. **Desmond JE**. The classically conditioned nictitating membrane response: Analysis of learning-related single neurons of the brain stem. *Dissertation Abstracts International*. 1986; 46: 4447.
8. **Desmond JE**, Moore JW. Dorsolateral pontine tegmentum and the classically conditioned nictitating membrane response: analysis of CR-related single-unit activity. *Experimental Brain Research*. 1986; 65: 59-74.
9. Moore JW, **Desmond JE**, Berthier NE, Blazis DE, Sutton RS, Barto AG. Simulation of the classically conditioned nictitating membrane response by a neuron-like adaptive element: response topography, neuronal firing, and interstimulus intervals. *Behavioural Brain Research*. 1986; 21: 143-154.
10. **Desmond JE**, Moore JW. Adaptive timing in neural networks: The conditioned response. *Biological Cybernetics*. 1988; 58: 405-416.
11. Moore JW, **Desmond JE**, Berthier NE. Adaptively timed conditioned responses and the cerebellum: A neural network approach. *Biological Cybernetics*. 1989; 62: 17-28.
12. **Desmond JE**, Moore JW. Altering the synchrony of stimulus trace processes: Tests of a neural-network model. *Biological Cybernetics*. 1991; 65: 161-170.
13. **Desmond JE**, Moore JW. Single-unit activity in red nucleus during the classically conditioned

rabbit nictitating membrane response. *Neuroscience Research*. 1991; 10: 260-279.

14. Gevins AS, Le J, Brickett P, Reutter B, **Desmond JE** Seeing through the skull: advanced EEGs use MRIs to accurately measure cortical activity from the scalp. *Brain Topography*. 1991; 4: 125-131.
15. Gevins AS, Le J, Brickett P, Cutillo B, Ward M, Alexander J, **Desmond JE**, Leong H, Johnston J, McLaughlin J, DuRousseau D, Raffaelli P, Filidei M, Illes J. The future of high-resolution EEGs in assessing neurocognitive effects of mild head injury. *Journal of Head Trauma Rehabilitation*. 1992; 7: 78-90.
16. Gevins A, Cutillo B, **Desmond JE**, Ward M, Bressler S, Barbero N, Laxer K. Subdural grid recordings of distributed neocortical networks involved with somatosensory discrimination. *Electroencephalography and Clinical Neurophysiology*. 1994; 92: 282-290.
17. Gevins A, Le J, Martin NK, Brickett P, **Desmond JE**, Reutter B. High resolution EEG: 124-Channel Recording, spatial deblurring and MRI Integration Methods. *Electroencephalography and Clinical Neurophysiology*. 1994; 90: 337-358.
18. Demb JB, **Desmond JE**, Wagner AD, Vaidya CJ, Glover GH, Gabrieli JDE. Semantic encoding and retrieval in the left inferior prefrontal cortex: a functional MRI study of task difficulty and process specificity. *Journal of Neuroscience*. 1995; 15: 5870-5878.
19. **Desmond JE**, Sum JM, Wagner AD, Demb JB, Shear PK, Glover GH, Gabrieli JDE, Morrell MJ. Functional MRI measurement of language lateralization in Wada-tested patients. *Brain*. 1995; 118: 1411-1419.
20. Gabrieli JDE, **Desmond JE**, Demb JB, Wagner AD. Functional magnetic resonance imaging of semantic memory processes in the frontal lobes. *Psychological Science*. 1996; 7: 278-283.
21. Menon V, Freeman WJ, Cutillo BA, **Desmond JE**, Ward MF, Bressler SL, Laxer KD, Barbaro N, Gevins AS. Spatio-temporal correlations in human gamma band electrocorticograms. *Electroencephalography And Clinical Neurophysiology*. 1996; 98: 89-102.
22. Pfefferbaum A, Lim KO, **Desmond JE**, Sullivan EV. Thinning of the corpus callosum in older alcoholic men: A magnetic resonance imaging study. *Alcoholism: Clinical and Experimental Research*. 1996; 20: 752-757.
23. Sullivan EV, Deshmukh A, **Desmond JE**, Pfefferbaum A. Alcohol and the cerebellum: Effects on balance, motor coordination, and cognition. *Alcohol Health & Research World*. 1996; 19: 138-141.
24. Deshmukh AR, **Desmond JE**, Sullivan EV, Lane BF, Jr, Lane BF, Matsumoto B, Marsh L, Lim KO, Pfefferbaum A. Quantification of cerebellar structures with MRI. *Psychiatry Research*. 1997;

75: 159-171.

25. Deshmukh A, Sullivan EV, Mathalon DH, **Desmond JE**, Lim KO, Pfefferbaum A. Regional cerebellar volume deficits in schizophrenia, alcoholism, and schizophrenia with alcohol comorbidity. *Schizophrenia Research*. 1997; 24: 142-143.
26. **Desmond JE**, Gabrieli JDE, Wagner AD, Ginier BL, Glover GH. Lobular patterns of cerebellar activation in verbal working memory and finger tapping tasks as revealed by functional MRI. *Journal of Neuroscience*. 1997; 17: 9675-9685.
27. **Desmond JE**, Lim KO. On- and offline Talairach registration for structural and functional MRI studies. *Human Brain Mapping*. 1997; 5: 58-73.
28. Gabrieli JDE, Brewer JB, **Desmond JE**, Glover GH. Separate neural bases of two fundamental memory processes in the human medial temporal lobe. *Science*. 1997; 276: 264-266.
29. Prabhakaran V, Smith JAL, **Desmond JE**, Glover GH, Gabrieli JDE. Neural substrates of fluid reasoning: An fMRI study of neocortical activation during performance of the Raven's Progressive Matrices Test. *Cognitive Psychology*. 1997; 33: 43-63.
30. Sobel N, Prabhakaran V, **Desmond JE**, Glover GH, Sullivan EV, Gabrieli JDE. A method for generating olfactory stimuli in human imaging studies. *Journal of Neuroscience Methods*. 1997; 78: 115-121.
31. Wagner AD, **Desmond JE**, Demb JB, Glover GH, Gabrieli JDE. Semantic repetition priming for verbal and pictorial knowledge: A functional MRI study of left inferior prefrontal cortex. *Journal of Cognitive Neuroscience*. 1997; 9: 714-726.
32. Canli T, **Desmond JE**, Zhao Z, Glover GH, Gabrieli JDE. Hemispheric asymmetry for emotional stimuli detected with fMRI. *Neuroreport*. 1998; 9: 3233-3239.
33. Brewer JB, Zhao Z, **Desmond JE**, Glover GH, Gabrieli JDE. Making memories: Brain activity that predicts whether visual experience is remembered or forgotten. *Science*. 1998; 281: 1185-1187.
34. **Desmond JE**, Fiez J. Neuroimaging studies of the cerebellum: Language, learning, and memory. *Trends in Cognitive Sciences*. 1998; 2: 355-362.
35. **Desmond JE**, Gabrieli JDE, Glover GH. Dissociation of frontal and cerebellar activity in a cognitive task: Evidence for a distinction between selection and search. *Neuroimage*. 1998; 7: 368-376.
36. Gabrieli JDE, Poldrack RA, **Desmond JE**. The role of the left prefrontal cortex in language and memory. *Proceedings of the National Academy of Sciences (USA)*. 1998; 95: 906-913.

