

Curriculum Vitae

January 14, 2019

NAME: Dana DeMaster Ph.D.

PRESENT TITLE:

Assistant Professor, Children's Learning Institute at UTHealth

WORK ADDRESS:

Children's Learning Institute
6655 Travis, Suite HMC 10.03,
Houston, Texas 77030

UNDERGRADUATE EDUCATION:

Hampshire College, B.A. in Cognitive Science, May 2003

GRADUATE EDUCATION:

University of California, Davis, M.S. in Psychology, April 2010
University of California, Davis, Ph.D. in Psychology, April 2014

POSTGRADUATE TRAINING:

Postdoctoral Researcher, University of Texas, Health Science Center at Houston, in
Neuroimaging Methods, Completed August 2015
Summer Training Program in Advanced Neuroimaging Methods at University of California, Los
Angeles, Completed August 2014

ACADEMIC & ADMINISTRATIVE APPOINTMENTS:

Assistant Professor, Children's Learning Institute, Department of Pediatrics, University of Texas
Health Science Center

PROFESSIONAL ORGANIZATIONS (AND COMMITTEES OF THESE):

Society for Research in Child Development
National Neurotrauma Society

HONORS AND AWARDS:

2005 Segal AmeriCorps Education Award
2012 University of California, Davis Summer Research Fellowship
2013 Society for Research in Child Development Travel Award
2014 National Neurotrauma Society Travel Award
2014 Summer Training Program at UCLA

EDITORIAL POSITIONS (Invited Reviewer):

2014-2018 Cognitive Development
2015-2016 Developmental Science
2016-2017 Society for Research in Child Development
2017 Cortex

SERVICE ON COMMITTEES:

2017 Member, Research Faculty Search Committee

SERVICE TO THE COMMUNITY:

2016 Graduate School of Biomedical Sciences -- Science Night, Faculty Presenter at event for the Houston Community, to share our science with the public.
2016 & 2017 Brain Night for Kids at the Houston Health Museum, Faculty Presenter at event to inform public about the field of neuroscience.
2017 Children's learning Institute Fall Lunch and Learn, Faculty Presentation on current research findings related to brain development from infancy through kindergarten. Free presentation for the Houston education community held at The United Way of Greater Houston.

MENTORING ACTIVITIES:

I mentor Dr. Kelly Vaughn, a postdoctoral researcher, in acquisition of MRI data from young children and neuroimaging techniques in a population with history of prematurity.
I am responsible for training Dr. Christopher Watson, a postdoctoral researcher mentored by Dr. Ewing-Cobbs, in application of advanced neuroimaging techniques in a population with history of traumatic brain injury.

PAST GRANT SUPPORT:

Herman H. Fleishman Foundation (D. DeMaster, PI)
01/01/2017-12/31/2017 (\$50,000)

Title: PALS Toddler Brain Study

The primary objective of our research program is to determine if responsive caregiving shapes brain development in early childhood.

Role: PI

2R01NS046308 (L. Ewing-Cobbs, PI)

NIH/NINDS 07/01/2011- 07/30/2016

Title: Traumatic Stress After Pediatric Injury: Neurobiological Influences

This project will examine the impact of traumatic injury on the biomarkers of three stress-responsive neurobiological systems and their relation to cognitive and psychological health outcomes during the first year after TBI or extracranial injury.

Role: Faculty

2P50HD052117-06 (J.M. Fletcher - PI)

NIH/NINDS 12/01/2011 – 11/30/2016

Title: Texas Center for Learning Disabilities

The major goals of this project are to develop and evaluate classifications of learning disabilities, conduct empirical syntheses, evaluate the role of executive functions in reading comprehension, to provide reading comprehension interventions for students in grades 4-5, and conduct neuroimaging studies of students in various phases of intervention.

Role: Faculty

PUBLICATIONS:

Ghetti, S., Lee, J.K., Sims, C.E., DeMaster, D.M., Glaser, N.S.: Diabetic ketoacidosis and memory dysfunction in children with type 1 diabetes. *The Journal of Pediatrics*. 156(1):109-114, 2010.

Ghetti, S., DeMaster, D.M., Yonelinas, A.P., Bunge, S.A.: Developmental differences in medial temporal lobe function during memory encoding. *Journal of Neuroscience*. 30(28): 9548-9556, 2010.

