

**LARA FOLAND-ROSS**  
Stanford University  
Department of Psychology  
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(650) 690-5468

## ACADEMIC POSITIONS / EDUCATION

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- 2010-present Postdoctoral Fellow, Department of Psychology, Stanford University  
*Research Focus: Neural underpinnings of major depressive disorder in adults;  
Neurobiological markers of risk for mood disorders in children  
Advisor: Ian Gotlib*
- 2004-2010 Ph.D., Neuroscience, University of California, Los Angeles  
*Dissertation: Brain structure and function in Bipolar Disorder  
Advisors: Paul Thompson, Lori Altshuler  
GPA: 3.9*
- 1997-2001 B.A., Psychobiology, University of California, Santa Cruz  
*GPA: N/A (course performance provided via narrative evaluations)*

## RESEARCH INTERESTS

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- Environmental and genetic influences on neural circuits of emotion
- Emotion-cognition interactions in emotional disorders
- Neural markers of risk for psychopathology in children and adolescents
- Medication and mood state effects on brain structure and function

## AWARDS / HONORS

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- 2013 Travel Scholarship, *Society of Biological Psychiatry*
- 2009 Chapter Award, *Society for Neuroscience*
- 2009 Dissertation Year Fellowship, UCLA
- 2008 Travel Fellowship, *National Institutes of Health*
- 2007 Outstanding Graduate Trainee Award in Neuroscience, UCLA
- 2007 Special Course Fellowship, *National Institute on Drug Abuse*
- 2007 Travel Award, *Organization for Human Brain Mapping*
- 2006 Outstanding Graduate Trainee Award in Neuroscience, UCLA
- 2006 Travel Award, *Organization for Human Brain Mapping*
- 2005 Quality of Graduate Education Special Course Travel Fellowship, UCLA

## GRANTS

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- 2013-2015 *Neural risk factors for depression: An integrative investigation* PI  
Brain & Behavior Research Foundation  
(formerly the National Alliance for Research on Schizophrenia and  
Depression; NARSAD; 19018)

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| 2013-2014 | <i>Associations between early life stress, amygdala-prefrontal circuitry and vulnerability for psychopathology in children</i><br>Center for Cognitive and Neurobiological Imaging | PI                                  |
| 2013-2016 | <i>The effects of early life stress on neurodevelopment in children and adolescents</i><br>NIMH / NIH (R01 MH101495)   | Postdoctoral Fellow<br>(PI: Gotlib) |
| 2013-2014 | <i>Interpretation bias training in depressed adolescents: Effects and mechanisms</i><br>NIMH / NIH (R21 MH101545)  | Postdoctoral Fellow<br>(PI: Gotlib) |
| 2010-2013 | <i>Integrative approaches for the examination of brain structure and function in major depressive disorder</i><br>NIMH / NIH (F32 MH090617)  | PI                                  |
| 2010-2012 | <i>Integrative approaches for the examination of brain structure in major depressive disorder</i><br>Hope for Depression Research Foundation                                       | Co-PI<br>(PI: Gotlib)               |
| 2006-2009 | <i>Brain function and structure in bipolar euthymia</i><br>NIMH / NIH (F31 MH078556)   | PI                                  |

## PUBLICATIONS

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**Foland-Ross L**, Kircanski K, Gotlib I (in press). Coping with having a depressed mother: The role of stress and coping in HPA-axis dysfunction in girls at familial risk for major depression. *Development and Psychopathology*.

Sacchet M, **Foland-Ross L**, Gotlib I (in press). Imaging genetics and depression. *Neuroimaging Genetics*. Eds Bigos K, Hariri A, Weinberger D. London: Oxford University Press.

**Foland-Ross L**, Cooney R, Joormann J, Henry M, Gotlib I (in press). Recalling happy memories in remitted depression: A neuroimaging investigation of the repair of sad mood. *Cognitive, Affective and Behavioral Neuroscience*.

Gotlib I, Joormann J, **Foland-Ross L** (in press). Understanding familial risk for depression: a 25-year perspective. *Perspectives on Psychological Science*.

**Foland-Ross L**, Hamilton J, Sacchet M, Furman D, Sherdell L, Gotlib I (in press). Activation of the medial prefrontal and posterior cingulate cortex during encoding of negative material predicts symptom worsening in major depression. *Neuroreport*.

