

## Jennifer Mascaro, Ph.D.

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### Curriculum Vitae

**Current Position:**

Assistant Professor  
Family and Preventive Medicine  
Emory University School of Medicine

**Office Address (Mailing):**

Department of Family and Preventive Medicine  
Emory University School of Medicine  
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**Education:**

- 2011** Ph.D. (Anthropology)  
Emory University  
Advisers: James K. Rilling & Charles Raison  
Dissertation: "A Longitudinal Investigation of Empathic Behavior and Neural Activity and Their Modulation by Compassion Meditation"
- 2008** M.S. (Anthropology)  
Emory University
- 2001** B.A. Anthropology and Pre-Medical Studies (double major)  
University of Notre Dame  
*cum laude*

**Employment History:**

- Spring 2016** Instructor, Center for the Study of Human Health, Emory University
- 2014 - 2016** Instructor, Anthropology, Emory University
- 2011 – 2014** Post-doctoral Research Fellow, Anthropology, Emory University
- 2003 – 2005** Senior Research Technician, Texas A&M Veterinary Medical Diagnostic Toxicology Lab
- 2001 – 2003** Professional Soccer Player for the San Diego Spirit

### **Awards and Fellowships:**

<b>2014</b>	Center for Translational Social Neuroscience Travel Award for best presentation 2013-2014 (\$500 award)
<b>2014</b>	Center for Mind, Brain, and Culture sponsored course award for design and teaching of interdisciplinary course (“Human Brain Variation: the Varieties of Mental Experience”)
<b>2005 - 2011</b>	Graduate Scholar awarded by the Center for Behavioral Neuroscience
<b>2000</b>	Big East Conference Female Scholar Athlete of the Year; Post-Graduate Scholarship
<b>2000</b>	NCAA Post-Graduate Scholarship
<b>2000</b>	Byron V. Kanaley Award Winner; most prestigious academic honor presented by the University of Notre Dame to a student-athlete
<b>1998-1999</b>	NCAA Division 1 Academic All-American

### **Grant Support (\*Dr. Mascaro is the Research PI):**

<b>2014 – 2017</b>	Internal grant from Emory School of Medicine (\$180,000)*
<b>2014 – 2016</b>	NARSAD Young Investigator Award (2013 awardee) (\$58,379)*
<b>2014 – 2016</b>	Mind and Life 1440 Award for Real-World Contemplative Research (\$13,135)*
<b>2009 – 2013</b>	Neuroscience Initiative Seed Grant, Emory University (\$21,172)
<b>2008 – 2011</b>	Ruth L. Kirschstein National Research Service Award (NRSA) for Individual Predoctoral Fellowship Training in Complementary and Alternative Medicine (NCCAM) (\$87,066)*
<b>2005 – 2009</b>	Center for Behavioral Neuroscience Graduate Scholar (approx. \$29,000)*

### **Formal Teaching (\*syllabus and teaching evaluations available):**

<b>Spring 2007</b>	Teaching assistant for “Introduction to Biological Anthropology”*
<b>Fall 2007</b>	Teaching assistant for “The Human Brain”*
<b>Fall 2009</b>	Co-taught “The Human Brain” with Dr. Melvin Konner*
<b>Sp 2014, Fa 2015</b>	“Human Social Neuroscience”*
<b>Spring 2014</b>	“Foundations of Behavior”*
<b>Fa 2014, Fa 2015</b>	“The Human Brain”*
<b>Fall 2014</b>	“Human Brain Variation: the Varieties of Mental Experience”*
<b>Spring 2015</b>	“Religion, Health, and Healing”*
<b>Spring 2016</b>	“Contemplative Science and Health”*
<b>Spring 2016</b>	“Capstone Course: Future Health”*

### **Student Mentoring:**

- 2016** Honor committee for undergraduates majoring in neuroscience (2) and liberal arts
- 2015** Advised student for the Emory Summer Undergraduate Research Program (SURE) (honorable mention)  
(<http://www.cse.emory.edu/sciencenet/undergrad/SURE/SURE.html>)
- 2014 -** Dissertation committee for two graduate students (clinical psychology, anthropology)
- 2013- 2014** Mentored Post-baccalaureate Research Education Program (PREP)  
(<http://emorypostbac.blogspot.com/p/program-purpose-goals.html>) student
- 2013-2014** Mentored honor student
- 2013** Mentored student for the SURE program
- 2012-2013** Mentored 2 students for the Emory Scholarly Inquiry and Research (SIRE) program (<http://college.emory.edu/home/academic/research/sire/>)
- 2008** Mentored Emory honor student

