

MELANIE STOLLSTORFF, PH.D.

CURRICULUM VITAE

CONTACT INFORMATION

Department of Psychology
Florida International University
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Miami, Florida, 33199

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CITIZENSHIP: Canadian & British

EMPLOYMENT

Assistant Professor, Aug 2014 – present

Department of Psychology
Center for Children and Families
Florida International University, Miami, FL

Postdoctoral Research Associate, Institute of Cognitive Science, 2010 – 2013

University of Colorado, Boulder, CO | P.I.s: Drs. Yuko Munakata & Marie Banich

Research Assistant, Laboratory of Cognitive Neurobiology, 2002 – 2003

Boston University, Boston, MA | P.I.: Dr. Howard Eichenbaum

Research Technician, Center for Developmental Cognitive Neuroscience, 2001 – 2002

University of Massachusetts Medical School, Waltham, MA | P.I.: Dr. Adele Diamond

Research Assistant, Psychobiology of Maternal Behaviour Lab, 1999 – 2001

University of Toronto, Ontario, Canada | P.I.: Dr. Alison Fleming

DEGREES

Ph.D., Psychology, Developmental Science Program, 2005 – 2010

Georgetown University, Washington, DC
Thesis: “Modulation of reasoning bias and brain activation by serotonin transporter genotype emotional content.” Advisor: Dr. Chandan Vaidya

M.A., Brain, Behaviour and Cognitive Science Program, 2003 – 2005

York University, Ontario, Canada
Thesis: “Inhibitory control in reasoning: Neural correlates of belief bias.” Advisor: Dr. Vinod Goel

Hon. B.Sc., Psychology, 1997 – 2001

University of Toronto, Ontario, Canada
Graduated Honors with High Distinction
Honors Thesis: “Memory and attention in children with intractable epilepsy.” Advisor: Dr. Mary Lou Smith

GRANTS & AWARDS

External

- 2007 – 2010 Canadian Institutes of Health Research (CIHR) Doctoral Research Award
– *Total award \$81,000*
- 2007 Cognitive Neuroscience Society (CNS) Graduate Students Present Award –
\$500
- 2005 – 2007 Natural Science and Engineering Research Council of Canada (NSERC)
Post Graduate Scholarship – *\$42,000*
- 2003 – 2005 NSERC Post Graduate Scholarship – *\$42,000*
- 2003 Ontario Graduate Scholarship – *\$10,000* (declined due to NSERC award)

Internal

- 2015 Center for Children & Families Intramural Award - *\$5,000*
- 2009 Center for the Brain Basis of Cognition (CBBC) Graduate Student Grant,
Georgetown University – *\$5,000*
- 2006, 2007, 2008, 2009 Georgetown University Conference Travel Award – *\$500-\$900 each*
- 2003 York University Graduate Entrance Scholarship – *\$10,000*

PUBLICATIONS

- Stollstorff, M.** (2013). Genes of Rationality: Building Blocks for The Neurobiology of Reasoning. In W. De Neys & M. Osman (Eds.), *New Approaches in Reasoning, Current Issues in Thinking & Reasoning*. New York: Psychology Press.
- Stollstorff, M.,** Munakata, Y., Jensen, A.P.C., Guild, R.M., Smolker, H.R., Devaney, J.M., Banich, M.T. (2013). Individual differences in emotion-cognition interactions: Emotional valence interacts with serotonin transporter genotype to influence brain systems involved in emotional reactivity and cognitive control. *Frontiers in Human Neuroscience*, 7, 327.
- Stollstorff, M.,** Bean, S.E., Anderson, L.M., Devaney, J.M., Vaidya, C.J. (2013). Rationality versus Emotionality: Serotonin transporter genotype influences reasoning bias. *Social, Cognitive & Affective Neuroscience*, 8, 404-409.
- Gordon, E.M., **Stollstorff, M.,** Devaney, J.M., Vaidya, C.J. (2012). Effect of dopamine transporter genotype on intrinsic functional connectivity depends on cognitive state. *Cerebral Cortex*, 22, 2182-2196.

