

Leah H. Somerville, PhD  
Postdoctoral Associate  
Sackler Institute for Developmental Psychobiology  
Department of Psychiatry  
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

1997-2001 B. S., University of Wisconsin, Psychology, *summa cum laude*  
2003-2008 Ph.D., Dartmouth College, Psychological and Brain Sciences  
*Dissertation: "Physiological and neural mechanisms of anxiety, negativity, and threat." Advisor: William Kelley, Ph.D.*

## Academic Appointments

2008-2010 Postdoctoral Associate of Psychology in Psychiatry, Sackler Institute,  
Weill Cornell Medical College  
2001-2003 Research Specialist, Departments of Psychiatry and Psychology,  
University of Wisconsin

## Grants

2004-2007 National Science Foundation Graduate Research Fellowship; L. H. Somerville, PI  
2008-present National Institute of Drug Abuse; Postdoctoral trainee on T32 training grant

## Honors and Awards

2001 Phi Beta Kappa  
2004 Travel Fellowship, Wisconsin Symposium on Emotion  
2005 Outstanding Presentation Award, Dartmouth College Neuroscience Day  
2007 Fellow, Summer Institute in Cognitive Neuroscience  
2007 AAAS Excellence in Science Award  
2008 Fellow, Summer Institute in Cognitive Neuroscience  
2008 Hannah Croasdale Graduate Scholar Award, Dartmouth College. Awarded to the single graduating PhD best representing the qualities of an academic scholar  
2010 Career Development Travel Award, Anxiety Disorders Association of America

## Bibliography

### *Peer-Reviewed Publications*

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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.

11. 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.
12. 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.
13. 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.
14. Somerville, L. H., & Casey, B. J. (2010). Developmental neurobiology of cognitive control and motivational systems. *Current Opinion in Neurobiology*, *20*, 1-6.
15. Somerville, L. H., Fani, N., & McClure-Tone, E. B. (in press). Behavioral and neural representation of emotional facial expressions across the lifespan. *Developmental Neuropsychology*.
16. Casey, B. J., Jones, R. M., Levita, L., Libby, V., Pattwell, S., Ruberry, E. J., Soliman, F. A., & Somerville, L. H. (in press). The storm and stress of adolescence: Insights from human imaging and mouse genetics. *Developmental Psychobiology*.
17. Somerville, L. H., Kelley, W. M., & Heatherton, T. F. (in press). Self-esteem modulates medial prefrontal cortical responses to evaluative social feedback. *Cerebral Cortex*.

#### *Under Review*

1. Somerville, L. H.\*, Hare, T. A.\*, & Casey, B. J. Frontostriatal maturation predicts behavioral regulation failures to appetitive cues in adolescence. \*Equal author contribution
2. Somerville, L. H., Whalen, P. J., & Kelley, W. M. Human bed nucleus of the stria terminalis indexes hypervigilant threat monitoring.
3. Davis, F. C., Somerville, L. H., Ruberry, E. J., Shin, L. M., & Whalen, P. J. A tale of two negatives: Differential memory effects associated with angry and fearful facial expressions.
4. Casey, B. J., Jones, R. M., & Somerville, L. H. Braking and accelerating of the adolescent brain.

## *Book Chapters*

1. 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.

## **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  
Brain and Cognition  
Brain Research  
Cognition and Emotion  
Cognitive, Affective, and Behavioral Neuroscience  
Developmental Neuropsychology  
Emotion  
Human Brain Mapping  
Journal of Cognitive Neuroscience  
Neuroimage  
Psychological Science  
Psychoneuroimmunology  
Social, Cognitive, and Affective Neuroscience

## **Teaching**

2004	Lab Instructor, Experimental Research Methods Dartmouth College, Department of Psychological and Brain Sciences
2005	Teaching Assistant, Statistics Dartmouth College, Department of Psychological and Brain Sciences
2005, 2007	Guest Lecturer and Lab Instructor, Brain Mapping: The Methods Dartmouth College, Department of Psychological and Brain Sciences
2008, 2009	Lecturer and Lab Instructor, “Mind to Brain” Weill Cornell Medical College, Psychiatry Department, Second Year Medical School course
2009	Lecturer, Summer Course in Translational Imaging Weill Cornell Medical College

2009                      Lecturer, Neuron to Brain  
Weill Cornell Medical College Graduate School of Medical Sciences,  
Neuroscience Department, First Year Graduate School course

### **Selected Conference Presentations**

- 06/03 Somerville, L. H., Kim, H., McLaren, D. G., Johnstone, T., & Whalen, P. J. State anxiety correlates with human amygdala response during presentation of happy and neutral faces. Poster presentation at the Annual Meeting of the Human Brain Mapping Society: New York, NY.
- 10/04 Somerville, L. H., Wig, G. S., Macrae, C. N., Whalen, P. J., & Kelley, W. M. 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.
- 10/04 Kelley, W. M., Somerville, L. H., & Heatherton, T. F. 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.
- 04/05 Somerville, L. H., Heatherton, T. F., & Kelley, W. M. 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.
- 10/06 Somerville, L. H., Whalen, P. J., & Kelley, W. M. 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.
- 05/07 Somerville, L. H., Heatherton, T. F., & Kelley, W. M. 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.
- 10/07 Somerville, L. H. 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.
- 11/08 Somerville, L. H., Parker, A. S., Alexander, D. M., Whalen, P. J., Shin, L. M., Heatherton, T. F., & Kelley, W. M. 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.

- 03/09 Somerville, L. H. 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.
- 03/09 Somerville, L. H., Whalen, P. J., & Kelley, W. M. 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.
- 10/09 Somerville, L. H., Heatherton, T. F., & Kelley, W. M. Low self-esteem biases neural responses to evaluative social feedback. Poster presentation at the Annual meeting of Social & Affective Neuroscience Society: New York, NY.
- 11/09 Molina, J.\*, Somerville, L. H., Jones, R. M., & Casey, B. J. Biological correlates of socially induced state anxiety. Talk at the Annual Biomedical Research Conference for Minority Students: Phoenix, AZ. \* *Student trainee*
- 03/10 Somerville, L. H., Whalen, P. J., Casey, B. J., & Kelley, W. M. 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.
- 04/10 Somerville, L. H., Hare, T. A., & Casey, B. J. Frontostriatal maturation predicts behavioral regulation failures to appetitive cues in adolescence. Poster submitted to the Annual Meeting of the Cognitive Neuroscience Society: Montreal, Canada.
- 06/10 Somerville, L. H., Hare, T. A., & Casey, B. J. Frontostriatal maturation predicts adolescents' failure to resist approach to appetitive cues. Abstract submitted to Human Brain Mapping: Barcelona, Spain.