37. Poldrack RA, **Desmond JE**, Glover GH, Gabrieli JDE. The neural basis of visual skill learning: An fMRI study of mirror reading. *Cerebral Cortex*. 1998; 8: 1-10.
38. Sobel N, Prabhakaran V, **Desmond JE**, Glover GH, Goode RL, Sullivan EV, Gabrieli JDE. Sniffing and smelling: Separate subsystems in human olfactory cortex. *Nature*. 1998; 392: 282-286.
39. Sobel N, Prabhakaran V, Hartley CA, **Desmond JE**, Glover G, Gabrieli JDE, Sullivan EV. Odorant-induced activation in the cerebellum of the human. *J. Neuroscience*. 1998; 18: 8990-9001.
40. Vaidya CJ, Austin G, Kirkorian G, Ridlehuber H W, **Desmond JE**, Glover GH, Gabrieli JDE. Selective effects of methylphenidate in Attention Deficit Hyperactivity Disorder: A functional magnetic resonance study. *Proceedings of the National Academy of Sciences (USA)*. 1998; 95: 14494-14499.
41. Wagner AD, **Desmond JE**, Glover GH, Gabrieli JDE. Prefrontal cortex and recognition memory: fMRI evidence for context-dependent retrieval processes. *Brain*. 1998; 121: 1985-2002.
42. Wagner AD, Poldrack RA, Eldridge L, **Desmond JE**, Glover GH, Gabrieli JDE. Material-specific lateralization of prefrontal activation during episodic encoding and retrieval: A neural mechanism for encoding specificity. *Neuroreport*. 1998; 9: 3711-3717.
43. Canli T, **Desmond JE**, Glover G, Gabrieli J DE fMRI identifies a network of structures correlated with retention of positive and negative emotional memory. *Psychobiology*. 1999; 27: 441-452.
44. Illes J, Francis WS, **Desmond JE**, Gabrieli JDE, Glover GH, Poldrack R, Lee C J, Wagner A D. Convergent cortical representation of semantic processing in bilinguals. *Brain Language*. 1999; 70: 347-363.
45. Poldrack RA, Wagner AD, Prull MW, **Desmond JE**, Glover GH, Gabrieli JDE. Functional specialization for semantic and phonological processing in the left inferior prefrontal cortex. *Neuroimage*. 1999; 10: 15-35.
46. Rypma B, Prabhakaran V, **Desmond JE**, Glover GH, Gabrieli JDE. Load-dependent roles of frontal brain regions in the maintenance of working memory. *Neuroimage*. 1999; 9: 216-226.
47. Seger CA, Rabin LA, **Desmond JE**, Gabrieli JDE. Verb generation priming involves conceptual implicit memory. *Brain and Cognition*. 1999; 41: 150-177.
48. Sobel N Prabhakaran V, Hartley CA, **Desmond JE**, Glover G, Sullivan E, Gabrieli JDE. Blind smell: Brain activation induced by an air-borne chemical. *Brain*. 1999; 122: 209-217.

49. Sullivan EV, Lane B, Deshmukh A, Rosenbloom MJ, **Desmond JE**, Lim KO, Pfefferbaum A. In vivo mammillary body volume deficits in amnesic and nonamnesic alcoholics. *Alcoholism: Clinical and Experimental Research*. 1999; 23: 1629-1636.
50. Seger CA, **Desmond JE**, Glover GH, Gabrieli JDE. fMRI evidence for right hemisphere involvement in processing unusual semantic relationships. *Neuropsychology*. 2000; 14: 361-369.
51. Sobel N, Prabhakaran V, Zhao Z, **Desmond JE**, Glover GH, Sullivan EV, Gabrieli JDE. Time course of odorant-induced activation in the human primary olfactory cortex. *Journal of Neurophysiology*. 2000; 83: 537-551.
52. Sullivan EV, Deshmukh A, **Desmond JE**, Lim KO, Pfefferbaum A. Cerebellar volume decline in normal aging, alcoholism, and Korsakoff's syndrome: Relation to ataxia. *Neuropsychology*. 2000; 14: 341-352.
53. Sullivan EV, Deshmukh A, **Desmond JE**, Mathalon DH, Rosenbloom MJ, Lim KO, Pfefferbaum A. Contribution of alcohol abuse to cerebellar volume deficits in men with schizophrenia. *Archives of General Psychiatry*. 2000; 57: 894-902.
54. Bunge SA, Ochsner KN, **Desmond JE**, Glover GH, Gabrieli JDE. Prefrontal regions involved in keeping information in and out of mind. *Brain*. 2001; 124: 2074-2086.
55. Canli T, Zhao Z, **Desmond JE**, Kang E, Gross J, Gabrieli JDE. An fMRI study of personality influences on brain reactivity to emotional stimuli. *Behavioral Neuroscience*. 2001; 115: 33-42.
56. Golby AJ, Poldrack RA, Brewer JB, Spencer D, **Desmond JE**, Aron AP, Gabrieli JDE. Material-specific lateralization in the medial temporal lobe and prefrontal cortex during memory encoding. *Brain*. 2001; 124: 1841-1854.
57. Menon V, **Desmond JE**. Left superior parietal cortex involvement in writing: Integrating fMRI with lesion evidence. *Cognitive Brain Research*. 2001; 12: 337-340.
58. Pfefferbaum A, **Desmond JE**, Galloway C, Menon V, Glover GH, Sullivan EV. Reorganization of frontal systems used by alcoholics for spatial working memory: An fMRI study. *Neuroimage*. 2001; 14: 7-20.
59. Rypma B, Prabhakaran V, **Desmond JE**, Gabrieli JDE. Age differences in prefrontal cortical activity in working memory. *Psychology Aging*. 2001; 16: 371-384.
60. Sullivan EV, Rosenbloom M J, **Desmond JE**, Pfefferbaum A. Sex differences in corpus callosum size: Relationship to age and intracranial size. *Neurobiology of Aging*. 2001; 22: 603-611.
61. Arnow B, **Desmond JE**, Banner L, Glover G H, Solomon A, Polan M, Lue TF, Atlas SW. Brain

- activation during sexual arousal in healthy, heterosexual males. *Brain*. 2002; 125: 1014-1023.
62. Canli T, **Desmond JE**, Zhao Z, Gabrieli JDE. Sex differences in the neural basis of emotional memories. *Proceedings of the National Academy of Sciences U S A*. 2002; 99: 10789-10794.
63. **Desmond JE**, Chen SHA. Ethical issues in the clinical application of fMRI: Factors affecting the validity and interpretation of activations. *Brain and Cognition*. 2002; 50: 482-497.
64. **Desmond JE**, Glover GH. Estimating sample size in functional MRI (fMRI) neuroimaging studies: statistical power analyses. *Journal of Neuroscience Methods*. 2002; 118: 115-128.
65. Golby AJ, Poldrack RA, Illes J, Chen D, **Desmond JE**, Gabrieli JDE. Memory lateralization in medial temporal lobe epilepsy assessed by functional MRI. *Epilepsia*. 2002; 43: 855-863.
66. Illes J, **Desmond JE**, Huang LF, Raffin TA, Atlas SW. Ethical and practical considerations in managing incidental findings in functional magnetic resonance imaging. *Brain and Cognition*. 2002; 50: 358-65.
67. Rosen AC, Prull MW, O'Hara R, Race EA, **Desmond JE**, Glover GH, Yesavage JA, Gabrieli JDE. Variable Effects of Aging on Frontal-Lobe Contributions to Memory. *Neuroreport*. 2002; 13: 2425-2428.
68. Stebbins GT, Carrillo MC, Dorfman J, Dirksen C, **Desmond JE**, Turner DA, Bennett DA, Wilson RS, Glover G, Gabrieli JDE. Aging effects on memory encoding in the frontal lobes. *Psychology and Aging*. 2002; 17: 44-55.
69. Sullivan EV, **Desmond JE**, Lim KO, Pfefferbaum A. Speed and efficiency but not accuracy or timing deficits of limb movements in alcoholic men and women. *Alcoholism: Clinical and Experimental Research*. 2002; 26: 705-713.
70. Vaidya C, Zhao M, **Desmond JE**, Gabrieli JDE. Evidence for cortical encoding specificity in episodic memory: memory- induced re-activation of picture processing areas. *Neuropsychologia*. 2002; 40: 2136-2143.
71. **Desmond JE**, Chen SHA, DeRosa E, Pryor MR, Pfefferbaum A, Sullivan EV. Increased Fronto-Cerebellar Activation in Alcoholics During Verbal Working Memory: An fMRI Study. *Neuroimage*. 2003; 4: 1510-1520.
72. Sullivan EV, Harding AJ, Pentney R, Dlugos C, Martin PR, Parks MH, **Desmond JE**, Chen SHA, Pryor MR, De R, Pfefferbaum A. Disruption of frontocerebellar circuitry and function in alcoholism. *Alcoholism: Clinical and Experimental Research*. 2003; 27: 301-309.
73. Polan ML, **Desmond JE**, Pryor MR, Banner LL, McCallum SW, Atlas SW, Glover GH, Arnow BA. Female sexual arousal: A behavioral analysis. *Fertility and Sterility*. 2003; 80: 1480-1487.

