# Ariel Beth Brown

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## Education:

Boston University School of Medicine, Division of Graduate Medical Sciences, **Ph.D Candidate** in Behavioral Neuroscience (Advisor: Marlene Oscar-Berman, Ph.D.) Dissertation title: *Effect of Dopamine Transporter Gene (DAT1) on Brain Function in ADHD.* Expected defense date, May 1 2009.

Skidmore College, Saratoga Springs, NY; Bachelor of Arts in Psychology, 2001

# Research Positions:

- 2005 current Predoctoral Research Associate, Functional Neuroimaging Program in Pediatric Psychopharmacology and Adult ADHD (**PI: Joseph Biederman, M.D.**), Department of Psychiatry, Massachusetts General Hospital, Boston, MA
- 2005 current fMRI Data Analyst and Laboratory Manager, Laboratory of Developmental Neuropsychiatry and Clinical Neuroscience (PI: Larry Seidman, Ph.D.), Department of Psychiatry, Massachusetts General Hospital, Boston, MA
- 2002 2005 Psychology Technician and Laboratory Manager, Parkinson's Disease Unit (**PI: Patrick McNamara, Ph.D.**), Department of Neurology, Boston VA Medical Center
- 2001 2002 Research Assistant, Memory Disorders Research Center, Boston University School of Medicine (**PI: David Schnyer, Ph.D.**)

### Awards and Honors:

- 2008, June: Henry I. Russek Student Achievement Award. \$1000 personal award for excellent Dissertation abstract "Effect of Dopamine Transporter Gene on Dorsal Anterior Cingulate Function in ADHD".
- 2008, June: Faculty nominated Participant in the AAAS/Science Program for Excellence in Science.
- 2008, May: \$500 travel award, Division of Graduate Medical Sciences, Boston University School of Medicine
- 2008, March: Graduate Student Research Fellowship, Division of Graduate Medical Sciences, Boston University School of Medicine. \$4000 award to support dissertation research. Title "Effect of Dopamine Transporter Gene Variation on Brain Function in ADHD"
- 2007, June: \$500 travel award, Division of Graduate Medical Sciences, Boston University School of Medicine

## Submitted Papers:

- **Brown, A. B.,** Seidman, L., Valera, E.M. et al. Effect of Dopamine Transporter Gene (DAT1) on Dorsal Anterior Cingulate Function in ADHD.
- Valera, E.M., **Brown, A. B.** et al. Sex differences in the neuroanatomy of working memory in Adult ADHD.
- Makris, N., Seidman, L., Valera, EM., Monuteaux, MC., Kaiser, J., Hodge, SM., **Brown, A.,** et al. Prefrontal-Limbic Deficiencies in Adults with Attention-Deficit/Hyperactivity Disorder Comorbid with Bipolar Disorder: A Cortical Thickness MRI analysis.

# Publications:

- Makris, N., Seidman, L., Valera, E., Monuteaux, M., Kennedy, D. N., Caviness, V.S., Crum, K., **Brown, A**. et al. (in press) Anterior Cingulate Volumetric Alterations in Treatment-Naïve Adults with ADHD: A Pilot Study. Journal of Attention Disorders.
- Monuteaux, M., Seidman, L. Faraone, S. V., Makris, N., Spencer, T. Valera, E., **Brown, A.** et al., (in press). A preliminary study of dopamine D4 receptor genotype and structural brain alterations in adults with ADHD. Am J Med Gen B: Neuropsychiatric Genetics.
- Valera, E. M., **Brown, A. B**. & Seidman, L.S. (in press). Neuropsychology of ADHD and other Childhood Disorders. <u>Neuropsychology of Mental Disorders</u>. Editor: Stephen Wood.
- Makris N. M., Buka S. L., Biederman J., Papadimitriou G. M., Hodge S. M., Valera E. M., **Brown A. B.**, et al. (2008). Attention and executive Systems abnormalities in adults with childhood ADHD: A DT-MRI study of connections. <u>Cerebral Cortex,18,</u> 1210-1220.
- Hodgins, H., **Brown, A**. & Carver, B. (2007). Autonomy and control motivation and self-esteem. <u>Self and Identity</u>, 6(2-3): 189-208.
- McNamara, P., Durso, R., **Brown, A.,** & Harris, E. (2006). The chemistry of religiosity: Evidence from patients with Parkinson's disease. Where God and Science Meet: How the Brain and Evolutionary Studies Alter our Understanding of Religion, Volume II: Neurology of Religion, Chapter 1, Editor: Patrick McNamara.
- McNamara, P., Durso, R. & **Brown, A.** (2006). Religiosity in patients with Parkinson's Disease. Neuropsychiatric Disease and Treatment, 2(3), 341-348.
- Wegelin, J., McNamara, P., & **Brown, A.** (2005). Correlates of excessive daytime sleepiness in Parkinson's disease. <u>Parkinsonism and Related Disorders, 11(7),</u> 441-448.
- McNamara, P., **Brown, A.,** McLaren, D., Smith, D., & Stickgold, R. (2005). A Jekyll and Hyde Within: Opposing social interactions in REM versus NREM sleep mentation. Psychological Science, 16(2), 130-136.
- McNamara, P., McGeeney, B., **Brown, A.,** Benson, E. & Albert, M. L. (2005). Modes of Remembering in Chronic Pain: Relation to Current Pain. <u>Journal of Nervous and Mental Disease</u>, 193 (1), 53-57.

