

Leah H. Somerville, PhD

Postdoctoral Associate of Psychology in Psychiatry
Sackler Institute for Developmental Psychobiology
Weill Medical College of Cornell University
1300 York Avenue, Box 140
New York, NY 10065
(212) 746-3781
lhs2003 AT med.cornell.edu

Education and Training

- 2008- Postdoctoral Associate of Psychology in Psychiatry
Sackler Institute, Weill Cornell Medical College
- 2003-2008 Ph.D. in Psychology
Dartmouth College, Psychological and Brain Sciences
Dissertation: *Physiological and neural mechanisms of anxiety, negativity,
and threat*
- 1997-2001 Bachelor of Science in Psychology *summa cum laude*
University of Wisconsin

Funding

- 2010-2015 K99/R00 Pathway to Independence Award
National Institute of Mental Health
K99MH087813 *Development of tonic and phasic neural systems
mediating affect and anxiety* (PI: Somerville)
Total costs (K Period): \$169,208
Anticipated costs (R Period): \$743,081
- 2004-2007 National Science Foundation Graduate Research Fellowship

Honors and Awards

- 2010 *Biological Psychiatry* paper (Somerville, Whalen, & Kelley) granted
Priority Communication status
- 2010 Trainee Abstract Travel Award, Organization for Human Brain Mapping
- 2010 Career Development Travel Award, Anxiety Disorders Association of
America
- 2008 Hannah Croasdale Graduate Scholar Award, Dartmouth College
Awarded to the single graduating PhD best representing the qualities of an
academic scholar
- 2008 Fellow, Summer Institute in Cognitive Neuroscience
- 2007 AAAS Excellence in Science Award

2007	Fellow, Summer Institute in Cognitive Neuroscience
2005	Outstanding Presentation Award, Dartmouth College Neuroscience Day
2004	Travel Fellowship, Wisconsin Symposium on Emotion
2001	Phi Beta Kappa

Publications

- Somerville, L. H.*, Hare, T. A.*, & Casey, B. J. (in press). Frontostriatal maturation predicts behavioral regulation failures to appetitive cues in adolescence. *Journal of Cognitive Neuroscience*. *Equal author contribution
- Davis, F. C., Somerville, L. H., Ruberry, E. J., Berry, A., Shin, L. M., & Whalen, P. J. (in press). A tale of two negatives: Differential memory effects associated with angry and fearful facial expressions. *Emotion*.
- Somerville, L. H., Fani, N., & McClure-Tone, E. B. (in press). Behavioral and neural representation of emotional facial expressions across the lifespan. *Developmental Neuropsychology*.
- Somerville, L. H., Whalen, P. J., & Kelley, W. M. (2010). Human bed nucleus of the stria terminalis indexes hypervigilant threat monitoring. *Biological Psychiatry*, e-pub ahead of print.
- Somerville, L. H., Kelley, W. M., & Heatherton, T. F. (2010). Self-esteem modulates medial prefrontal cortical responses to evaluative social feedback. *Cerebral Cortex*, e-pub ahead of print.
- Somerville, L. H., & Casey, B. J. (2010). Developmental neurobiology of cognitive control and motivational systems. *Current Opinion in Neurobiology*, 20, 1-6.
- Somerville, L. H., Jones, R. M., & Casey, B. J. (2010). A time of change: Behavioral and neural correlates of adolescent sensitivity to appetitive and aversive environmental cues. *Brain and Cognition*, 72, 124-133.
- Casey, B. J., Jones, R. M., Levita, L., Libby, V., Pattwell, S., Ruberry, E. J., Soliman, F. A., & Somerville, L. H. (2010). The storm and stress of adolescence: Insights from human imaging and mouse genetics. *Developmental Psychobiology*, 52(3), 225-235.
- Soliman, F., Glatt, C. E., Levita, L., Bath, K. G., Jones, R. M., Pattwell, S. S., Tottenham, N., Somerville, L. H., Voss, H. U., Glover, G., Ballon, D. J., Lee, F. S., & Casey, B. J. (2010). A genetic variant BDNF (Val66Met) polymorphism alters extinction learning in both mouse and human. *Science*, 327, 863-866.
- Aminoff, E. M., Balslev, D., Borroni, P., Bryan, R. E., Chua, E. A., Cloutier, J., Cross, E. S., Drew, T., Funk, C. M., Gil-da-Costa, R., Guerin, S. A., Hall, J. L., Jordan, K. E., Landau, A. N., Molnar-Szakacs, I., Montaser-Kouhsari, L., Olofsson, J. K., Quadflieg, S.,