74. DeRosa E, **Desmond JE**, Anderson AK, Pfefferbaum A, Sullivan EV. The Human Basal Forebrain Integrates the Old and the New. *Neuron*. 2004; 41: 825-837.
75. Illes J, Kirschen MP, Karetzky K, Kelly M, Saha A, **Desmond JE**, Raffin TA, Glover GH, Atlas SW. Discovery and disclosure of incidental findings in neuroimaging research. *J Magn Reson Imaging*. 2004; 20: 743-747.
76. Chen SHA, **Desmond JE**. Temporal dynamics of cerebro-cerebellar network recruitment during verbal working memory. *Neuropsychologia*. 2005; 43: 1227-1237.
77. Chen SHA, **Desmond JE**. Cerebro-cerebellar networks during articulatory rehearsal and verbal working memory tasks. *Neuroimage*. 2005; 24: 332-338.
78. Kirschen MP, Chen SA, Schraedley-Desmond P, **Desmond JE**. Load and practice dependent increases in cerebro-cerebellar activation in verbal working memory: An fMRI study. *Neuroimage*. 2005; 24: 462-472.
79. **Desmond JE**, Chen SA, Shieh PB. Cerebellar transcranial magnetic stimulation impairs verbal working memory. *Annals of Neurology*. 2005; 58: 553-560.
80. Kirschen MP, Jerde TE, Davis-Ratner MS, Schraedley-Desmond P, **Desmond JE**. Enhancement of phonological memory following transcranial magnetic stimulation (TMS). *Behavioural Neurology*. 2006; 17: 187-194.
81. Walsh V, **Desmond JE**, Pascual-Leone A. Manipulating brains. *Behavioural Neurology*. 2006;17:131-134.
82. Hadipour-Niktarash, A, Lee, CK, **Desmond, JE**, Shadmehr, R. Impairment of retention but not acquisition of a visuomotor skill through time-dependent disruption of primary motor cortex, *Journal of Neuroscience*. 2007; 27: 13413-9.
83. Kirschen MP, Davis-Ratner MS, Milner MW, Chen SHA, Schraedley-Desmond P, Fisher PG, **Desmond JE**. Verbal memory impairments in children after cerebellar tumor resection. submitted

Book Chapters, Monographs:

1. Moore JW, **Desmond JE**, Berthier NE The metencephalic basis of the conditioned nictitating membrane response. In C.D. Woody (Ed.), *Conditioning: Representation of involved neural function*. New York: Plenum, 1982. 459-482.
2. **Desmond JE**. The classically conditioned nictitating membrane response: Analysis of learning-related single neurons of the brain stem. *Dissertation Abstracts International*. 1986, 46(12-B, Pt

1): 4447.

3. Berthier NE, **Desmond JE**, Moore JW. Brain stem control of the nictitating membrane response. In I. Gormezano, WF Prokasy, R Thompson (Eds.), *Classical Conditioning III* (pp. 275-286). Hillsdale, NJ: Lawrence Erlbaum Associates. 1987, 275-286.
4. **Desmond JE**. Temporally adaptive conditioned responses: Representation of the stimulus trace in neural-network models. 88-80 (Computer and Information Science technical report) University of Massachusetts, 1988.
5. **Desmond JE**. Temporally adaptive responses in neural models the stimulus trace. In M. Gabriel J.W. Moore (Eds.), *Learning and Computational Neuroscience: Foundations of Adaptive Networks*. Cambridge, Massachusetts, USA: MIT Press, 1990, 421-456.
6. Moore JW, **Desmond JE**. A cerebellar neural network implementation of a temporally adaptive conditioned response. In I. Gormezano (Ed.), *Learning and Memory: The Biological Substrates*. Hillsdale, NJ: Lawrence Erlbaum Associates, 1992.

Abstracts:

1. **Desmond JE**, Berthier NE, Moore JW Brain stem elements essential for the classically conditioned nictitating membrane response of rabbit. [Abstract] Society for Neuroscience Abstracts 1981; 7: 650.
2. **Desmond JE**, Berthier NE, Moore JW. Rabbit nictitating membrane response: Neural elements essential for conditioned but not unconditioned responding. [Abstract] Eastern Psychological Association Annual Meeting, New York NY, 1981.
3. Moore JW, Berthier NE, **Desmond JE**. Brain stem electrophysiological correlates of the classically conditioned nictitating membrane response in the rabbit.[Abstract] Society for Neuroscience Abstracts 1981; 7: 358.
4. **Desmond JE**, Rosenfield ME, Moore JW. Red nucleus and supratrigeminal reticular formation: Brain stem components of the conditioned nictitating membrane response. [Abstract] Society for Neuroscience Abstracts 1983; 9: 331.
5. **Desmond JE**, Moore JW. Single-unit activity during conditioning of the nictitating membrane response. [Abstract] Abstracts of the Psychonomic Society, 1985.
6. **Desmond JE**, Moore JW. The classically conditioned rabbit nictitating membrane response: Excitatory and inhibitory conditioned activity from single units in the brain stem. [Abstract] Society for Neuroscience Abstracts, 1985; 11: 981.

7. Moore JW, **Desmond JE**, Berthier NE, Blazis DEJ, Sutton RS, Barto AG. Connectionist learning in real time: Sutton-Barto adaptive element and classical conditioning of the nictitating membrane response. [Abstract] Proceedings of the Seventh Annual Conference of the Cognitive Science Society, 1985.
8. Blazis DEJ, **Desmond JE**, Moore JW, Berthier NE. Simulation of the classically conditioned response by a neuron-like adaptive element: a real-time variant of the Sutton-Barto model. [Abstract] Proceedings of the Eight Annual Conference of the Cognitive Science Society, 1986.
9. **Desmond JE**, Blazis DEJ, Moore JW, Berthier NE. Computer simulations of a classically conditioned response using neuron-like adaptive elements: Response topography. [Abstract] Society for Neuroscience Abstracts, 1986; 12: 516.
10. **Desmond JE**, Moore JW. Red nucleus single-unit activity during the classically conditioned rabbit nictitating membrane response. [Abstract] Society for Neuroscience Abstracts, 1987; 13: 841.
11. **Desmond JE**, Moore JW. Simulating conditioned response topography: A network approach. [Abstract] Conference on Neural Models of Plasticity: Theoretical and Empirical Approaches, Woods Hole, MA, 1987.
12. Moore JW, **Desmond JE**, Berthier NE. Adaptively timed conditioned responses and the cerebellum a neural network approach. [Abstract] Society for Neuroscience Abstracts, 1989; 15: 506.
13. Demb JB, **Desmond JE**, Wagner AD, Stone, M, Lee AT, Glover GH, Gabrieli JDE. A functional MRI (fMRI) study of semantic encoding and memory in the left inferior frontal gyrus. [Abstract] Society for Neuroscience Abstracts, 1994; 20: 1290.
14. **Desmond JE**, Gabrieli JDE, Demb JB, Wagner AD, Mendius JR, Sum JM, Lee AT, Illes J, Glover GH. A functional MRI (fMRI) study of language lateralization in normal and Wada-tested subjects. [Abstract] Society for Neuroscience Abstracts, 1994; 20: 6.
15. Gabrieli JDE, Fleischman DA, Rinaldi JA, Vaidya CJ, Park SM, Reminger SL, Schacter DL, Church BA, Blaxton TR, Demb JB, **Desmond JE**, Lim KO, Kamijo K, Rumelhart DE, Morrell F. Functional and anatomic characterization of a memory system for visual implicit memory in the right occipital lobe. [Abstract] Society for Neuroscience Abstracts, 1994; 20: 431.
16. Mendius JR, Sum JM, **Desmond JE**, Lee AT, Demb JB, Wagner AD, Illes J, Gabrieli JDE, Glover GH. Localization of language using functional MRI in patients with complex partial seizures. [Abstract] Epilepsia, 1994; 35(SUPPL. 8): 87.
17. **Desmond JE**, Gabrieli JDE, Ginier BL, Demb JB, Wagner AD, Enzmann DR, Glover GH. A functional MRI (fMRI) study of cerebellum during motor and working memory tasks. [Abstract]

Society for Neuroscience Abstracts, 1995; 21: 1210.