Ghetti, S., Lyons, K.E., & DeMaster, D.M.: The development of episodic memory: Binding processes, controlled processes, and introspection on memory States. In S. Ghetti and P.J. Bauer (Eds.), *Origins and development of recollection: Perspectives from psychology and neuroscience* (pp. 144-167). New York, NY: Oxford University Press, 2012.

DeMaster, D.M., Ghetti, S.: Developmental differences in hippocampal and cortical contributions to episodic retrieval. *Cortex*. 49:1482–1493, 2013.

DeMaster, D.M., Pathman, T., Ghetti, S.: Development of memory for spatial context: Hippocampal and cortical contributions. *Neuropsychologia*. 51(12):2415-2426, 2013.

DeMaster, D.M., Pathman, T., Lee, J., Ghetti, S.: Structural development of the hippocampus and episodic memory: Developmental dissociations along the anterior/posterior axis. *Cerebral Cortex*. 24(11):3036-3045, 2013.

DeMaster, D.M., Coughlin, C., Ghetti, S.: Retrieval Flexibility and Reinstatement in the Developing Hippocampus. *Hippocampus*, 26:492–501, 2016.

Ewing-Cobbs, L., Johnson, C.P., Juranek, J., DeMaster, D., Prasad, M., Duque, G., ... Swank, P.R.: Longitudinal diffusion tensor imaging after pediatric traumatic brain injury: Impact of age at injury and time since injury on pathway integrity. *Human Brain Mapping*. 37(11):3929-3945, 2016.

Engelhardt, L.E., Roe, M.A., Juranek, J., DeMaster, D., Harden, K.P., Tucker-Drob, E.M. and Church, J.A. Children's Head Motion During fMRI Tasks is Heritable and Stable over Time. *Developmental Cognitive Neuroscience*. 25:58-68, 2017.

DeMaster, D., Johnson, C.P., Juranek, J., Ewing-Cobbs, L.: Memory and the hippocampal formation following pediatric traumatic brain injury. *Brain and Behavior*, 7(12), 2017.

DeMaster, D., Bick, J., Johnson, U., Montroy, J.J., Landry, S., and Duncan, A.F., *Nurturing the preterm infant brain: Leveraging neuroplasticity to improve neurobehavioral outcomes*, *Pediatric Research*, 2018.

Watson, C.G., DeMaster, D., Ewing-Cobbs, L. Graph theory analysis of DTI tractography in children with traumatic brain injury. *NeuroImage: Clinical*. In press.

OTHER PROFESSIONAL COMMUNICATIONS:

Ghetti, S., DeMaster, D. M., Bunge, S., Yonelinas, A. Development of recognition memory: Behavioral and neuroimaging evidence. In S. Ghetti & T. DeBoer (Chairs). *Memory for events and their context: Examining brain-behavior connections in childhood and adolescence*.

Symposium conducted at the Biennial Conference of Society for Research in Child Development, Boston, MA, March 2007.

DeMaster, D. M., Ghetti, S., Bunge, S., Yonelinas, A. Neural correlates of recollection and familiarity: A developmental study. Poster presented at Biennial Conference of Society for Research in Child Development, Boston, MA, March 2007.

Castelli, P., Lyons, K., DeMaster, D. M., Ghetti, S. Metacognitive awareness of negative memories. Poster presented at Biennial Conference of Society for Research in Child Development, Boston, MA, March 2007.

DeMaster, D. M., Ghetti, S., Bunge, S., Yonelinas, A. Developmental differences in recollection and familiarity: An fMRI study. Poster presented at the Annual Cognitive Neuroscience Society Conference, New York, NY, May 2007.

DeMaster, D. M., Ghetti, S., Bunge, S., Yonelinas, A. Neurodevelopmental correlates of recollection and familiarity: An fMRI study. Poster presented at the Biennial Meeting of the Cognitive Development Society, Santa Fe, NM, October, 2007.

Ghetti, S., Holtpatrick, C., DeMaster, D. M., Glaser, N. Type-1 diabetes and development of memory. Poster presented at the Biennial Meeting of the Cognitive Development Society, Santa Fe, NM, October 2007.

DeMaster D. M., Ghetti S. Neural developmental correlates of memory retrieval. Poster presented at the Annual Cognitive Neuroscience Society Conference, San Francisco, CA, April 2008.