### **Peer-Reviewed Journal Articles (citation counts from Google Scholar where available):**

- Mascaro, J. S.,** Kelley S., Darcher A., Negi, L. T., Worthman, C., Miller, A., Raison, C. (2016) Meditation Buffers Medical Student Compassion from the Deleterious Effects of Depression. *The Journal of Positive Psychology*. 1-10
- Mascaro, J. S.,** Darcher, A., Negi, L. T., Raison, C. (2015) The neural mediators of kindness-based meditation: a theoretical model. *Frontiers in Psychology* 6: 109. (cited by 10)
- Mascaro, J. S.,** Hackett, P. D., & Rilling, J. K. (2014). Differential neural responses to child and sexual stimuli in human fathers and non-fathers and their hormonal correlates. *Psychoneuroendocrinology*, 46, 153-163. (cited by 15)
- Mascaro, J. S.,** Hackett, P. D., Gouzoules, H., Lori, A., & Rilling, J. K. (2013). Behavioral and genetic correlates of the neural response to infant crying among human fathers. *Social Cognitive and Affective Neuroscience*, nst166. (cited by 22)
- Mascaro, J. S.,** Hackett, P. D., & Rilling, J. K. (2013). Testicular volume is inversely correlated with nurturing-related brain activity in human fathers. *Proceedings of the National Academy of Sciences*, 110(39), 15746-15751. [F1000Prime] (cited by 46)
- Mascaro, J. S.,** Rilling, J. K., Negi, L. T., & Raison, C. L. (2013). Compassion meditation enhances empathic accuracy and related neural activity. *Social Cognitive and Affective Neuroscience*, 8(1), 48-55. (cited by 97)
- Mascaro, J. S.,** Rilling, J. K., Negi, L. T., & Raison, C. L. (2013). Pre-existing brain function predicts subsequent practice of mindfulness and compassion meditation. *Neuroimage*, 69, 35-42. (cited by 25)

Silk, J. B., Brosnan, S. F., Vonk, J., Henrich, J., Povinelli, D. J., Richardson, A. S., . . . **Mascaro, J. S.**, Schapiro, S. J. (2005). Chimpanzees are indifferent to the welfare of unrelated group members. *Nature*, 437 (7063), 1357-1359. (cited by 475)

#### **Peer-Reviewed Journal Articles Under Review:**

**Mascaro, J. S.**, Hackett, P. D., Mehl, M., & Rilling, J. K. Child gender/sex influences paternal behavior, language, and brain function. Under review: *Behavioral Neuroscience*.

Rilling, J. K. & **Mascaro, J. S.** The Neurobiology of Fatherhood. Invited submission under review: *Current Opinion in Psychology*

Ting Li, Chen, X., **Mascaro, J. S.**, Ebrahim Haroon, E., Rilling, J. K. Intranasal oxytocin, but not vasopressin, augments neural responses to toddlers in human fathers. Under review: *Hormones and Behavior*

#### **Peer-Reviewed Journal Articles In Progress:**

**Mascaro, J. S.**, Brown, A. A pilot study of compassion meditation for emotional numbing symptoms in PTSD. In progress.

**Mascaro, J. S.**, Hackett, P. D., Rilling, J. K., & Mehl, M. Testosterone levels predict swearing in the relationship context. In progress.

**Mascaro, J.S.**, et al. Mindfulness on call: impact of meditation on patient interactions. In progress

#### **Invited Book Chapters and Textbooks:**

**Mascaro, J. S.**, Raison, C. The body of Compassion. (Under review)

Gilbert, P., **Mascaro, J. S.**, Compassion Fears, Blocks, and Resistances: An Evolutionary Investigation. Oxford Textbook of Compassion (Under review)

**Mascaro, J. S.**, Negi, L. T., Raison, C. From specific to general: the biological effects of Cognitively-Based Compassion Training. Oxford Textbook of Compassion (Under review)

**Mascaro, J. S.** and Worthman, C. M. *Neuroscience Primer 3. Emotions and Memory*. Dharamsala, India: Library of Tibetan Works and Archives. (English and Tibetan) (In translation)

Hasenkamp, W., Eisen, A., **Mascaro, J. S.**, and Worthman, C. M. *Neuroscience Primer 2. Basic Processes of Transmission, Integration, and Response*. Dharamsala, India: Library of Tibetan Works and Archives. (English and Tibetan; G. Dadul, translator) (In translation)

Rilling, J. K., **Mascaro, J. S.** The Neural Correlates of Individual Variation in Paternal Nurture. In: *Positive Neuroscience*. (invited chapter)

Raison, C., **Mascaro, J. S.**, Pace, T. Mind your Hormones! The Endocrinology of Compassion. In: Singer T., Bolz M., and Schnabel, editors. *Compassion: From Theory to Training to Neuroscience*.