Stollstorff, M., Vartanian, O., Goel, V. (2012). Levels of conflict in reasoning modulate right lateral prefrontal cortex. *Brain Research*, 1428, 24-32.

Gordon, E.M., **Stollstorff, M.**, Vaidya, C.J. (2012). Using spatial multiple regression to identify intrinsic connectivity networks involved in working memory performance. *Human Brain Mapping*, 33, 1536-1552.

Simon, J.R., **Stollstorff, M.**, Westbay, L.C., Vaidya, C.J., Howard, J.H. Jr., Howard, D.V. (2011). Dopamine transporter genotype predicts implicit sequence learning. *Behavioral Brain Research*, 216, 452-457.

Stollstorff, M., Foss-Feig, J., Cook, E.H., Stein, M.A., Gaillard, W.D., Vaidya, C.J. (2010). Neural response to working memory load varies by dopamine transporter genotype in children. *NeuroImage*, 53, 970-977.

Goel, V., **Stollstorff, M.**, Nakic, M., Knutson, K., Grafman, J. (2009). A role for right ventrolateral prefrontal cortex in reasoning about indeterminate relations. *Neuropsychologia*, 47, 2790-2797.

Vaidya, C.J., **Stollstorff, M.** (2008). Cognitive neuroscience of Attention Deficit Hyperactivity Disorder: Current status and working hypotheses. *Developmental Disabilities Research Reviews*, 14, 261-267.

Kadis, D.S., **Stollstorff, M.**, Elliott, I., Lach, L., Smith, M.L. (2004). Cognitive and psychological predictors of everyday memory in children with intractable epilepsy. *Epilepsy & Behavior*, 5, 37-43.

MANUSCRIPTS SUBMITTED AND IN PREPARATION

Stollstorff, M., Foss-Feig, J., Kenealy, L., Gaillard, W.D., Stein, M., Cook, E. Jr. & Vaidya, C.J. (submitted). Effect of methylphenidate on caudate response to working memory load varies by DAT1 in children with ADHD.

Stollstorff, M., Bean, S., Anderson, L., Vaidya, C. J. (to be submitted). The effect of BDNF Val66Met on relational reasoning with and without emotional content.

Stollstorff, M., Banich, M.T., Jensen, A.P.C., Guild, R.M., Smolker, H.R., Devaney, J.M., Munakata, Y. (in prep). Overcoming emotional interference for logical reasoning: an fMRI study of serotonin transporter genotype effects on amygdala and inferior prefrontal cortex activity.

TRAINING INSTITUTES

- 2014 Summer Institute in Cognitive Neuroscience (competitive award)
 2007 John Merck Fund Summer Institute on the Biology of Developmental Disabilities (competitive award) – Sackler Institute for Developmental Psychobiology, Weill Medical College of Cornell University
 2006 American Psychological Association (APA) Advanced fMRI Training Institute (competitive award) – MGH-NMR Center for Biomedical Imaging

INVITED* & DEPARTMENTAL LECTURES

- 2012 “Individual Differences in Emotional & Cognitive Control: Evidence from Genes, Brain & Behavior”. Dept. of Psychology & Neuroscience, University of Colorado Boulder, CO.
 2012* “Individual Differences in Deductive Reasoning: Evidence from Genetic and Brain Studies”. *International Conference on Thinking*, London, U.K.
 2010* “Modulation of Reasoning Bias and Brain Activation by Serotonin Transporter Genotype and Emotional Content”. Functional Imaging Laboratory, University College London, London, U.K.
 2010 “Modulation of Reasoning Bias and Brain Activation by Serotonin Transporter Genotype and Emotional Content”. Dept. of Psychology & Neuroscience, University of Colorado Boulder, CO.
 2010* “Genes of Rationality: Evidence for genetic modulation of logical reasoning and underlying brain activation”. Center for Genetic Medicine Research Seminar, Children’s National Medical Center, Washington, DC.
 2009* “Effect of dopamine transporter genotype and methylphenidate on working memory in childhood ADHD: A pharmacological fMRI study.” Clinical Neuroscience Research Seminar, Children’s National Medical Center, Washington, DC.
 2007 “Neuroscience: Probing the brain.” Lecture to highschool girls about Women in Science; Georgetown Visitation Preparatory School, Washington, DC.