18. **Desmond JE**, Sum JM, Wagner AD, Demb JB, Shear PK, Illes J, Glover GH, Gabrieli JDE, Morrell MJ. An fMRI study of language lateralization in Wada-tested patients. [Abstract] Cognitive Neuroscience Society Abstracts, 1995; 60.
19. Menon V, **Desmond JE**, Lim KO, Demb JB, Spielman D, Pfefferbaum A. A functional MRI study of writing. [Abstract] Society for Neuroscience Abstracts, 1995; 21: 1763.
20. Rypma B, Vaidya CJ, Lange K, **Desmond JE**, Fleischman DA, Gabrieli JDE. Evidence for multiple perceptual implicit memory processes. [Abstract] Society for Neuroscience Abstracts, 1995; 21: 754.
21. Wagner AD, Demb JB, **Desmond JE**, Glover GH, Gabrieli JDE. A functional magnetic resonance imaging study of semantic working memory. [Abstract] Abstracts of the American Psychological Society Annual Meeting, New York, NY, 1995, 104.
22. Wagner AD, Gabrieli JDE, **Desmond JE**, Demb JB, Stebbins GT, Turner DA, Glover GH. Semantic encoding and retrieval of words and pictures: a functional MRI (fMRI) study of frontal cortex. [Abstract] Society for Neuroscience Abstracts, 1995; 21: 274.
23. Brewer JB, **Desmond JE**, Glover GH, Gabrieli JDE. Dissociation of medial temporal lobe structures involved in encoding and retrieval: An fMRI study. [Abstract] Society for Neuroscience Abstracts, 1996; 22: 1450.
24. Canli T, **Desmond JE**, Glover G, Gross J, Gabrieli JDE. An fMRI study of emotion processing: Valence-dependent hemispheric lateralization. [Abstract] Society for Neuroscience Abstracts, 1996; 22: 443.
25. Deshmukh A, Sullivan EV, Mathalon DH, **Desmond JE**, Matsumoto B, Lim KO, Pfefferbaum A. Cerebellar volume deficits in schizophrenia. [Abstract] Biological Psychiatry, 1996; 39: 600.
26. **Desmond JE**, Gabrieli JDE, Sobel N, Rabin LA, Wagner AD, Seger CA, Glover GH. An fMRI study of frontal cortex and cerebellum during semantic and working memory tasks. [Abstract] Society for Neuroscience Abstracts, 1996; 22: 1111.
27. Gabrieli JDE, Sullivan EV, **Desmond JE**, Stebbins GT, Vaidya CJ, Keane MM, Wagner AD, Zarella MM, Glover GH, Pfefferbaum A. Behavioral and functional neuroimaging evidence for preserved conceptual implicit memory in global amnesia. [Abstract] Society for Neuroscience Abstracts, 1996; 22: 1449.
28. Menon V, **Desmond JE**, Lim KO, Demb JB, Spielman D, Pfefferbaum A. Activation of primary visual cortex underlying visual imagery during writing. [Abstract] Cognitive Neuroscience Society Abstracts, 1996; 130.

29. Poldrack RA, **Desmond JE**, Glover GH, Gabrieli JDE. The neural basis of visual skill: An fMRI study of mirror reading. [Abstract] Society for Neuroscience Abstracts, 1996; 22: 719.
30. Prabhakaran V, Smith JAL, **Desmond JE**, Glover GH, Gabrieli JDE. Neural substrates of reasoning: An fMRI study of Raven's Progressive Matrices Test. [Abstract] Society for Neuroscience Abstracts, 1996; 22: 967.
31. Rypma B, DeBell MA, Gabrieli JDE, Prabhakaran V, Zabinski MF, **Desmond JE**, Glover GH. Functional MRI studies of mental rotation and object identification processes. [Abstract] Society for Neuroscience Abstracts, 1996; 22: 720.
32. Sobel N, Prabhakaran V, **Desmond JE**, Glover GH, Sullivan EV, Gabrieli JDE. A method for generation of olfactory stimuli for fMRI. [Abstract] Society for Neuroscience Abstracts, 1996; 22: 259.
33. Sullivan EV, Deshmukh A, **Desmond JE**, Lane B, Jr., Lane B, Shear PK, Pfefferbaum A. Volumetric MRI analysis of cerebellar hemispheres and vermis in chronic alcoholics: Relationship to ataxia. [Abstract] Journal of the International Neuropsychological Society, 1996; 2: 34.
34. Wagner AD, Illes J, **Desmond JE**, Lee CJ, Glover GH, Gabrieli JDE. A functional MRI study of semantic processing in bilinguals. [Abstract] Second International Conference on Functional Mapping of the Human Brain, Boston, MA., 1996.
35. Brewer JB, **Desmond JE**, Glover GH, Gabrieli JDE. Parahippocampal cortex involvement in the encoding of both visual and auditory stimuli: An fMRI study. [Abstract] Society for Neuroscience Abstracts, 1997; 23: 566.
36. Canli T, **Desmond JE**, Glover G, Bailey JM, Gabrieli JDE. Brain activation in response to biologically relevant affective stimuli: An fMRI study. [Abstract] Society for Neuroscience Abstracts, 1997; 23: 1318.
37. Canli T, **Desmond JE**, Glover GH, Kang E, Gross J, Gabrieli JDE. An fMRI study of emotion processing: Correlations with personality measures. [Abstract] Cognitive Neuroscience Society Abstracts, 1997; 46.
38. **Desmond JE**, Gabrieli JDE, Stone M, Wagner AD, Glover GH. An fMRI study of cerebellum and frontal cortex during a word stem completion task. [Abstract] Society for Neuroscience Abstracts, 1997; 23: 210.
39. Gabrieli JDE, Prabhakaran V, Rypma B, Wagner AD, Kang E, **Desmond JE**. Attention to thought: Functional magnetic resonance imaging (fMRI) evidence. [Abstract] Abstracts of the Psychonomics Society, 1997; 2: 28.

40. Gabrieli JDE, Rypma B, Prabhakaran V, Wagner AD, **Desmond JE**, Glover GH. Common right prefrontal processes involved in episodic retrieval, working memory, and reasoning. [Abstract] Society for Neuroscience Abstracts, 1997; 23: 1679.
41. Kang E, Vaidya CJ, **Desmond JE**, Glover GH, Gabrieli JDE. An fMRI study of perceptual and non-perceptual repetition priming. [Abstract] Society for Neuroscience Abstracts, 1997; 23: 208.
42. Poldrack RA, Prabhakaran V, Seger C, **Desmond JE**, Glover GH, Gabrieli JDE. Learning to classify probabilistically: changes in cortical activity revealed by functional MRI. [Abstract] Society for Neuroscience Abstracts, 1997; 23: 1053.
43. Prabhakaran V, Seger CA, Poldrack RA, **Desmond JE**, Glover GH, Gabrieli JDE. Neural correlates of categorization: An fMRI study of probabilistic classification using the weather prediction task. [Abstract] Proceedings of the Nineteenth Annual Conference of the Cognitive Science Society, 1997; 1014.
44. Prabhakaran V, Sobel N, **Desmond JE**, Glover G, Sullivan E, Gabrieli JDE. Hedonic value of odors is reflected in the level of activation in the amygdala. [Abstract] Abstracts of the Third Annual Human Brain Mapping Conference, 1997.
45. Prabhakaran V, Sobel N, **Desmond JE**, Glover G, Sullivan E, Gabrieli JDE. Comparison of brain activation following stimulation with odors and vomeropherins. [Abstract] AChemS XIX, 1997.
46. Prull MW, Poldrack RA, Wagner AD, **Desmond JE**, Glover GH, Gabrieli JDE, Fleischman DA. Semantic and phonological processing in prefrontal cortex: An fMRI study. [Abstract] Society for Neuroscience Abstracts, 1997; 23: 493.
47. Rypma B, Gabrieli JDE, Prabhakaran V, Prull MW, **Desmond JE**, Glover GH. Age-related changes in cerebral activity during a working memory task. [Abstract] Society for Neuroscience Abstracts, 1997; 23: 1678.
48. Rypma B, Prabhakaran V, Smith J, **Desmond JE**, Gabrieli JDE. Neural correlates of mathematical reasoning. [Abstract] Abstracts of the Psychonomics Society, 1997; 2: 68.
49. Seger CA, **Desmond JE**, Gabrieli JDE, Glover GH. fMRI studies of verb generation priming and unusual verb generation. [Abstract] Society for Neuroscience Abstracts, 1997; 23, 1402.
50. Seger CA, Prabhakaran V, Poldrack RA, **Desmond JE**, Gabrieli JDE. Implicit and explicit knowledge in artificial grammar learning: An fMRI study. [Abstract] Proceedings of the Nineteenth Annual Conference of the Cognitive Science Society, 1997; 1043.
51. Smith JAL, Prabhakaran V, Rypma B, Gabrieli JDE, **Desmond JE**, Glover GH. Neural activity associated with mathematical reasoning using fMRI. [Abstract] Society for Neuroscience

Abstracts, 1997; 23: 1679.