**Foland-Ross L**, Hardin M, Gotlib I (2013). Neurobiological Markers of Familial Risk for Depression. *Current Topics in Behavioral Neurosciences*. Eds Cohen P, Sharp T, Lau J. Berlin: Springer-Verlag. 14, 181-206.

**Foland-Ross L**, Hamilton J, Joormann J, Berman M, Jonides J, Gotlib IH (2013). The neural basis of difficulties disengaging from negative irrelevant material in major depression. *Psychological Science* 24, 334-344.

**Foland-Ross L**, Thompson P, Sugar C, Narr K, Penfold C, Vasquez R, Townsend J, Fischer J, Saharan P, Bearden C, Altshuler L (2013). Three-dimensional mapping of hippocampal and amygdalar structure in euthymic adults with bipolar disorder not treated with lithium. *Psychiatry Research* 211, 195-201.

Barysheva M, Jahanshad N, **Foland-Ross L**, Altshuler L, Thompson P (2013). White matter microstructural abnormalities in bipolar disorder: A whole brain diffusion tensor imaging study. *NeuroImage: Clinical* 2, 558-568.

- Townsend J, Sugar C, Walshaw P, Vasquez R, **Foland-Ross L**, Moody T, Bookheimer S, McGough J, Altshuler L (2013). Frontostriatal neuroimaging findings differ in patients with bipolar disorder who have or do not have ADHD comorbidity. *Journal of Affective Disorders*.
- Hegarty C, **Foland-Ross L**, Narr K, Sugar C, McGough J, Thompson P, Altshuler L (2012). ADHD comorbidity can matter when assessing cortical thickness abnormalities in patients with bipolar disorder. *Bipolar Disorders* 14, 843-855.
- Foland-Ross L**, Gotlib I (2012). Cognitive and neural aspects of information processing in major depressive disorder: an integrative perspective. *Frontiers in Psychology* 3, 489.
- Townsend J, Bookheimer S, **Foland-Ross L**, Moody T, Eisenberger N, Fischer J, Cohen M, Sugar C, Altshuler LL (2012). Deficits in inferior frontal cortex activation in euthymic bipolar disorder patients during a response inhibition task. *Bipolar Disorders* 14, 442-450.
- Foland-Ross L**, Brooks J 3rd, Mintz J, Bartzokis G, Townsend J, Thompson P, Altshuler L (2012). Mood-state effects on amygdala volume in bipolar disorder. *Journal of Affective Disorders* 139, 298-301.
- Hegarty C, **Foland-Ross L**, Narr K, Townsend J, Bookheimer S, Thompson P, Altshuler L (2012). Anterior cingulate activation relates to local cortical thickness. *Neuroreport* 23, 420-424.
- Foland-Ross L**, Bookheimer S, Lieberman M, Sugar C, Townsend J, Fischer J, Torrisi S, Penfold C, Madsen S, Thompson P, Altshuler L (2012). Normal amygdala activation but deficient ventrolateral prefrontal activation in adults with bipolar disorder during euthymia. *Neuroimage* 59, 738-744.
- Foland-Ross L**, Thompson P, Sugar C, Madsen S, Shen J, Penfold C, Ahlf K, Rasser P, Fischer J, Yang Y, Townsend J, Bookheimer S, Altshuler L (2011). Investigation of cortical thickness abnormalities in lithium-free adults with bipolar I disorder using cortical pattern matching. *American Journal of Psychiatry* 168,530-539.
- Brooks J, **Foland-Ross L**, Thompson P, Altshuler L (2011). Preliminary evidence of within-subject changes in gray matter density associated with remission of bipolar depression. *Psychiatric Research* 192, 53-55.
- Foland-Ross L**, Altshuler L, Bookheimer S, Lieberman M, Townsend J, Penfold C, Moody T, Ahlf K, Shen J, Madsen S, Rasser P, Toga A, Thompson P (2010). Amygdala reactivity in healthy adults is correlated with prefrontal cortical thickness. *Journal of Neuroscience* 30,16673-16678.
- Altshuler L, Abulseoud O, **Foland-Ross L**, Bartzokis G, Chang S, Mintz J, Hellemann G, Vinters H (2010). Amygdala astrocyte reduction in subjects with major depressive disorder but not bipolar disorder. *Bipolar Disorders* 12, 541-549.
- Townsend J, Eberhart N, Bookheimer S, Eisenberger N, **Foland-Ross L**, Cook I, Sugar C, Altshuler L (2010). fMRI activation in the amygdala and the orbitofrontal cortex in unmedicated subjects with major depressive disorder. *Psychiatric Research Neuroimaging* 183, 209-217.
- Bilder R, Poldrack R, Parker D, Reise S, Jentsch J, Cannon T, London E, **Foland L**, Rizk A, Kalar D, Brown N, Carstensen A, Freimer A (2010). Cognitive phenomics. In Wood S, Allen N, & Pantelis C (Eds.), *Handbook of neuropsychology of mental disorders*. London: Oxford University Press.
- Townsend J, Bookheimer S, **Foland L**, Altshuler L (2010). fMRI abnormalities in dorsolateral prefrontal cortex during a working memory task in manic, euthymic and depressed bipolar subjects. *Psychiatric Research Neuroimaging* 182, 22-29.
- Foland L**, Altshuler L, Sugar C, Leow A, Asuncion DM, Thompson P (2008). Increased amygdala and hippocampus volume in bipolar patients treated with lithium medication. *Neuroreport* 19, 221-224.
- Foland L**, Altshuler L, Eisenberger N, Townsend J, Bookheimer S, Thompson P (2008). Evidence for deficient modulation of amygdala response by prefrontal cortex in bipolar mania. *Psychiatric Research: Neuroimaging* 162, 27-37.
- Thomason M, **Foland L**, Glover G (2007). Calibration of BOLD fMRI using breath holding reduces group variance during a cognitive task. *Human Brain Mapping* 1, 59-68.