TEACHING & MENTORING EXPERIENCE**Course Instructor FIU**, Fall 2014-present

Florida International University, Miami, FL

Undergraduate level: Research Methods in Psychology, Cognitive Neuroscience & Senior Seminar in Genes, Brain & Behavior. *Graduate level*: Cognitive Neuroscience**Research Assistant Mentor**, Fall 2015-present

Mentor to 10 undergraduates, 7 enrolled in Independent Research Credits, 2 Honors Thesis students

Course Instructor, Fall 2008

Georgetown University, Washington, DC

Taught undergraduate-level lecture course: *Introduction to Cognitive Neuroscience*.**Undergraduate Mentor**, 2006-2013

Georgetown University & University of Colorado

Supervised senior thesis of Stephanie Bean (2009-10) and Arielle Jensen (2012-13). Mentor to undergraduate research assistants: Alexandra Bond, Ryan Guild, Lindsay Anderson, Christopher Tsang, Noah Schoenholtz, Adam Evans and William Parrott.

Teaching Fellow, 2005-2010

Georgetown University, Washington, DC

Assisted in *General Psychology, Cognitive Neuroscience, Research Methods and Statistics, Social Psychology* and *Abnormal Psychology* undergraduate courses. Responsibilities included creating and grading exams and some lecturing.

Teacher Assistant, 2004-2005

York University, Toronto, Ontario, Canada

TA for second-year undergraduate course, *Biological Bases of Behaviour*, and third-year undergraduate course, *Neural Bases of Behaviour*. Responsibilities included creating, grading and administering exams. Gave lectures on fMRI and other neuroimaging techniques.

Tutor in Advanced Statistics, 2003–2005

York University, Toronto, Ontario, Canada

Assisted graduate and undergraduate students in preparing for exams and assignments in advanced statistics.

Substitute Teacher, 1998-2001

Toronto District Catholic School Board, Ontario, Canada

Taught Kindergarten through Grade 8 in various schools, including multiple handicap and special needs classes.

SERVICE

- 2014 & 2015 FIU Psychology Student Conference: “Career Paths in Cognitive Neuroscience”
- 2014-2015 Cognitive Neuroscience Faculty Search Committee
- 2009-2010 Mind The Gap, Georgetown University Student Club, *Founder and President*
- 2007-2008 Georgetown Graduate Student Organization, *Vice-President*
- 2005-2007 Georgetown Graduate Student Organization, *Psychology Dept. Representative*
- 2003-2005 York Psychology Graduate Students Association, *Executive Committee Member*
- 2003-2005 York Psychology Graduate Department, *Student Representative*

PEER-REVIEW FOR THE FOLLOWING JOURNALS

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|---|---|
| Cerebral Cortex | Child Development |
| Frontiers in Human Neuroscience | Frontiers in Developmental Psychology |
| Journal of the American Academy of Child & Adolescent Psychiatry (JAACAP) | |
| Journal of Child Psychology and Psychiatry | Journal of Cognition and Development |
| Journal of Experimental Child Psychology | Journal of Neuropsychology |
| Neuropsychologia | J Behav Therapy & Experimental Psychiatry |
| Brain Imaging & Behavior | |

PROFESSIONAL ASSOCIATIONS

American Psychological Association
Cognitive Neuroscience Society
Organization for Human Brain Mapping
Society for Neuroscience
Social and Affective Neuroscience Society

CONFERENCE PROCEEDINGS & ABSTRACTS

Stollstorff, M., Bean, S., Anderson, L., Vaidya, C. J. (2016, June). The effect of BDNF Val66Met on relational reasoning with and without emotional content. Poster presented at the Organization for Human Brain Mapping Conference, Geneva, Switzerland.

You, X., Gordon, E, Norr, M., **Stollstorff, M.** & Vaidya, C.J. (2014, November). Clustering coefficient in spontaneous neural activity predicts trait anxiety in healthy subjects. Poster presented at the Society for Neuroscience Conference, Washington, DC.