52. Sobel N, Prabhakaran V, **Desmond JE**, Glover G, Sullivan E, Gabrieli JDE. Sniff-driven activation in the piriform cortex of humans. [Abstract] AChemS XIX, 1997.
53. Sobel N, Prabhakaran V, **Desmond JE**, Glover G, Sullivan E, Gabrieli JDE. A functional dissociation between primary and secondary olfactory cortex in humans. [Abstract] Abstracts of the Third Annual Human Brain Mapping Conference, 1997.
54. Sobel N, Prabhakaran V, **Desmond JE**, Glover GH, Sullivan EV, Gabrieli JDE. Separate cerebellar components subserved sniffing and smelling. [Abstract] Society for Neuroscience Abstracts, 1997; 23: 2077.
55. Vaidya CJ, Gabrieli JDE, Rypma B, Mak J, Heberlein A, **Desmond JE**, Glover GH, Austin G, Krikorian GJ, Ridlehuber HW, Strass HW, Annis FL, Schell H. fMRI of frontal lobe function in children with attention deficit disorder on and off ritalin. [Abstract] Society for Neuroscience Abstracts, 1997; 23: 859.
56. Wagner AD, Bower GH, **Desmond JE**, Glover GH, Gabrieli JDE. Episodic retrieval and prefrontal cortex: Evidence for context-dependent retrieval processes. [Abstract] Abstracts of the Psychonomics Society, 1997; 2: 28.
57. Wagner AD, Poldrack RA, **Desmond JE**, Glover GH, Gabrieli JDE. An fMRI study of prefrontal activation during retrieval of verbal and non-verbal episodic memory. [Abstract] Society for Neuroscience Abstracts, 1997; 23: 492.
58. Zhao M, **Desmond JE**, Gabrieli JDE, Cronin-Golomb A. A comparison of some analytic strategies for fMRI. [Abstract] Society for Neuroscience Abstracts, 1997; 23: 1576.
59. Bunge SA., Zhao Z, Prabhakaran V, **Desmond JE**, Glover GH., Gabrieli JDE. Decomposing working memory: A single trial fMRI analysis. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 1895.
60. Canli T, Zhao Z, **Desmond JE**, Glover GH., Gabrieli JDE. Amygdala activation at encoding correlates with long-term recognition memory for emotional pictures: An fMRI study. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 935.
61. Carrillo MC, Stebbins GT, Gabrieli JDE, **Desmond JE**, Dirksen C, Turner D, Bennett DA, Wilson RS, Glover GH. An fMRI study of the effect of aging on frontal activation during a control condition. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 2117.
62. **Desmond JE**. Cerebrocerebellar interactions in human cognition: Functional MRI investigations. [Abstract] Abstracts of the Sixth Annual Meeting of the International Society for Behavioural Neuroscience, Athlone, Ireland, May 27-31, 1998.

63. **Desmond JE**, Gabrieli JDE, Seger CA, Tran AT, Glover GH. Naming pictures with high versus low name agreement: An fMRI study. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 259.
64. Dorfman J, Gabrieli JDE, Stebbins GT, **Desmond JE**, Turner D, Glover GH. Semantic interference effects in selective attention: An fMRI study. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 1681.
65. Francis WS, Bar-Ziv I, Prabhakaran V, Gabrieli JDE, **Desmond JE**, Seger CA. An fMRI study of semantic word matching. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 1174.
66. Kang E, Vaidya CJ, Fine EM, Klein AL, **Desmond JE**, Glover GH, Gabrieli JDE. Neural correlates of within-form and cross-form conceptual priming for pictures and words. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 1897.
67. Narayanan K, Prabhakaran V, Zhao Z, Bunge SA, **Desmond JE**, Glover GH, Gabrieli JDE, Hazeltine RE. An fMRI study of working memory utilizing a single trial parametric design. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 1895.
68. Prabhakaran V, Fine EM, **Desmond JE**, Gabrieli JDE. Binding of spatial and non-spatial items in working memory: An fMRI study. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 1252.
69. Prull MW, Stebbins GT, Gabrieli JDE, Carrillo MC., Dorfman J, **Desmond JE**, Glover GH. Normal age-related changes in semantic and episodic memory: Evidence from functional magnetic resonance imaging. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 760.
70. Sobel N, Prabhakaran V, **Desmond JE**, Glover G, Sullivan E, Gabrieli JDE. A cerebellar role in olfaction. [Abstract] AchemS, 1998.
71. Sobel N, Prabhakaran V, Hartley CA, **Desmond JE**, Glover GH, Sullivan EV, Gabrieli JDE. Brain activation induced by air-borne chemicals - without awareness. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 1508.
72. Stebbins GT, Gabrieli JDE, Carillo MC, Dorfman J, Dirksen C, Turner D, Glover GH, **Desmond JE**. Individual differences in working memory: A functional magnetic resonance imaging (fMRI) study. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 1896.
73. Sullivan EV, Deshmukh A, **Desmond JE**, Shear PK, Lim KO, Pfefferbaum A. Cerebellar volume deficits and neuropsychological functions in alcoholics. [Abstract] Alcoholism Clinical and Experimental Research, 1998; 22: 63A.
74. Sullivan EV, **Desmond JE**, Pfefferbaum A. Alcoholic men have speed but not accuracy deficits in limb movements. [Abstract] Abstracts of the American College of Neuropsychopharmacology,

1998.

75. Vaidya CJ, Gabrieli JDE, **Desmond JE**, Glover GH. fMRI of developmental changes in implicit and explicit memory. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 760.
76. Zhao Z, **Desmond JE**, Bunge S, Prabhakaran V, Gabrieli JDE. The effect of hemodynamic response function on single trial fMRI analysis. [Abstract] Society for Neuroscience Abstracts, 1998; 24: 429.
77. Brewer JB, Zhao Z, **Desmond JE**, Fine EM, Gabrieli JDE. Human perirhinal cortex participates in associative encoding. [Abstract] Society for Neuroscience Abstracts, 1999; 25: 647.
78. Carrillo MC, Stebbins GT, Gabrieli JDE, **Desmond JE**, Bennett DA, Wilson RS, Turner D, Glover GH. A fMRI study of semantic and episodic memory tasks on frontal activation: A single trial analysis. [Abstract] Society for Neuroscience Abstracts, 1999; 25: 648.
79. **Desmond JE**. Estimating sample size for fMRI experiments. [Abstract] Abstracts of the Seventh Annual Meeting of the International Society for Behavioural Neuroscience, Messaria, Island of Santorini, Greece, June 30 -July 4, 1999.
80. **Desmond JE**, Bunge S, Sullivan EV, Pfefferbaum A, Gabrieli JDE Glover GH. Cerebro-cerebellar interactions during verbal working memory: An fMRI study. [Abstract] Society for Neuroscience Abstracts, 1999; 25: 1141.
81. Rosen AC, Prull MW, O'Hara R, Van De Water M, Gabrieli JDE, **Desmond JE**, Glover GH, Yesavage JA. FMRI analysis of memory encoding and retrieval in young and older adults: Role of high- versus low-functioning elderly. [Abstract] Society for Neuroscience Abstracts, 1999; 25: 649.
82. Sobel N, Prabhakaran V, **Desmond JE**, Glover G, Sullivan E, Gabrieli JDE. Odorants increase the variance but not the amplitude of fMRI activation in the ventral temporal lobe of the human. [Abstract] AchemS, 1999.
83. Zhao Z, **Desmond JE**, Poldrack RA., Gabrieli JDE. A comparison of some analytic strategies for multi-subject fMRI studies. [Abstract] Society for Neuroscience Abstracts, 1999; 25: 1144.
84. Beeman MJ, Stebbins GT, Bowden EM, Carrillo MC, Karni O, Glover GH, **Desmond JE**. Right hemisphere activity during verbal tasks: fMRI evidence for coarse semantic coding. [Abstract] Society for Neuroscience Abstracts, 2000; 26: Abstract No -9 2.
85. Carrillo MC, Stebbins GT, Gabrieli JD, **Desmond JE**, Karni O, Bennett DA, Wilson RS, Turner D, Glover GH (2000) An fMRI study of novelty on medial temporal lobe activation in normal aging, mild cognitive impairment and Alzheimer's disease. [Abstract] Society for Neuroscience Abstracts, 2000; 26: Abstract No -463 411.