## MANUSCRIPTS UNDER REVIEW

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Chen M, Sacchet M, Fuller P, **Foland-Ross L**, Gotlib I, Lu J. Identification of a pallidocortical pathway in rodents and humans.

## MANUSCRIPTS IN PREPARATION

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**Foland-Ross L**, Gotlib I, Singh M. Neural markers of a familial risk for bipolar disorder: an investigation of cortical and subcortical gray matter structure.

**Foland-Ross L**, Sacchet M, Prasad G, Gilbert B, Thompson P, Gotlib I. Neuroanatomical predictors of the onset of major depression in adolescence.

**Foland-Ross L**, Gilbert B, Joormann J, Gotlib I. Neural markers of intergenerational transmission of risk for depression: An investigation of cortical thickness.

**Foland-Ross L**, Hamilton P, Gotlib I. Neural circuit deficits in the top-down modulation of negative emotional experience in major depression: A multimodal neuroimaging investigation.

**Foland-Ross L**, Gotlib I. HPA-axis dysregulation associations with brain structure in major depression.

Colich N, **Foland-Ross L**, Gotlib I. Inhibition in the presence of emotional stimuli in adolescents with major depressive disorder.

Sacchet M, Prasad G, **Foland-Ross L**, Joshi S, Hamilton P, Thompson P, Gotlib I. Automated identification of abnormal fiber tracts in major depressive disorder.

## CONFERENCE PRESENTATIONS (selected)

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**Foland-Ross L**, Sacchet M, Prasad G, Gilbert B, Thompson P, Gotlib I (submitted). Neuroanatomical predictors of the onset of major depression in adolescence, *Society of Biological Psychiatry*; New York, NY.

**Foland-Ross L**, Gotlib I (submitted). An integrative investigation of neural function and structure in major depression. *Society of Biological Psychiatry*; New York, NY.

LeMoult J, **Foland-Ross L**, Sorenson J, Ordaz S, Bergman S, Gotlib I (submitted). Effects of working memory training in major depressive disorder: facilitating scientific translation. *Society of Biological Psychiatry*; New York, NY.

Gotlib I, **Foland-Ross L**, Colich N, Kircanski K, Singh M, Joormann J (submitted). The impact of early stress on the development of neural circuitry in pre-pubertal children: gender differences and emotional and cognitive functioning. *Society of Biological Psychiatry*; New York, NY.

Sacchet M, Chen M, Fuller P, **Foland-Ross L**, Lu J, Gotlib I (submitted). Globus pallidus externa projections to frontal cortex. *Society of Biological Psychiatry*; New York, NY.

