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APPOINTMENTS

2012- Assistant Professor, Department of Anthropology, University of South Florida
2011-12 Postdoctoral Fellow, Department of Anthropology, Northwestern University

EDUCATION

2011 Ph.D., University of Michigan, Anthropology
2006 M.A., University of Michigan, Anthropology
2004 M.S., University of Illinois Urbana-Champaign, Library and Information Science
2003 B.A., Northwestern University, Anthropology and Psychology (*cum laude*)

EXTERNAL GRANTS AND FELLOWSHIPS

Wenner-Gren Foundation Post-Ph.D. Research Grant

PI: **Miller, E.M.** Co-Investigators: Groer, M.E., Dishaw, L. Award Amount: \$20,000

Title: *Ecology of the human milk and infant salivary microbiomes*

Project Period: 01/01/2016 – 12/31/2017

NIH National Institute for Nursing Research 1 R01 NR015446-01

PI: M.E. Groer. Co-Is: K. Armstrong, T. Ashmeade, L. Dishaw, J.A. Gilbert, H. Li, **E.M. Miller** J. Ming.

Award Amount: \$2,700,000.

Title: *The preterm infant microbiome: Biological, behavioral and health outcomes at 2 and 4 years of age*

Project Period: 05/15/2015 – 05/14/2020

American Association of Physical Anthropologists Professional Development Award

PI: **E.M. Miller** Award Amount: \$5,000

Title: *The feeding ecology of infant immune function in the United States*

Project Period: 7/1/2014 – 6/31/2015

NSF Doctoral Dissertation Improvement Grant BCS-0750779

Co-PI: **E.M. Miller** (PI: A.R. Frisancho) Award Amount: \$15,000

Title: *Culture, Evolution and Immunity in Breastfeeding Ariaal Mothers and Infants*

Project Period: 1/1/2008 - 1/1/2010

Leakey Foundation General Research Grant

PI: **E.M. Miller** Award Amount: \$13,500

Title: *Breastfeeding, Immunity and Life History in Ariaal Mothers and Infants*

Project Period: 1/1/2008 - 1/1/2010

NSF Graduate Research Fellowship

Fellowship Period: 9/1/2006 - 8/30/2009

INTERNAL GRANTS, FELLOWSHIPS AND AWARDS

- 2014-2014- CAS Internal Pilot Award, \$1,500, College of Arts and Sciences, University of South Florida
2014- Research that Matters Faculty-Community Partner Grant, \$7,702, Office of Community Engagement, University of South Florida
- 2014 Outstanding Undergraduate Teaching Award 2013-2014, University of South Florida
- 2011 Rackham One-Term Fellowship
- 2009-11 Rackham Conference Travel Grant, \$1150 total over 3 years
- 2006 Rackham Graduate Student Research Grant, \$1500, Rackham Graduate School, University of Michigan
- 2006 Helen M. Spuhler Memorial Grant, \$2000, Department of Anthropology, University of Michigan
- 2004-06 Regents Fellowship, University of Michigan

PEER REVIEWED PUBLICATIONS

- 2016 **Miller, E.M.** (in press). The reproductive ecology of iron in women. *Yearbook of Physical Anthropology*.
- 2015 **Miller E.M.** (2015). A comparison of three infant skinfold reference standards: Tanner-Whitehouse, Cambridge Infant Growth Study, and WHO Child Growth Standards. *Maternal & Child Nutrition*, 11, 1023-1027.
- 2015 **Miller E.M.** and McConnell D.S. (2015). Milk immunity and reproductive status among Ariaal women of northern Kenya. *Annals of Human Biology*, 42, 76-83.
- 2014 **Miller E.M.** (2014). Iron status and reproduction in US women: National Health and Nutrition Examination Survey, 1999-2006. *PLoS ONE* 9, e112216.
- 2014 Groer M., Luciano A., Dishaw L., Ashmeade T., **Miller E.**, and Gilbert J.A. (2014). Development of the preterm infant gut microbiome: A research priority. *Microbiome* 2, 38.
- 2014 **Miller E.M.** (2014). Chronic undernutrition and traditional weaning foods are associated with fat stores in Ariaal infants of northern Kenya. *American Journal of Physical Anthropology* 153, 286-296.
- 2013 **Miller, E.M.**, Aiello, M.O., Fujita, M., Hinde K., Milligan, L.M., and Quinn, E.A. (2013). Field and laboratory methods in human milk research. *American Journal of Human Biology*, 25, 1-11.
- 2012 **Miller, E.M.** and McDade, T.W. (2012). A highly sensitive immunoassay for interleukin-6 in dried blood spots. *American Journal of Human Biology*, 24, 863-865.
- 2012 **Miller, E.M.** and McConnell, D.S. (2012). Chronic undernutrition is associated with mucosal antibody concentration among Ariaal infants of northern Kenya. *American Journal of Physical Anthropology*, 149, 136-141.
- 2011 **Miller, E.M.** (2011). Maternal health and knowledge and infant health outcomes in the Ariaal people of northern Kenya. *Social Science & Medicine*, 73, 1266-1274.