Loewenstern, J., You, X., Gordon, E., **Stollstorff, M.**, Devaney, J. & Vaidya, C.J. (2014, May). Resting-state amygdala-prefrontal functional connectivity mediates association between serotonin transporter genotype and anxiety. Poster presented at the Society for Biological Psychiatry Annual Scientific Meeting, New York, NY.

Stollstorff, M., Banich, M.T., Guild, R.M., Smolker, H.R., Jensen, A.P.C., Devaney, J.M. & Munakata, Y. (2013, April). Recruitment of cognitive and affective brain networks depends on the interaction between serotonin transporter genotype and emotional valence during belief-bias interference in reasoning. Poster presented at the Social Affective Neuroscience Society, San Francisco, CA.

Stollstorff, M., Munakata, Y., Smolker, H.R., Jensen, A.P.C., Guild, R.M., Devaney, J.M. & Banich, M.T. (2013, April). Individual differences in emotion-cognition interactions: Emotional valence interacts with serotonin transporter genotype to influence brain systems involved in emotional reactivity and cognitive control. Poster presented at the Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.

Gordon, E.M., **Stollstorff, M.,** Devaney, J.M., Vaidya, C.J. (2012, October). Effect of DAT, COMT and working memory load in prefrontal cortex. Poster presented at the Society for Neuroscience Annual Meeting, New Orleans, LA.

Stollstorff, M. (2012, July). Individual differences in deductive reasoning: Evidence from genetic and brain studies. Invited lecture presented at the International Conference on Thinking, London, U.K.

Gordon, E.M., Bean, S.E., **Stollstorff, M.,** Vaidya, C.J. (2011, November). Stability of resting-state functional connectivity predicts behavioral inattention and impulsivity. Poster presented at the Society for Neuroscience Annual Meeting, Washington, DC.

Gordon, E.M., **Stollstorff, M.**, Bean, S.E., Vaidya, C.J. (2011, June). Task performance globally reduces nonstationarity of functional connectivity. Poster presented at the Organization for Human Brain Mapping Annual Meeting, Quebec City, Canada.

Stollstorff, M., Bean, S.E., Parrott, W.N., Anderson, L.M., Gordon, E.M., & Vaidya, C.J. (2010, November). Effect of serotonin transporter gene (5-HTTLPR) on neural activation during belief bias suppression in logical reasoning with emotional content. Poster presented at the Society for Neuroscience Annual Meeting, San Diego, CA.

Gordon, E.M., **Stollstorff, M.**, Vaidya, C.J. (2010, November). Modulation of temporal relationships between default mode and task-positive networks by the dopamine transporter genotype during working memory and the resting state. Poster presented at the Society for Neuroscience Annual Meeting, San Diego, CA.

Westbay, L.C., Simon, J.R., **Stollstorff, M.**, Vaidya, C.J., Howard, J.H. Jr., Howard, D.V. (2010, November). Functional polymorphisms in the genes COMT and BDNF associated with reward-based working memory in the probabilistic selection task. Poster presented at the Society for Neuroscience Annual Meeting, San Diego, CA.

Simon, J.R., Westbay, L.C., **Stollstorff, M.**, Vaidya, C.J., Howard, J.H. Jr., Howard, D.V. (2010, November). Val allele homozygotes at BDNF Val66Met reveal better early implicit associative learning than Met carriers. Poster presented at the Society for Neuroscience Annual Meeting, San Diego, CA.

Pepe, L.M., Gordon, E.M., Foss-Feig, J., **Stollstorff, M.**, Kenealy, L., Gaillard, W.D., Stein, M., Cook, E.H., Vaidya, C.J. (2010, November). Effects of methylphenidate on functional network connectivity differ by DAT1 in children with ADHD. Poster presented at the Society for Neuroscience Annual Meeting, San Diego, CA.

Gordon, E.M., **Stollstorff, M.**, Vaidya, C.J. (2010, September). Task-evoked activation is composed of networks identifiable at rest, and degree of network activation predicts performance. Poster presented at the Second Biennial International Conference on Resting-State Functional Brain Connectivity, Milwaukee, WI.