86. **Desmond JE**, Glover GH. Estimating sample size in random effects analyses of fMRI data. [Abstract] Society for Neuroscience Abstracts, 2000; 26: 2235.
87. Golby AJ, Poldrack RA, Illes J, Brewer JB, Shuer LM, Chen DR, **Desmond JE**, Gabrieli JDE. Novelty-associated mesial temporal lobe activation during memory encoding in patients with mesial temporal lobe epilepsy. [Abstract] Society for Neuroscience Abstracts, 2000; 26: Abstract No -463 419.
88. Pfefferbaum A, **Desmond JE**, Menon V, Galloway C, Glover GH, Sullivan EV. fMRI activation patterns of attention and working memory in alcoholics. [Abstract] Biological Psychiatry, 2000; 47: 101S.
89. Arnow B, **Desmond JE**, Banner L, Glover GH, Abbehusen C, Lue, T, Atlas SW. Brain activation during sexual arousal in healthy heterosexual males. [Abstract] Abstracts of the International Society for Magnetic Resonance in Medicine, 9th annual meeting, Glasgow, Scotland, UK, April 2001.
90. **Desmond JE**. Cerebro-cerebellar interactions in articulatory loops with and without working memory: An fMRI study. [Abstract] Society for Neuroscience Abstracts, 2001; 27: 219.
91. Stebbins GT, Poldrack RA, Klingberg T, Carrillo MC, **Desmond JE**, Moseley ME, Hedehus M, Wilson RS, Karni O, Bennett DA, deToledo-Morrell L, Gabrieli JDE. [Abstract] Aging Effects on White Matter Integrity and Processing Speed: A Diffusion Tensor Imaging Study. American Academy of Neurology Annual Meeting, Philadelphia, PA, May, 2001.
92. Chen SHA, **Desmond JE**, De Rosa E, Pryor MR, Pfefferbaum A, Sullivan EV. Frontocerebellar circuitry and verbal working memory in alcoholism: An fMRI study. [Abstract] Research Society on Alcoholism, 25th Annual Meeting, July 2002. Alcoholism Clinical and Experimental Research, 2002; 26: Supplement p.35A.
93. Chen SA, Pryor MR, **Desmond JE**. Cerebellar involvement in encoding, maintenance, and retrieval components of verbal working memory: An event-related fMRI study. [Abstract] Society for Neuroscience Abstract Viewer and Itinerary Planner, 2002; Abstract No. 416.4.
94. De Rosa E, **Desmond JE**, Pfefferbaum A, Sullivan EV. Basal forebrain nuclei activation during acquisition of a proactive interference simultaneous discrimination task in healthy and nonamnesic alcoholic men: an fMRI study. [Abstract] Cognitive Neuroscience Society Abstracts, 2002.
95. De Rosa E, **Desmond JE**, Pfefferbaum A, Sullivan EV. Reduced activation of the basal forebrain system in nonamnesic alcoholics: An fMRI study of proactive interference. [Abstract] Research Society on Alcoholism, 25th Annual Meeting. Alcoholism Clinical and Experimental Research, 2002; 26: Supplement p.36A.

96. Kirschen MP, Pryor MR, Chen SA, **Desmond JE**. Load dependent increases in cerebellar activation during verbal working memory: an fMRI investigation. [Abstract] Society for Neuroscience Abstract Viewer and Itinerary Planner, 2002; Abstract No. 373.13.
97. Chen SA, **Desmond JE**. Cerebro-cerebellar circuitry of verbal working memory. [Abstract] Society for Neuroscience Abstract Viewer and Itinerary Planner, 2003; Abstract No. 287.6.
98. **Desmond JE**, Chen SHA, Kirschen MP, DeRosa E, Pfefferbaum A, Sullivan EV. Cerebro-cerebellar circuitry in verbal working memory: Neuroimaging evidence from healthy and alcoholic populations. [Abstract] Eleventh Annual Meeting of the International Society for Behavioural Neuroscience, Prague, Czech Republic, June, 2003.
99. **Desmond JE**, Chen SA, Shieh PB. Right cerebellar single-pulse transcranial magnetic stimulation (TMS) affects verbal working memory performance. [Abstract] Society for Neuroscience Abstract Viewer and Itinerary Planner; 2003; Abstract No. 287.8.
100. Illes J, Kelly M, Saha A, Kirschen M, **Desmond JE**, Glover GH, Raffin TA, Atlas SW. Discovery and disclosure of incidental findings on brain MRI. [Abstract] Society for Neuroscience Abstract Viewer and Itinerary Planner; 2003; Abstract No. 935.6.
101. Kirschen MP, Chen SA, **Desmond JE**. Modality specific cerebellar activation during verbal working memory: a fMRI study. [Abstract] Society for Neuroscience Abstract Viewer and Itinerary Planner, 2003; Abstract No. 287.7.
102. Kirschen MP, Chen SHA, **Desmond JE**, Fahrig R. MRI characterization of transcranial magnetic stimulation (TMS) fields. [Abstract] Society for Neuroscience Abstract Viewer and Itinerary Planner, 2004.
103. Chen SHA, **Desmond JE**. Phonological similarity effects on cerebro-cerebellar verbal working memory activation. [Abstract] Cognitive Neuroscience Society Abstracts, 2004.
104. Kirschen MP, Chen SHA, Schraedley-Desmond P, **Desmond JE**. Increases in cerebro-cerebellar activation with increasing memory load and task practice: An fMRI study. [Abstract] International Society for Magnetic Resonance in Medicine Abstracts, 2004.
105. Kirschen MP, Jerde TE, Davis-Ratner MS Schraedley-Desmond P, **Desmond JE**. Enhancement of phonological memory following transcranial magnetic stimulation (TMS). [Abstract] Society for Neuroscience Abstract Viewer and Itinerary Planner, 2005.
106. Cheng DT, Disterhoft JF, Power JM, Oh MM, Weiss C, Ellis DA, Marvel, CL, **Desmond JE**, Within-subject performance during human delay and trace eyeblink conditioning, [Abstract] Society for Neuroscience Abstract Viewer and Itinerary Planner, 2006.
107. Marvel CL, Ellis DA, Cheng DT, **Desmond JE**. The effects of increasing verbal working memory

executive load in prefrontal areas 9/46 and the cerebellum. Society for Neuroscience Abstract Viewer and Itinerary Planner, 2006.

108. Cheng DT, Disterhoft JF, Power JM, Ellis DA, **Desmond JE**. Neural substrates underlying human delay and trace eyeblink conditioning. Abstracts of the Cognitive Neuroscience Society, 2007
109. Cheng, DT Disterhoft, JF, Power, JM, Ellis, DA, **Desmond, JE**. The effects of aging on human delay and trace eyeblink conditioning, Society for Neuroscience Abstract Viewer and Itinerary Planner, 2007.
110. Marvel, C., Ellis, DA, **Desmond, JE**. Cerebellar neural correlates of executive function: An fMRI verbal working memory investigation. Society for Neuroscience Abstract Viewer and Itinerary Planner, 2007.

Extramural Funding

Current

Grants

- 2000- fMRI and TMS Analysis of Cerebellar Cognitive Function
Identification #: RO1-MH60234
Sponsor: NIMH / NIH
Total Direct Costs: \$1,250,000 Current Direct Costs: \$180,000
PI: John E. Desmond, PhD
Role: PI
Percent Effort: 34%
- 2003- Mental Retardation & Developmental Disabilities Research Center
Identification #: P30HD024061-16
Sponsor NICHHD
Total Direct Costs: \$6,676,333 Current Direct Costs (Imaging Core): \$191,784
PI: Michael Cataldo, Ph.D.; Imaging Core Director: Michael Kraut, MD, Ph.D.
Role: Co-Investigator
Percent Effort: 5%
- 2004- fMRI Analysis of Aging and Awareness in Conditioning
Identification #: RO1-AG021501
Sponsor: NIA/NIH
Total Direct Costs: \$1,062,500 Current Direct Costs: \$250,000
PI: John E. Desmond, PhD
Role: PI
Percent Effort: 35%
- 2006- Anomalous Motor Physiology in ADHD
Identification #: R01-MH078160

Sponsor: NIMH/NIH
Total Direct Costs: \$1,062,500
PI: Martha Denckla, MD
Role: Co-investigator
Percent Effort: 5%