- Somerville, L. H., Sy, J. L., Uddin, L. Q., & Yamada, M. (2009). The landscape of cognitive neuroscience: Challenges, rewards, and new perspectives. In M. Gazzaniga (Ed.), *The New Cognitive Neurosciences* (4th ed.). Cambridge, MA: MIT Press.
- Whalen, P. J., Johnstone, T., Somerville, L. H., Nitschke, J. B., Polis, S. A., Alexander, A. L., Davidson, R. J., & Kalin, N. H. (2008). A functional magnetic resonance imaging predictor of treatment response to venlafaxine in generalized anxiety disorder. *Biological Psychiatry*, *63*(9), 858-863.
- Somerville, L. H., & Whalen, P. J. (2006). Prior experience as a stimulus category confound: An example using facial expressions of emotion. *Social, Cognitive, and Affective Neuroscience*, *1*, 271-274.
- Somerville, L. H., Heatherton, T. F., & Kelley, W. M. (2006). Anterior cingulate cortex responds differentially to expectancy violation and social rejection. *Nature Neuroscience*, *9*(8), 1007-1008.
- Somerville, L. H., Wig, G. S., Whalen, P. J., & Kelley, W. M. (2006). Dissociable medial temporal lobe contributions to social memory. *Journal of Cognitive Neuroscience*, *18*(8), 1253-1265.
- Johnstone, T., Somerville, L. H., Alexander, A. L., Davidson, R. J., Kalin, N. H., & Whalen, P. J. (2005). Stability of amygdala BOLD response to fearful faces over multiple scan sessions. *Neuroimage*, *25*, 1112-1123.
- Whalen, P. J., Kagan, J., Cook, R. G., Davis, F. C., Kim, H., Polis, S., McLaren, D. L., Somerville, L. H., McLean, A. A., Maxwell, J. S., & Johnstone, T. (2004). Human amygdala responsivity to masked fearful eye-whites. *Science*, *306*, 2061.
- Somerville, L. H., Kim, H., Johnstone, T., Alexander, A. L., & Whalen, P. J. (2004). Human amygdala responses during presentation of happy and neutral faces: Correlations with state anxiety. *Biological Psychiatry*, *55*, 897-903.
- Kim, H., Somerville, L. H., Johnstone, T., Polis, S., Alexander, A. L., Shin, L. M., & Whalen, P. J. (2004). Contextual modulation of fMRI responsivity to surprised faces. *Journal of Cognitive Neuroscience*, *16*, 1730-1745.
- Kim, H., Somerville, L. H., Johnstone, T., Alexander, A. L., & Whalen, P. J. (2003). Inverse amygdala and medial prefrontal cortex responses to surprised faces. *Neuroreport*, *14*, 2317-2322.
- Kim, H., Somerville, L. H., McLean, A. A., Johnstone, T., Shin, L. M., & Whalen, P. J. (2003). Functional MRI responses of the human dorsal amygdala/substantia innominata region to facial expressions of emotion. *Annals of the New York Academy of Sciences*, *985*, 533-535.

Whalen, P. J., Shin, L. M., Somerville, L. H., McLean, A. A., & Kim, H. (2002). Functional neuroimaging studies of the amygdala in depression. *Seminars in Clinical Neuropsychiatry*, 7, 234-242.

Manuscripts Under Review

Casey, B. J., Jones, R. M., & Somerville, L. H. Braking and accelerating of the adolescent brain.

Memberships in Professional Societies

2002-present	Society for Neuroscience
2004-present	Cognitive Neuroscience Society
2008-present	New York Academy of Sciences
2009-present	Social and Affective Neuroscience Society

Ad hoc reviewing

Biological Psychiatry	International Journal of Methods in Psychiatric Research
Brain and Cognition	Journal of Cognitive Neuroscience
Brain Research	Neuroimage
Cognition and Emotion	Proceedings of the National Academy of Sciences
Cognitive, Affective, and Behavioral Neuroscience	Psychological Science
Developmental Neuropsychology	Psychoneuroimmunology
Emotion	Social, Cognitive, and Affective Neuroscience
Human Brain Mapping	

Teaching

2010	Lecturer, Didactics: Lecture Series in Developmental Neuroscience Weill Cornell Medical College, Department of Psychiatry Residency Program
2009	Lecturer, Neuron to Brain Weill Cornell Medical College Graduate School of Medical Sciences, Neuroscience Department, First Year Graduate School course
2009	Lecturer, Summer Course in Translational Imaging Sackler Institute, Weill Cornell Medical College
2008, 2009	Lecturer and Lab Instructor, "Mind to Brain" Weill Cornell Medical College, Psychiatry Department, Second Year Medical School course
2005, 2007	Guest Lecturer and Lab Instructor, Brain Mapping: The Methods Dartmouth College, Department of Psychological and Brain Sciences
2005	Teaching Assistant, Statistics Dartmouth College, Department of Psychological and Brain Sciences

2004

Lab Instructor, Experimental Research Methods
Dartmouth College, Department of Psychological and Brain Sciences

Selected Conference Presentations

Somerville, L. H., Whalen, P. J., Casey, B. J., Walkup, J. T., & Kelley, W. M. Dissociating brain networks mediating transient and sustained emotion: Implications for neurodevelopment of anxiety. Abstract submitted to the American Academy of Child and Adolescent Psychiatry, New York, NY

Somerville, L. H., Whalen, P. J., & Kelley, W. M. (2010). Subcortical and cortical predictors of hypervigilant threat monitoring with greater trait anxiety. Forthcoming talk at the Annual Meeting of the Society for Neuroscience: San Diego, CA.