Stollstorff, M., Bean, S.E., Anderson, L.M., Parrot, W.N., Schoenholtz, N., Evans, A.D. & Vaidya, C.J. (2010, June). Dopamine-regulating genes (DAT1 & COMT) influence Belief Bias suppression in reasoning: an fMRI study. Poster presented at the Organization for Human Brain Mapping Annual Meeting, Barcelona, Spain.

Gordon, E.M., **Stollstorff, M.** & Vaidya, C.J. (2010, June). Task-evoked activation is composed of networks identifiable at rest and predicts performance. Poster presented at the Organization for Human Brain Mapping Annual Meeting, Barcelona, Spain.

Vaidya, C.J., **Stollstorff, M.**, Foss-Feig, J., Kenealy, L., Gaillard, W., Stein, M., Cook, E. (2010, June). Methylphenidate response to working memory load varies by DAT1 genotype in childhood ADHD: A phfMRI study. Poster presented at the Organization for Human Brain Mapping Annual Meeting, Barcelona, Spain.

- Stollstorff, M.,** Bean, S.E., Anderson, L.M., Parrott, W.N., Schoenholtz, N., Evans, A.D., Vaidya, C.J. (2010, April). Emotional content shifts activation to ventromedial prefrontal cortex during belief-bias suppression in logical reasoning. Poster presented at the Cognitive Neuroscience Society Annual Meeting, Montreal, Quebec, Canada.
- Gordon, E.M., **Stollstorff, M.,** Salona, P. & Vaidya, C.J. (2010, April). Functional connectivity during working memory between default mode and task-positive regions is modulated by dopamine-regulating genes COMT and DAT. Presentation at the Cognitive Neuroscience Society Annual Meeting, Montreal, Quebec, Canada.
- Simon, J.R., **Stollstorff, M.,** Westbay, L.C., Vaidya, C.J., Howard Jr., J.H., Howard, D.V. (2010, April). Dopamine transporter genotype predicts implicit sequence learning but not implicit spatial learning. Poster presented at the Cognitive Neuroscience Society Annual Meeting, Montreal, Quebec, Canada.
- Stollstorff, M.,** Bean, S.E., Anderson, L.M., Parrott, W.N., Evans, A.D., Schoenholtz, N., Vaidya, C.J. (2010, January). Effect of dopamine regulating genes on Belief Bias in logical reasoning. Poster presented at the Executive Function Conference, Boulder, CO.
- Stollstorff, M.,** Bean, S.E., Anderson, L.M., Vaidya, C.J. (2009, October). Effect of serotonin transporter gene (5-HTTLPR) on belief bias in logical reasoning with emotional content. Poster presented at the Society for Neuroscience Annual Meeting, Chicago, IL.
- Gordon, E., **Stollstorff, M.,** Vaidya, C.J. (2009, October). Load-dependent suppression of default mode regions during working memory. Poster presented at the Society for Neuroscience Annual Meeting, Chicago, IL.
- Stollstorff, M.,** Bean, S.E., Anderson, L.M., Vaidya, C.J. (2009, April). Effect of dopamine regulating genes (DAT1 & COMT) on logical reasoning with emotional content. Poster presented at the Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.
- Stollstorff, M.,** Bean, S.E., Anderson, L.M., Vaidya, C.J. (2009, January). Effect of dopamine regulating genes (DAT1 & COMT) on logical reasoning with emotional content. Poster presented at the Conference on Prefrontal Cortex and Executive Function, Boulder, CO.
- Stollstorff, M.,** Bean, S.E., Shook, D., Ruiz, E., Billington, M., Kenealy, L, Vaidya, C.J. (2008, Nov). Effect of DAT1 on reasoning and belief bias in children with and without ADHD. Poster presented at the Society for Neuroscience Annual Meeting, Washington, DC. Program No. 682.4.
- Stollstorff, M.,** Bean, S, Tsang, C, Kenealy, L, Burgos-Ruiz, E, Billington, M, Shook, D & Vaidya, C.J. (2008, April). Development of reasoning and executive control in children with and without ADHD. Poster presented at the Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.
- Stollstorff, M.,** Foss-Feig, J., Shook, D., Cook, E., Kenealy, L., Stein, M., & Vaidya, C.J. (2007, November). Effects of dopamine transporter genotype and methylphenidate on sustained

attention in childhood ADHD: A pharmacological fMRI study. Slide presentation at the Society for Neuroscience Annual Meeting, San Diego, CA. Program No. 454.6.