Sacchet M, Prasad G, **Foland-Ross L**, Joshi S, Hamilton P, Thompson P, Gotlib I (submitted). Automated identification of abnormal fiber tracts in major depressive disorder. *Organization for Human Brain Mapping*; Hamburg, Germany.

Sacchet M, Prasad G, **Foland-Ross L**, Thompson P, Gotlib I (submitted). Characterizing abnormal brain networks in major depressive disorder using machine learning. *Organization for Human Brain Mapping*; Hamburg, Germany.

**Foland-Ross L**, Gotlib I (2013). Reduced orbitofrontal gray matter density is associated with HPA-axis dysregulation in major depression. *Society of Biological Psychiatry*; San Francisco, CA.

**Foland-Ross L**, Gotlib I (2013). Cortical thinning in children of depressed mothers varies as a function of pubertal status. *Society of Biological Psychiatry*; San Francisco, CA.

- Kircanski K, **Foland-Ross L**, Gotlib I (2013). Increased waking cortisol emerges during pubertal development in girls at risk for depression. *Society of Biological Psychiatry*, San Francisco, CA.
- Colich N, **Foland-Ross L**, Kircanski K, Gotlib I (2013). Risk for depression: the role of puberty, stress reactivity and familial history. *Society of Biological Psychiatry*, San Francisco, CA.
- Hamilton P, Foland-Ross L, Gotlib I (2013). Ventral cingulate hyper-response as a function of pubertal onset in the risk for depression. *Society of Biological Psychiatry*, San Francisco, CA.
- Foland-Ross L**, Kircanski K, Gotlib I (2013). Coping with having a depressed mother: The role of stress and coping in HPA-axis dysfunction in girls at familial risk for major depression. *Society for Research in Child Development*, Seattle, WA.
- Colich N, **Foland-Ross L**, Hamilton P, Gotlib, I (2012). Inhibition in the presence of emotional stimuli in adolescents with major depressive disorder. *Society for Research in Psychopathology*, Ann Arbor, MI.
- Foland-Ross L**, Gilbert B, Raman M, Burley H, Reiss A, Gotlib I (2012). Evidence of abnormal cortical gray matter development in healthy girls at risk for major depression. *Society of Biological Psychiatry*; Philadelphia, PA.
- Sacchet M, **Foland-Ross L**, Hamilton J, Sherdell L, Gotlib I (2012). Activations in posterior cingulate and subcallosal gyrus during affective encoding predict change in symptomatology in major depressive disorder. *Society of Biological Psychiatry*; Philadelphia, PA.
- Foland-Ross L**, P Thompson, S Madsen, J Shen, C Penfold, K Ahlf, T Nguyen, P Rasser, Y Yang, J Townsend, S Bookheimer, J Fischer, L Altshuler (2010). Gray matter thinning in frontal and anterior cingulate cortices is associated with course of illness in adults with bipolar type I disorder. *Society for Neuroscience*; Chicago, IL.
- Foland-Ross L**, Bookheimer S, Leow, A, Townsend J, Shen J, Penfold C, Ahlf K, Madsen S, Fischer J, Thompson P, Altshuler, L (2010). Decreased white matter microstructure in prefrontal cortex in euthymic bipolar patients revealed with diffusion tensor imaging. *Eighth International Conference on Bipolar Disorder*; Pittsburgh, PA.
- Foland-Ross L**, Bookheimer S, Townsend J, Shen J, Penfold C, Ahlf K, Madsen S, Fischer J, Thompson P, Altshuler, L (2010). Decreased gray matter density in orbitofrontal cortex and anterior cingulate in euthymic bipolar patients revealed with cortical pattern matching. *Eighth International Conference on Bipolar Disorder*; Pittsburgh, PA.
- Foland-Ross L**, P Thompson, S Madsen, J Shen, C Penfold, K Ahlf, T Nguyen, P Rasser, Y Yang, J Townsend, S Bookheimer, J Fischer, L Altshuler. (2009). Gray matter thinning in frontal and anterior cingulate cortices is associated with course of illness in adults with bipolar type I disorder. *Society for Neuroscience*; Chicago, IL.
- Foland-Ross L**, Bookheimer S, Leow, A, Townsend J, Shen J, Penfold C, Ahlf K, Madsen S, Fischer J, Thompson P, Altshuler, L (2009). Decreased white matter microstructure in prefrontal cortex in euthymic bipolar patients revealed with diffusion tensor imaging. *Eighth International Conference on Bipolar Disorder*; Pittsburgh, PA.
- Foland-Ross L**, Bookheimer S, Townsend J, Shen J, Penfold C, Ahlf K, Madsen S, Fischer J, Thompson P, Altshuler, L (2009). Decreased gray matter density in orbitofrontal cortex and anterior cingulate in euthymic bipolar patients revealed with cortical pattern matching. *Eighth International Conference on Bipolar Disorder*; Pittsburgh, PA.
- Foland-Ross L**, Bookheimer S, Penfold C, Shen J, Townsend J, Ahlf K, Madsen S, Fischer J, Thompson P, Altshuler, L (2009). Activation level of the amygdala is associated with decreased prefrontal cortical thickness cortex in healthy subjects, but not in patients with bipolar type I disorder. *Organization for Human Brain Mapping*; San Francisco, CA.