Current Direct Costs: \$291,150

2007- Research Training in Age-Related Cognitive Disorders
Identification #: T32 AG027668
Sponsor: NIA/NIH
Current Direct Costs: \$356,334
PI: Marilyn Albert, Ph.D.
Role: Associate Director
Percent Effort: 1%

Previous Research Funding:

- 1995-1998 Functional MRI Analysis of Memory in Aging and Amnesia
Sponsor: NIA / NIH
Role: Co-Investigator
- 1996-1999 Cerebellar Contribution to Skill Learning in Alcoholism
Sponsor: NIAAA / NIH
Role: Co-Investigator
- 1996-2000 Anatomic, Physiologic and Cognitive Pathology of AD
Sponsor: NIA / NIH
Role: Consultant
- 1998-2004 Functional MRI Analysis of Memory in Aging and Amnesia
Sponsor: NIA / NIH
Role: Co-Investigator
- 1999-2002 Information-Processing Biases in Depression
Sponsor: NIMH / NIH
Role: Consultant
- 1999-2003 SPECT and fMRI Analysis of Motor and Cognitive Indices of Early Parkinson's Disease: The Relationship of Striatal Dopamine and Cortical Function
Sponsor: U.S. Army Medical Research Acquisition Agency
Role: Consultant

- 1999-2004 Cerebellar Structure and Function in Alcoholism
 Sponsor: NIAAA / NIH
 Role: Co-Investigator
- 2000-2002 Advanced neuroimaging and behavioral analysis of cognitive changes in multiple sclerosis
 Sponsor: The Rayman MS Research Award
 Role: Consultant
- 2000-2001 Brain Activation during Sexual Arousal
 Sponsor: Tap Holdings, Inc.
 Role: Co-Investigator
- 2002-2002 Developing procedures for using fMRI to study sexual arousal and peripheral response in healthy, heterosexual women.
 Sponsor: Pfizer Central Research
 Role: Co-Investigator

Previous
 Contracts

- 2001-2007 An fMRI Investigation of Sexual Arousal and Peripheral Response in Healthy, Heterosexual Women and Women with Hypoactive Sexual Desire Disorder.
 Sponsor: Pfizer Central Research
 Role: Co-Investigator
- 2004-2007 MRI Studies of Medial Temporal Lobe Function
 Sponsor: The Fidelity Foundations
 Role: Co-PI

EDUCATIONAL ACTIVITIES

Teaching:

Classroom Instruction – University of Massachusetts, Amherst

- 1980-1982 Undergraduate Instructor, Graduate TA
 'Introductory Statistics'

Classroom Instruction – Pacific Graduate School of Psychology

- 1992-2001 12-week quarter course

‘Physiological Psychology’ (Undergraduate Level)

1997-2001 12-week quarter course
‘Introduction to Neuropsychology’ (Graduate Level)

Classroom Instruction – Stanford University

1999 Lecture for *Applications of Three-Dimensional Rendering in Medicine*
‘Functional MRI’

2001-2004 Annual Lecture and demo for *Neurobiology 250: Experimental Approaches in Neurobiology*: ‘Transcranial Magnetic Stimulation’

Classroom Instruction – Johns Hopkins University

2006 Co-instructor, ME440.813 *Current Issues In Systems And Cognitive Neuroscience*

Web-based Instruction – Johns Hopkins University

2006 Co-developer (with Dr. Marilyn Albert): Neuropsychiatry Rotation Imaging Tutorial
(http://www.neuro.jhmi.edu/neuropsych_tutorial/)

Classroom Instruction – Johns Hopkins Bloomberg School of Public Health

2007 Co-instructor, 330.802.01: *Seminar in Aging, Cognition and Neurodegenerative Disorders*

Mentoring (pre- and post-doctoral)

Primary Mentor:

Kirschen, M	Predocctoral 2001-2005	Stanford Medical School
Chen, SHA	Postdoctoral 2001-2004	Asst Professor, National Taiwan University
Pryor, M	Scientific Staff 2001-2002	Partner & Co-founder, Sprockit Web Techology
Boshart, J	Scientific Staff 2002-2005	Stanford Dept of Radiology
Cheng, D	Postdoctoral 2005-	Johns Hopkins University Dept of Neurology
Katzenelson, A	Predocctoral 2007-	Johns Hopkins Neuroscience Program
Marvel, C	Postdoctoral 2005-	Johns Hopkins University Dept of Neurology

Lab Rotation Advisor:

Thomason, M	Predocctoral 2001	Stanford Neuroscience Program
Race, E	Predocctoral 2004	Stanford Neuroscience Program

Jerde, T	Predoctoral 2005	Stanford Neuroscience Program
Katzenelson, A	Predoctoral 2007	Johns Hopkins Neuroscience Program
Wolmetz, M	Predoctoral 2007	Johns Hopkins Univ Cognitive Science Dept

Graduate Board Oral Examination Committee

Fuentes, K	Predoctoral 2007	Johns Hopkins Neuroscience Program
Pei, Y	Predoctoral 2007	Johns Hopkins Neuroscience Program

Dissertation Orals Chair:

Kristoff, K	Predoctoral 2001	Dept Psychology, Stanford University
Trall, S	Predoctoral 2001	Dept Psychology, Stanford University
Hanson, M	Predoctoral 2003	Dept Psychology, Stanford University
Ray, R	Predoctoral 2004	Dept Psychology, Stanford University
Kao, C	Predoctoral 2005	Dept Psychology, Stanford University

Masters Thesis Committee:

Lee, C	Predoctoral 2007	Johns Hopkins, Biomedical Engineering
--------	------------------	---------------------------------------

K Award Co-Mentor:

Rosen, A	Postdoctoral 2005-2008	Research Scholar, Stanford University
----------	------------------------	---------------------------------------

Research Mentor

Prabhakaran, V	Postdoctoral 2006-	Resident, Dept Neurology, Radiology, Johns Hopkins Hospital
----------------	--------------------	---

Society For Neuroscience Mentorship Program

Alvarado, M	Predoctoral 2005-2006	Neuroscience Scholar
-------------	-----------------------	----------------------

Johns Hopkins Dept of Neurology Young Investigator's Day Sponsorship

Marvel, C	Postdoctoral 2005	Dept of Neurology, Johns Hopkins University
Cheng, D	Postdoctoral 2006	Dept of Neurology, Johns Hopkins University

Training grant participation:

Associated Faculty, Department of Psychology 5T32MH015157-25, "Analyzing Human Abilities," Stanford University, 2002-2004

Associate Director, T32AG027668, "Research Training in Age-Related Cognitive Disorders," Johns Hopkins Department of Neurology, 2007-present

Reviews:

Desmond JE (2001) Cerebellar involvement in cognitive function: Evidence from Neuroimaging. *International Review of Psychiatry*, 13, 283-294.

Desmond, JE and Marvel, CL, Cognition: Cerebellum role. In L.E.A. Squire (Ed.), *The New Encyclopedia of Neuroscience*, Elsevier, in press.

Editorials:

Desmond JE, Atlas SW. Task-correlated head movement in fMR imaging: false activations can contaminate results despite motion correction [editorial]. *American Journal of Neuroradiology*. 2000; 21: 1370-1371.

Editorial Activities:

Desmond, JE & Pascual-Leone, A (Eds.). Special Issue: TMS Improvement of Human Cognitive Abilities. *Behavioural Neurology*. 2006; Volume 17.