Stollstorff, M., Foss-Feig, J., Shook, D., Cook, E., Kenealy, L., Stein, M., & Vaidya, C.J. (2007, June). Effects of dopamine transporter genotype on neural basis of sustained attention in childhood ADHD. Poster presentation at the Organization for Human Brain Mapping Annual Meeting, Chicago, IL.

Stollstorff, M., Foss-Feig, J., Cook, E., Kenealy, L., Stein, M. & Vaidya, C.J. (2007, May). Effect of dopamine transporter genotype and methylphenidate on working memory in childhood ADHD: A pharmacological fMRI study. Podium presentation at the Cognitive Neuroscience Society Annual Meeting, New York, NY. *Graduate Students Present Award*

Stollstorff, M., Foss-Feig, J., Cook, E., Kenealy, L., Stein, M., & Vaidya, C. (2006, November). Effects of dopamine transporter genotype on neural basis of working memory in childhood ADHD. Poster presented at the Society for Neuroscience Annual Meeting, Atlanta, GA. Program No. 570.4.

Stollstorff, M., Foss-Feig, J., Kenealy, L., Germain, A., Vaidya, C.J. (2006, April). Effect of methylphenidate on working memory in childhood ADHD: A pharmacological fMRI study. Poster presented at the Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.

Stollstorff, M., Nakic, M., Knutson, K., Grafman, J. & Goel, V. (2005, November). Explaining the role of right prefrontal cortex in reasoning about indeterminate relations. Poster presented at the Society for Neuroscience Meeting, Washington, DC. Program No. 877.20.

Stollstorff, M. & Goel, V. (2004, October). Prefrontal cortex activation during attentional inhibition in syllogistic reasoning. Poster presented at Society for Neuroscience Meeting, San Diego, CA. Program No. 548.1.

Stollstorff, M. & Goel, V. (2004, April). Neural correlates of inhibition in reasoning: The belief bias effect. Slide presentation at Psychology Department's Annual In-House Conference, York University.

Stollstorff, M., Gonzalez, A., Steiner, M., Fleming, A.S. (2003, April). Early maternal stimulation, hormones and sexual behaviour in adult male rats. Poster presented at 15th Annual Research Day, Department of Psychiatry & Behavioural Neurosciences, McMaster University, ON, Canada.

Fortin, N. J., Wright, S. P., **Stollstorff, M. L.**, Petrusis, A. T., & Eichenbaum, H. B. (2002, November). A cortical network that mediates odor recognition memory. Poster presented at Society for Neuroscience Meeting, Orlando, FL. Program No. 478.1.

McGaughy, J. A., Rubin, S., **Stollstorff, M.**, Baxter, M. G., Eichenbaum, H. B. (2002, November). 192 IgG saporin-induced cortical, cholinergic deafferentation in rats produces a dissociation in the function of prelimbic/infralimbic and orbitofrontal cortex in an attentional set-shifting task. Poster presented at the Society for Neuroscience Meeting, Orlando, FL. Program No. 674.4.

Smith, M. L., Kadis, D., **Stollstorff, M.**, Lach, L. & Elliott, I. (2002, February). Predictors of everyday memory in children with epilepsy. Poster presented at the International Neuropsychological Society 13th Annual Meeting, Toronto, Ontario, Canada.

Smith, M. L., **Stollstorff, M.**, Hoosen-Shakeel, S., Elliott, I., Lach, L. (2001, November). The relationship of attention to memory in children with intractable epilepsy. Poster presented at the American Epilepsy Society/ American Clinical Neurophysiology Society Annual Meeting, Philadelphia, PA.