- Foland-Ross L**, Bookheimer S, Townsend J, Shen J, Penfold C, Ahlf K, Madsen S, Fischer J, Thompson P, Altshuler, L (2009). Mapping the relationship between brain structure and function during a behavioral inhibition task in patients with bipolar disorder. *Society of Biological Psychiatry*; Vancouver, Canada.
- den Braber A, van 't Ent D, Cath D, Boomsma D, Barysheva M, Lee A, **Foland L**, Stein J, Thompson P, De Geus, E (2009). A DTI study of monozygotic twins discordant for obsessive compulsive symptoms. *Organization for Human Brain Mapping*; San Francisco, CA.
- Townsend J, **Foland L**, McGough J, Fischer J, Bookheimer S, Altshuler L (2009). Inferior frontal cortex dysfunction during an inhibition task in adult ADD/ADHD compared with control subjects using fMRI. *Organization for Human Brain Mapping*; San Francisco, CA.
- Daley M, Mittal V, van Erp T, O'Neill J, Loesch I, Altshuler L, **Foland L**, Cannon T (2009). Medial temporal lobe volumes in early-onset psychosis and bipolar disorder. *American Academy of Child and Adolescent Psychiatry*; Honolulu, HI.
- Foland L**, Townsend J, Bookheimer S, Thompson P, Altshuler L (2008). A functional magnetic resonance imaging study of bipolar disorder: elucidation of state- and trait-related changes in prefrontal cortex. *Society of Biological Psychiatry*; Washington D.C.
- Foland L**, Altshuler L, Narr K, Bartzokis G, Alaghband Y, Townsend J, Toga A, Thompson P (2008). Can brain structure change with mood? An exploratory analysis of mood-state related changes in amygdala volume in subjects with bipolar disorder. *American Psychiatric Association*; Washington D.C.
- Townsend J, Bookheimer S, **Foland L**, Altshuler L (2008). Working memory network differences in bipolar mania and euthymia: an fMRI study. *Society of Biological Psychiatry*; Washington D.C.
- Foland L**, Altshuler L, Sugar C, Leow A, Toga A, Thompson P (2007). Lithium and Mood State Effects on Brain Structure in Subjects with Bipolar Disorder. *Society for Neuroscience*; San Diego, CA.
- Townsend J, Altshuler L, Cohen M, Eisenberger N, **Foland L**, Bookheimer, S (2007). Persistent deficits in orbitofrontal cortex function in euthymic bipolar subjects. *Society for Neuroscience*; San Diego, CA.
- Foland L**, Altshuler L, Eisenberger N, Townsend J, Bookheimer S, Thompson P (2007). Functional connectivity of fronto-limbic networks in bipolar mania during an affective faces task. *Organization for Human Brain Mapping*; Chicago, IL.
- Foland L**, Altshuler L, Leow A, Lee A, Lu A, Asuncion D, Toga A, Thompson P (2006). A tensor-based morphometric study of bipolar disorder. *Organization for Human Brain Mapping*; Florence, Italy.
- Foland L**, Thomason M, FIRST BIRN & Glover G (2004). Calibration of fMRI activation for the FIRST BIRN project. *International Society for Magnetic Resonance in Medicine*; Kyoto, Japan.
- Foland L**, Thomason M, FIRST BIRN, Glover G (2004). Calibrating functional MRI data across subjects and scan sites. *Society for Neuroscience*; San Diego, CA.