DeMaster, D. M., and Ghetti, S. Age differences in medial-temporal lobe contribution to episodic memory. In S. Ghetti & P. Paz-Alonso (Chairs). Neural substrates of typical and atypical development and declarative memory. Symposium conducted at the Biennial Conference of Society for Research in Child Development, Denver, CO, April 2009.

DeMaster, D. M., Ghetti, S., Bunge, S., Yonelinas, A. Prefrontal involvement in memory encoding: A developmental fMRI study. Poster presented at Biennial Conference of Society for Research in Child Development, Denver, CO, April 2009.

DeMaster, D. M., Ghetti, S. Age-related differences in hippocampal function and structure: Implications for the development of episodic recollection. In N. Ofen & M. A. Sheridan (Chairs). Neurodevelopment of contextually rich episodic memory from childhood to young adulthood. Symposium conducted at the Biennial Conference of Society for Research in Child Development, Montreal, Quebec, Canada, March 2011.

DeMaster, D. M., Ghetti, S. Hippocampal Contribution to Development of Flexible Encoding and Retrieval. In Yee Lee Shing (Chair). Development of Memory flexibility and plasticity: Brain-behavior relations. Symposium conducted at the Biennial Conference of Society for Research in Child Development, Seattle, WA, April 2013.

DeMaster, D. M., & Ghetti, S. Age-related Differences in Hippocampal Contribution to Episodic Retrieval. Poster presented at the Biennial Conference of Society for Research in Child Development, Seattle, WA, April 2013.

DeMaster, D.M., Johnson, C., Juranek, J., Ewing-Cobbs, L. Memory and the Hippocampal

Formation Following Pediatric Traumatic Brain Injury. Poster Presentation at the National Neurotrauma Society Symposium, San Francisco, CA, June 2014.

DeMaster, D.M., Juranek, J., Ewing-Cobbs, L. A Longitudinal Investigation of Memory and the Hippocampal Formation Following Pediatric Traumatic Brain Injury. Poster Presentation at the Biennial Conference of Society for Research in Child Development, Philadelphia, PA, April 2015.

Fischer, J., DeMaster, D., Juranek, J., Cox, C.S, Kramer, L., Hannay, H., and Ewing-Cobbs, L. Chronic white matter damage following pediatric traumatic brain injury. Symposium presented at the 33rd annual symposium of the National Neurotrauma Society, Santa Fe NM, June 2015

Roe MA, Martinez JE, Mumford JA, DeMaster DM, Juranek JJ, Olmedo LA, Poldrack RA, Vaughn SR, Fletcher JM, Church JA. Neural correlates of reading comprehension and stop-signal inhibition in struggling and typical readers. Cognitive Development Society 9th Biennial Meeting, Columbus, OH, October 2015.

DeMaster, D. Medial Temporal Lobe Development Following Pediatric Traumatic Brain Injury. Invited speaker at Rice University. Houston, TX, February 2016.

Roe, M.A., Deschner, L., Martinez, J., Mumford, .J, DeMaster, D., Juranek, J., and Church, J.A., Neural correlates of reading comprehension in struggling and typical readers. Cognitive Neuroscience Society 23rd Annual Meeting, New York, NY, April 2016.

Roe, M.A., Deschner, L., DeMaster, D.M., Juranek, J., Church, J.A. Neural correlates of reading improvement in struggling readers. Poster presented Flux 2nd International Congress for Integrative Developmental Cognitive Neuroscience, St. Louis, MO, September 2016.

Montroy, J., DeMaster, D., Landry, S., Duncan, A.F. Maternal Behaviors Mediate Executive Function Risks associated with Preterm Birth. Paper presented at the meeting of the Irish Pediatric Association, Dublin, Ireland, September 2016.

DeMaster, D., Montroy, J., Landry, S., Duncan, A.F. The Importance of Maternal Responsiveness for the Developing Child. Poster at the Biennial Conference of Society for Research in Child Development, Austin, TX, April 2017.

DeMaster, D., Juranek, J., Fischer, J., Ewing-Cobbs, L. Emotion Recognition and Limbic White Matter Integrity in Children with Traumatic Brain Injury, Poster at the Biennial Conference of Society for Research in Child Development, Austin, TX, April 2017.

DeMaster, D. "I Think I Know You from Somewhere": Retrieval flexibility in the developing hippocampus, Invited speaker at Hampshire College, Amherst, MA, April 2017.