### **Conference Presentations:**

- J. S. Mascaro.** S. Kelley, A. Darcher, L. T. Negi, C. Worthman, A. Miller, C. Raison. "The impact of compassion training on medical student well-being and immune function" Society of Biological Psychiatry Annual Meeting, Atlanta, GA, May 12-14, 2016
- J. S. Mascaro.** S. Kelley, A. Darcher, L. T. Negi, C. Worthman, A. Miller, C. Raison. "The impact of compassion training on medical student well-being and immune function" Human Biology Association Annual Meeting, Atlanta, GA, April 13-14, 2016
- J. S. Mascaro.** "The Neural Mediators of Kindness-based Meditation" part of panel entitled: Opportunities for Interdisciplinary Contemplative Studies. American Academy of Religion Annual Meeting, Atlanta, GA, Nov. 21-24, 2015
- J. K. Rilling and **J. S. Mascaro.** "Biological correlates of individual variation in human paternal behavior". Society for Research on Child Development, Philadelphia, March 21, 2015
- J. K. Rilling and **J. S. Mascaro.** "Neural, hormonal and genetic correlates of variation in human paternal behavior". Society for Research on Child Development Parenting Special Topic Meeting, San Diego, CA, Nov. 13, 2014
- J. S. Mascaro,** P. Hackett, James K. "Behavioral and genetic correlates of the neural response to infant crying." Society for Affective Science Annual Meeting, Bethesda, MD, Apr. 24-26, 2014
- J. S. Mascaro,** P. Hackett, James K. Rilling "Neural and hormonal bases of paternal nurturance." Society for Neuroscience Annual Meeting, San Diego, CA, Nov. 9-13, 2013
- J. S. Mascaro,** P. Hackett, James K. Rilling "Neural systems related to paternal empathy in humans." Society for Neuroscience Annual Meeting, New Orleans, LA, Oct. 13-17, 2012
- J. S. Mascaro,** P. Hackett, James K. Rilling "Neural systems related to paternal empathy in humans." Society for Social Neuroscience Annual Meeting, New Orleans, LA, Oct. 11-12, 2012
- J. S. Mascaro.** "A Longitudinal fMRI Investigation of Empathic Accuracy and its Modulation by Compassion Meditation." International Symposia for Contemplative Studies. Denver, CO, Apr. 26-29, 2012. (Invited talk)
- J. S. Mascaro,** J. K. Rilling, L. T. Negi, C. Raison A longitudinal, controlled investigation of compassion meditation and its relationship with the neurobiology of empathy. Society for Neuroscience Annual Meeting, Washington D.C., Nov. 12-16, 2011.
- J. S. Mascaro,** J. K. Rilling, L. T. Negi, C. Raison. Compassion meditation enhances empathic accuracy and related neural activity. Center for Translational Social Neuroscience Workshop on Prosocial Behavior. Atlanta, GA. Oct. 23-24, 2011.
- Using Global Health Narratives to Enhance Empathy in Middle School Students: An Empirical Classroom Trial. Society for Applied Anthropology Annual Conference, Merida, Mexico, March 16, 2010. **J. S. Mascaro,** Co-authored with Peter Brown and Jennifer Sweeney.
- E. Hecht, D. Gutman, M. Glasser, **J. S. Mascaro,** S. Hamann, T.M. Preuss, J.K. Rilling. Comparing amygdala connectivity between monkeys, apes, and humans using diffusion tensor imaging. American Association of Physical Anthropologists Annual Meeting, Columbus, OH Apr. 9-12, 2008.
- E. E. Hecht, **J. S. Mascaro,** D. Gutman, S. Hamann, T. M. Preuss, J.K. Rilling. Comparing amygdala connectivity between monkeys, apes, and humans using diffusion tensor imaging.

Society for Neuroscience Annual Meeting, San Diego, CA Nov. 3–7, 2007.

**J. S. Mascaro, A. Miura, M. F. Glasser, T.M. Preuss, J. K. Rilling.** A comparison of cerebellar connectivity in humans, chimpanzees, and rhesus macaques using diffusion tensor imaging (DTI) and probabilistic tractography. Society for Neuroscience Annual Meeting, Atlanta, GA Oct. 15-18, 2006.