## INVITED TALKS

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- 5/13 Cortical thinning in children of depressed mothers varies as a function of pubertal status. *Society of Biological Psychiatry*; San Francisco, CA.
- 4/12 *Understanding the Neural Basis of Difficulties Disengaging from Negative Irrelevant Material in Major Depression*. Affective Sciences Seminar, Stanford University, Stanford, CA.
- 2/10 *Gray matter thinning in frontal and anterior cingulate cortices in bipolar individuals are related to deficits in brain function*. USC Emotion and Cognition Laboratory Seminar, Los Angeles, CA.
- 2/10 *Brain structure and function in bipolar euthymia*. Psychoses Seminar, UCLA Psychology Department, Los Angeles, CA.
- 10/09 *Gray matter thinning in frontal and anterior cingulate cortices is associated with course of illness in adults with bipolar type I disorder*. Society for Neuroscience; Chicago, IL.

- 1/09 *Fronto-limbic circuitry in bipolar disorder: evidence for deficient prefrontal modulation of amygdala response in bipolar mania.* Colloquium, National Institute of Mental Health (NIMH), Washington, D.C.
- 1/09 *Relating brain structure and function in fronto-limbic circuits of bipolar disorder.* Psychoses Seminar, UCLA Psychology Department, Los Angeles, CA.
- 11/07 *Lithium and Mood State Effects on Brain Structure in Subjects with Bipolar Disorder.* Society for Neuroscience; San Diego, CA.
- 11/06 *Deficient modulation of amygdala activity by prefrontal cortex in bipolar mania.* Society for Neuroscience; Atlanta, GA.
- 10/06 *Abnormalities of fronto-Limbic circuitry in bipolar mania.* UCLA Neuroscience Graduate Forum, Los Angeles, CA.

### **EDITORIAL SERVICE**

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Ad hoc Reviewer *Acta Psychiatrica Scandinavica*  
*American Journal of Psychiatry*  
*Archives of General Psychiatry*  
*Biological Psychiatry*  
*Bipolar Disorders*  
*Human Brain Mapping*  
*Journal of the American Academy of Child and Adolescent Psychiatry*

### **TEACHING EXPERIENCE**

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- 2008 Teaching Assistant, UCLA Graduate Neuroscience Program  
*Course: Neuroanatomy*
- 2001 Teaching Assistant, Center for Adaptive Optics, University of California, Santa Cruz  
*Course: California State Summer School for Mathematics and Science*
- 2001 Teaching Assistant, Department of Biology, University of California, Santa Cruz  
*Course: Introduction to Psychobiology*

### **RESEARCH MENTORSHIP EXPERIENCE**

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- 2011-2012 Honors Thesis Supervisor, Department of Psychology, Stanford University  
*Elise Gibbs: Associations between childhood trauma with hypothalamic-pituitary-adrenal function in Major Depressive Disorder*
- 2011-2012 Honors Thesis Supervisor, Department of Psychology, Stanford University  
*Sara Leslie: Cortical thickness reductions in Major Depression: Relation with lifetime stress*

### **CLINICAL EXPERIENCE**

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- 2001-2003 Neurofeedback Technician, Brainwave Center  
Supervisor: Steven Padgitt, Ph.D.

## **PROFESSIONAL AFFILIATIONS**

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*American Psychiatric Association, Member*  
*Human Brain Mapping, Member*  
*Society of Biological Psychiatry, Member*  
*Society for Research in Child Development, Member*  
*Society for Neuroscience, Member*  
*Women in Neuroscience, Member*

## **MEDIA COVERAGE**

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**CNN**, March 2011: Bipolar Disorder: What is it (Featured on Dr. Sanjay Gupta Reports)

## **TECHNICAL SKILLS**

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|                 |                       |                                   |
|-----------------|-----------------------|-----------------------------------|
| MS Office Suite | SPSS                  | Shell scripting (Unix/Linux/BASH) |
| Adobe Photoshop | Matlab                | Sun Grid Engine                   |
| FSL             | SPM                   | Freesurfer                        |
| SAS             | MRI scanner operation | EEG data acquisition              |