Ad Hoc Reviewer for:

Alcoholism: Clinical and Experimental Research
American Journal of Neuroradiology
Behavioural Neurology
Brain
Human Brain Mapping
IEEE Transactions of Biomedical Engineering
Investigative Radiology
Journal of Cognitive Neuroscience
Journal of the International Neuropsychological Society
Journal of Neurophysiology
Journal of Neuroscience
Neuroimage
Neurology
Neuropsychology
Neuroreport
Neuroscience Letters
Progress in Neuro-Psychopharmacology and Biological Psychiatry

CLINICAL ACTIVITIES

Service Responsibilities:

2001-2005 Clinical functional MRI development and maintenance, Stanford University Dept of Radiology

ORGANIZATIONAL ACTIVITIES

Institutional Administrative Appointments – Stanford University:

2001-2005 Member, Working Group on Neuroimaging Ethics
2001-2005 Member, Radiology Research Committee
2003 Co-organizer, Dept of Radiology Annual Retreat

Institutional Administrative Appointments – Kennedy Krieger Institute:

2005- Faculty Member, Mental Retardation Research Center Neuroimaging Core

Professional Societies:

1977- Member, Phi Kappa Phi
1977- Member, Psi Chi
1981- Member, Society for Neuroscience
1995- Member, Cognitive Neuroscience Society
1998- Member, International Society for Behavioural Neuroscience

Advisory Committees, Review Groups:

2002- Ad Hoc Reviewer, NIH
2002- Ad Hoc Reviewer, NSF
2002 Reviewer, Special Emphasis Panel ZMH1-CRB-B (01) Neuroinformatics Tools
2002 Reviewer, Wellcome Trust
2002 Reviewer, Whitaker Foundation
2006 NIH Cognition and Perception Study Section, Feb 23-24
2006 Reviewer, Dana Foundation
2006 Reviewer, Alzheimers Disease Research Center, Johns Hopkins Medical Institutes
2006 NIH Cognition, Language, and Perception Fellowships Study Section, Nov 6
2006 Reviewer, NIMH B/START

RECOGNITION

Awards and Honors:

- 1978-1981 National Science Foundation Graduate Fellowship Award
- 1982 Fellowship, MBL Neurobiology Course, Woods Hole, MA
- 1983-1985 National Research Service Award (NIMH F31MH08951)
- 1994-1996 National Research Service Award (NIMH F32NS09628)
- 1999-2001 Executive Committee, International Society for Behavioural Neuroscience

Session Chairs:

- 2005 Working Memory I Session, Society for Neuroscience Annual Meeting, November 12, 2005, Washington DC

Invited Presentations (selected list):

- 1995 Grand Rounds, Department of Neurology, Stanford University (March, 1995).
- Workshop on “fMRI: How to interpret it, how to do it” Cognitive Neuroscience Society Satellite Symposium San Francisco, CA (April, 1995).
- Cognitive Seminar, Department of Psychology, Stanford University (November, 1995)
- Cognitive Colloquium, Department of Psychology, University of California, Berkeley, CA (December, 1995).
- 1996 Symposium speaker on “Non-Hippocampal, Non-Frontal, Non-Cerebellar Memory: The Agnosias of Man” at annual meeting of the Winter Conference on Neural Plasticity, St. Lucia, West Indies (February, 1996).
- 1997 Speaker, The PARALLEL Processing Connection, Sunnyvale, CA (February, 1997).
- Seminar, Department of Neurology, Rush Medical College, Chicago, IL (April, 1997).
- 1998 Seminar, NASA-Ames Research Center, Moffett Field, CA (February, 1998).
- 1999 Speaker, Stanford fMRI Journal Club, “Estimating Sample Size for fMRI Experiments” (February, 1999).
- Symposium speaker on “The Role of the Cerebellum in Higher Processes,” American Psychological Society Annual Meeting, Denver, Colorado (June, 1999).
- Symposium speaker on “Event-related fMRI,” International Society of Behavioural

- Neuroscience Seventh Annual Meeting, June 30-July 4, 1999, Messaria, Island of Santorini, Greece.
- Society for Neuroscience NIAAA-sponsored Satellite Symposium on “Cerebellum and Alcohol: Roles in Cognitive and Motor Function” (speaker and discussant), Miami, Florida (October, 1999).
- Speaker, “Workshop on Research Opportunities in Cognitive Aging.” National Research Council/National Academy of Sciences Committee on Future Directions for Cognitive Research on Aging, Washington, DC (November, 1999).
- 2000 Symposium speaker on “Cognitive Functions of the Cerebellum,” Winter Conference on Neural Plasticity, St. Lucia, West Indies (February, 2000).
- Symposium speaker on “Issues and Concerns in the Analysis of fMRI Data,” Cognitive Neuroscience Society Annual Meeting, San Francisco, CA (April, 2000).
- Co-speaker (with Dr. Gary Glover), “Inside the Skull: Exploring the Brain,” Exploratorium live webcast, April 22, 2000 (www.exploratorium.edu).
- 2001 NIH Workshop invited participant: "NIFTI Workshop: Users of Informatics Tools for fMRI Research", April 13, 2001 (NIFTI = *Neuroimaging Informatics Technology Initiative*)
- Symposium speaker, on "Medical Applications of functional MRI." International Symposium on Life Science and Human Technology. Stress, Signaling, Sensing, and Imaging. Nov 1-2, 2001, AIST-Kansai, Ikeda, Osaka, Japan.
- Invited speaker on "Cerebro-Cerebellar circuits in verbal working memory", University of Kyoto, Nov 5, 2001, Kyoto, Japan.
- Medical Imaging Seminar speaker on "Estimating Sample Size in Functional MRI Neuroimaging Studies: Statistical Power Analyses" December, 2001, Stanford University.
- 2002 Symposium speaker on “fMRI at High Field: Current and Emerging Applications,” *First Annual International Symposium on Clinical High Field MRI*, Las Vegas, Nevada, Sept 27-28, 2002.
- Symposium speaker on “Functional Reorganization of the Brain in Alcoholism: Neuroimaging Evidence,” *Research Society on Alcoholism Annual Meeting*, San Francisco, CA, July 2002.
- Invited Seminar Speaker on “Clinical Applications of fMRI,” University of California San Francisco, Oct 2002.

- 2003 Speaker on “Clinical fMRI: Applications, Caveats, and Implementation at Stanford”, Radiological Sciences Laboratory, Stanford University, Mar 10, 2003.
- Speaker on “Clinical fMRI at Stanford,” Neuroradiology Research Meeting, Stanford University, Apr 3, 2003.
- 2004 Symposium speaker on “Ethics and Future Developments of Clinical fMRI,” 6th European Congress on Epileptology, Vienna, May 30 – June 3, 2004.
- Symposium speaker on “The Evolving Platform for Integrated Imaging,” Neuroradiology Education and Research (NER) Foundation Symposium, Seattle, June 5-6, 2004.
- Colloquium speaker on “Clinical fMRI: Implementation, Uses, and Practical Considerations.” Johns Hopkins Department of Neurology, June 28, 2004.
- Colloquium speaker on “Cerebro-Cerebellar Circuits in Verbal Working Memory.” Johns Hopkins Department of Psychology, June 29, 2004.
- Symposium speaker on “How to Set Up a Clinical fMRI Center,” *Third Annual Global Symposium on Clinical High Field MRI*, Las Vegas, Nevada, Oct 17-18, 2004.
- 2005 Speaker on “Cerebro-Cerebellar Circuits in Verbal Working Memory,” Cognitive Neurology Lecture Series, Johns Hopkins Department of Neurology, November 17, 2005.
- Colloquium speaker on “Neuroimaging Investigations of the Cerebellum,” Department of Psychology, University of Massachusetts, Amherst, December 9, 2005.
- 2006 Grand Rounds Speaker on “Cerebro-Cerebellar Circuits in Verbal Working Memory,” Johns Hopkins Department of Neurology, February 9, 2006.
- Colloquium Speaker on “Cerebellar Involvement in Working Memory,” Indiana University, Department of Psychological and Brain Sciences, February 13, 2006.
- Neuroscience Colloquium Speaker on “Transcranial Magnetic Stimulation,” Indiana University, Programs in Neuroscience and Cognitive Science, February 13, 2006.
- Seminar speaker on “Cerebro-Cerebellar Circuits in Verbal Working Memory,” Neuropsychology Seminar Series, Kennedy Krieger Institute, March 20, 2006.
- Seminar speaker on “fMRI and TMS Studies of Cerebellar Function,” Marquette University Department of Biomedical Engineering, March 31, 2006.
- Seminar speaker on “Cerebellar Involvement in Working Memory,” Medical Psychology

Seminar Series, Johns Hopkins University School of Medicine, October 3, 2006

Speaker on “Neuroimaging and TMS investigations of working memory and eyeblink conditioning,” Systems Neuroscience Research Symposium, The Zanvyl Krieger Mind/Brain Institute, October 6, 2006

2007 Invited fMRI Journal Club Speaker on “Integrating fMRI and TMS”, Department of Psychological and Brain Sciences, January 25, 2007

Colloquium Speaker on “Cerebellar Function in Verbal Working Memory,” Cognitive Science Department, Johns Hopkins University, February 22, 2007

2008 Invited Speaker on “Cerebellar Involvement in Cognition,” Outpatient NeuroRehabilitation Program Education Series, Department of Physical Medicine & Rehabilitation, Johns Hopkins University, February 26, 2008

Invited speaker on “Executive and non-executive function of the cerebellum in verbal working memory”, Department of Psychiatry Research Conference, March 4, 2008