- McNamara, P., Durso, R. & **Brown, A.** (2003). Relation of 'sense of self' to executive function in Parkinson's disease. <u>Cognitive and Behavioral Neurology</u>, 16(3), 139-148.
- McNamara, P., Durso, R., **Brown, A.,** & Lynch, A. (2003). Counterfactual cognitive deficit in persons with Parkinson's disease. <u>Journal of Neurology, Neurosurgery, and Psychiatry</u>, 74, 1065-1070.

### Selected Invited Talks

- September, 2008: "Genetic Imaging as a Tool for Investigating Pathophysiological Heterogeneity in Psychiatric Disorders: Evidence from ADHD" Psychiatric Genetics Program in Mood and Anxiety Disorders, Massachusetts General Hospital
- May, 2008: "Effect of Dopamine Transporter Gene (DAT1) on Dorsal Anterior Cingulate Function in ADHD". Student Achievement Day, Boston University School of Medicine
- September, 2007: "The Prefrontal Cortex in Cognition". Neurology Seminar for Psychiatry Residents, Boston University School of Medicine

# Selected Conference Presentations

- **Brown, A.** Biederman, J et al. (May, 2008). Effect of Dopamine Transporter Gene (DAT1) on Dorsal Anterior Cingulate Cortex (dACC) activation in ADHD. Poster presented at the 63<sup>rd</sup> annual Scientific Convention and Meeting of the Society of Biological Psychiatry, Washington, DC.
- **Brown, A.** (March, 2008). Thinning of both attentional and affective cortical networks in comorbid ADHD and Bipolar Disorder. Poster presented at the 2008 Pediatric Bipolar Conference, Cambridge, MA.
- **Brown, A.**, Valera, E., Biederman, J. et al. (June, 2007). "fMRI Correlates of Subtype Symptoms in Adults with ADHD on a Verbal Working Memory Task." Poster presented at the 13<sup>th</sup> annual meeting of the Organization for Human Brain mapping, Chicago, II.
- **Brown, A.**, McNamara, P. & Durso, R. (February, 2006). "Awareness of cognitive deficits in patients with Parkinson's Disease" Poster presented at the 33<sup>rd</sup> annual meeting of the International Neuropsychological Society, Boston, MA.
- **Brown, A.,** McNamara, P., Chapman, G., Durso, R. (February, 2004). "Verbal perseverations in patients with Parkinson's disease: Relation to deficits in cognitive planning." Poster presented at the 32<sup>nd</sup> annual meeting of the International Neuropsychological Society, Baltimore, Maryland.

## Activities:

Student Representative, Graduate Medical Sciences Student Organization

- » Bring comments/issues of the students of department to the faculty and administration
- » Work with group to implement changes in administrative policy

### Moderator, Boston-Neurotalks Listserv

» Communication with Boston Neuroscience and Cognitive Science community to organize and implement daily listserv (serving 600 people) announcing relevant lectures and talks in the area.

# Skidmore College Alumni Mentor

- » Speaker on annual Alumni panel advising students on careers in the sciences
- » Personal contact for graduating psychology majors interested in research

## Specialized Computer and Analysis Skills

- » fMRI data analysis using SPM software
- » Linux Shell and Matlab programming
- » Statistical analysis in SPSS and SAS

### Specialized Training:

fMRI Visiting Fellowship: A 5-Day Intensive (Martinos Center for Biomedical Imaging, Boston, MA, 2006)

MRI Scanning Certification (Martinos Center for Biomedical Imaging, Boston, MA, 2004)

2-day training for Cambridge Neuropsychological Test Automated Battery (CANTAB; Cambridge, UK, 2002)

### References:

Larry Seidman, Ph.D. Joseph Biederman, M.D. Marlene Oscar Berman, Ph.D.