Somerville, L. H., Hare, T. A., & Casey, B. J. (2010). Frontostriatal maturation predicts adolescents' failure to resist approach to appetitive cues. Poster presentation at the Annual Meeting of Organization for Human Brain Mapping: Barcelona, Spain.

Somerville, L. H., Hare, T. A., & Casey, B. J. (2010). Frontostriatal maturation predicts behavioral regulation failures to appetitive cues in adolescence. Poster presentation at the Annual Meeting of the Cognitive Neuroscience Society: Montreal, Canada.

Somerville, L. H., Whalen, P. J., Casey, B. J., & Kelley, W. M. (2010). Dissociating brain networks mediating transient and sustained emotion: Implications for anxiety. Poster presentation at the Annual Meeting of the Anxiety Disorders Association of America: Baltimore, MD.

Molina, J.* , Somerville, L. H., Jones, R. M., & Casey, B. J. (2009). Biological correlates of socially induced state anxiety. Talk at the Annual Biomedical Research Conference for Minority Students: Phoenix, AZ. * *Student trainee*

Somerville, L. H., Heatherton, T. F., & Kelley, W. M. (2009). Low self-esteem biases neural responses to evaluative social feedback. Poster presentation at the Annual Meeting of Social & Affective Neuroscience Society: New York, NY.

Somerville, L. H., Whalen, P. J., & Kelley, W. M. (2009). A role for the ventrolateral prefrontal cortex and ventral basal forebrain in tracking proximity to threat and anxiety. Poster presentation at the Annual Meeting of the Cognitive Neuroscience Society: San Francisco, CA.

Somerville, L. H. (2009). A role for the human amygdala in transient valence responding but not sustained anxiety maintenance. Slide presentation at the Social Brain Sciences Winter Summit: Ludlow, VT.

Somerville, L. H., Parker, A. S., Alexander, D. M., Whalen, P. J., Shin, L. M., Heatherton, T. F., & Kelley, W. M. (2008). Dissociable transient and sustained responses to negative

stimuli and arousing contexts: A mixed design fMRI and GSR study. Talk given at the Annual Meeting of the Society for Neuroscience: Washington, D. C.

Somerville, L. H. (2007). Dissociable medial temporal lobe contributions to social memory. Talk given in symposium, "The role of the amygdala in social/emotional cognition across development." Annual Meeting of the Society for Psychophysiological Research: Savannah, GA.

Somerville, L. H., Heatherton, T. F., & Kelley, W. M. (2007). Amygdala, nucleus accumbens, and ventral ACC are engaged during anticipation of social feedback and are modulated by individual differences in self-esteem and anxiety. Poster presentation at the Annual Meeting of the Cognitive Neuroscience Society: New York, NY.

Somerville, L. H., Whalen, P. J., & Kelley, W. M. (2006). Differential roles for the amygdala and ventral prefrontal cortex in the regulation of and response to emotional pictures. Poster presentation at the Annual Meeting of the Society for Neuroscience: Atlanta, GA.

Somerville, L. H., Heatherton, T. F., & Kelley, W. M. (2005). A role for anterior cingulate cortex in expectancy violation: fMRI evidence from a social feedback task. Poster presentation at the Annual Meeting of the Cognitive Neuroscience Society: New York, NY.

Kelley, W. M., Somerville, L. H., & Heatherton, T. F. (2004). Dissociating cognitive and affective contributions of the anterior cingulate cortex during a social feedback task. Poster presentation at the Annual Meeting of the Society for Neuroscience: San Diego, CA.

Somerville, L. H., Wig, G. S., Macrae, C. N., Whalen, P. J., & Kelley, W. M. (2004). Dissociable roles for the hippocampus and amygdala in the representation of socially relevant contextual knowledge. Poster presentation at the Annual Meeting of the Society for Neuroscience: San Diego, CA.

Somerville, L. H., Kim, H., McLaren, D. G., Johnstone, T., & Whalen, P. J. (2003). State anxiety correlates with human amygdala response during presentation of happy and neutral faces. Poster presentation at the Annual Meeting of Organization for Human Brain Mapping: New York, NY.