**Invited talks and lectures (external):**

**2014** Invited talk UNC Asheville: “Cognitively-Based Compassion Training: Introduction and Practice”

**2014** Atlanta Science Festival: “Discovery Dialogues: Meditation”

**Invited talks and lectures (internal):**

**2016** Invited lecture for The Center for the Study of Human Health: Meditation, social well-being, and neural functioning

**2016** Invited talk for The Center for the Study of Human Health: “Physician, heal thyself: compassion meditation for medical students”

**2015** Invited talk for Emory’s Molecules 2 Mankind program: “Compassion training for medical students”

**2015** Center for Mind Brain and Culture Faculty luncheon: “Challenges and Advances in Understanding the Varieties of Mental Experience”

**2015** Invited talk for Emory Undergraduate Bioethics club: “Cognitive Enhancers: Big Brains, Big Money”

**2015** Invited talk for Emory Neuroethics Society: “Testicular volume is inversely correlated with nurturing-related brain activity in human fathers.”

**2014** Invited course lecture for *Neuroscience and Behavioral Biology Senior Seminar*: “Biological bases of individual variation in paternal nurturance”

**2013** Center for Mind Brain and Culture’s Post-doctoral lecture series; Emory University

**2013** Center for Translational Social Neuroscience invited talk; Emory University

**2013** Invited course lecture for *Secular Ethics: The Dalai Lama’s Approach*: “A Longitudinal Investigation of Empathic Behavior and Neural Activity and Their Modulation by Compassion Meditation”

**2007-2014** Invited course lecture for *Biosocial Approaches to Global Health*: “The Social Production of Health”

**2012** Invited course lecture for *Anthropology of Fatherhood*: “Biological bases of individual variation in paternal nurturance”

**2011** Invited course lecture for *Human Social Neuroscience*: “Interaction of the social brain with prosocial behavior”

**2007** Graduate Research Interdisciplinary Team of Scholars invited talk; Emory University

**Activities:**

1. **(2012 – present)** Co-author of the Emory Tibet Science Initiative Neuroscience Primers, which will serve as textbooks for Tibetan monastics in Dharamsala, and which eventually will be used in Tibetan monasteries throughout India and Nepal.
2. **(2011 – present)** Organize the interdisciplinary and multi-institutional Meditation Research Seminar.
3. **(2009 – present)** Emory Tibet Science Initiative (ETSI) Neuroscience Team in which I help create course materials (lectures and exercises), following the vision of His Holiness the Dalai Lama to design and implement comprehensive science education for Tibetan Buddhist monks and nuns. Pedagogical materials are presented to the Library of Tibetan Works and Archives and taught to Tibetan monastics at His Holiness' monastery in Dharamsala, India. ETSI curriculum is now being presented in Tibetan monasteries throughout India and Nepal. (<http://tibet.emory.edu/science/index.html>)
4. **(2005 – present)** Participation in the Evolution and Human Behavior seminar series in the Department of Anthropology, a weekly collaborative and interdisciplinary meeting.

**Selected Media Coverage:**

- 2014** [Wall Street Journal](#): It's Pretty Much True: More Parenting Equals Less Sex
- 2013** [CNN](#): Smaller testicles, more-involved dads?
- 2013** [Nature News](#): Better fathers have smaller testicles; Study finds evolutionary trade-off between mating prowess and parenting involvement.
- 2013** [Scientific American](#): Smaller Testicles Linked to Caring Fathers
- 2012** Center for Building a Culture of Empathy [[Link to video](#)]
- 2012** [Science Daily](#): Compassion meditation may boost neural basis of empathy, study finds
- 2012** [Huffington Post](#): Meditation Could Improve Empathy, Study Suggests

**Professional Memberships:**

American Association of Physical Anthropologists  
Human Biology Association  
American Academy of Religion  
Society for Neuroscience

**Invited Reviewer, Journals:**

Brain and Behavior  
Proceedings of the National Academy of Sciences

Frontiers of Psychology  
Developmental Biology  
Hormones and Behavior  
Brain, Behavior, and Immunity  
Emotion  
Child Maltreatment

**Invited Reviewer, Grants and Awards:**

Mind and Life Varela Award  
Emory Summer Research Partner Program

**References:**

1. James K. Rilling, Ph.D.  
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2. Charles Raison, MD  
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University of Wisconsin-Madison School of Medicine and Public Health  
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3. Carol Worthman, Ph.D.  
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