- 2011 Abrams, E.T. and **Miller, E.M.** (2011). The roles of the immune system in women's reproduction: Evolutionary constraints and life history trade-offs. *Yearbook of Physical Anthropology*, 53, 134-154.
- 2011 **Miller, E.M.** and McConnell, D.S. (2011). The stability of immunoglobulin A in human milk and saliva stored on filter paper at ambient temperature. *American Journal of Human Biology*, 23, 823-825.
- 2010 **Miller, E.M.** (2010). Maternal hemoglobin depletion in a settled northern Kenyan pastoral population. *American Journal of Human Biology*, 22, 768-774.
- 2009 **Miller, E.M.** (2009). Changes in serum immunity during pregnancy. *American Journal of Human Biology*, 21, 401-403.

BOOK REVIEWS

- 2015 Miller, E.M. (2015). Cultures of milk: The biology and meaning of dairy products in the United States and India. By Andrea S. Wiley. 208 pp. Cambridge, MA: Harvard University Press. 2014. \$39.95 (cloth). *American Journal of Human Biology*, 27: 881.

ABSTRACTS, PAPERS AND PRESENTATIONS

- 2015 Roundtable: Biocultural perspectives on normal, physiologic birth. Presenter. American Association of Anthropologists 2015 Meeting, Denver, CO
- 2015 Rivara, A.C.* and **Miller, E.M.** (2015). Pregnancy, age and IgE: unexpected levels of immune defenses in U.S. women (National Health and Nutrition Examination Survey 2005-2006). Human Biology Association 2015 Meeting, St. Louis, MO.
- 2015 **Miller E.M.** (2015). Predictors of reported nursing frequency in Ariaal mothers and infants of Kenya. Human Biology Association 2015 Meeting, St. Louis, MO.
- 2014 **Miller E.M.**, McConnell D.S., McDade T.W. (2014). Beyond passive immunity: Milk and shared mother-infant immune systems in Kenya. Included in invited session: "Anthropologies of breastfeeding: Producing new conversations." American Association of Anthropologists 2014 Meeting, Washington, DC.
- 2014 **Miller E.M.** (2014). Parity and hemoglobin in US women (National Health and Nutrition Examination Survey, 1999-2002). American Association of Physical Anthropologists 2014 Meeting, Calgary, AB.
- 2013 **Miller, E.M.**, McConnell, D.S. and McDade, T.W. (2013). Concordant maternal-infant immunity among the Ariaal of Kenya. Human Biology Association 2013 Meeting, Knoxville, TN.
- 2012 **Miller, E.M.** (2012). Ariaal mothers' nutritional status and infant sex predict infant height and weight. Human Biology Association 2012 Meeting, Portland, OR.

- 2011 **Miller, E.M.** (2011). The reproductive ecology of breastmilk immunity in Ariaal women of northern Kenya. Included in invited session: "Eating for two: Maternal ecology and nutrition in human and nonhuman primates". American Association of Physical Anthropologists 2011 Meeting, Minneapolis, MN.
- 2011 **Miller, E.M.** (2011). Fat deposition and growth in breastfeeding Ariaal infants. Human Biology Association 2011 Meeting, Minneapolis, MN.
- 2010 **Miller, E.M.** and McConnell, D.S. (2010). Chronic but not acute undernutrition predicts salivary IgA levels in Ariaal infants. American Association of Physical Anthropologists 2010 Meeting, Albuquerque, NM.
- 2010 **Miller, E.M.** and McConnell, D.S. (2010). Postpartum variation in breastmilk IgA. Human Biology Association 2010 Meeting, Albuquerque, NM.
- 2009 **Miller, E.M.** and McConnell, D.S. (2009). Development of an enzyme-linked immunosorbent assay (ELISA) for IgA in breastmilk and saliva stored on filter paper. Human Biology Association 2009 Meeting, Chicago, IL.
- 2009 **Miller, E.M.** (2009). Mothers' knowledge of traditional medicine is associated with reduced likelihood of infant illness in a northern Kenyan pastoral population. WIDTH Symposium, Department of Public Health, University of Michigan, Ann Arbor, MI.
- 2004 Kuzawa, C.W., **Miller, E.**, and Adair, L.S. (2004). Maternal and prenatal influences on male life history. Included in the invited session: "Life history, energetics, and human evolution." American Association of Physical Anthropologists 2004 Meeting, Tampa, FL.

RESEARCH EXPERIENCE

Fieldwork Experience

- 2015- Genesis Women's Center, Tampa General Hospital, Florida, United States
 • Interviews of African American women regarding infant feeding (n = 20)
- 2014-2015 Hillsborough County, Florida, United States
 • Collected breast milk and saliva from US mother-infant pairs (n = 82 pairs)
 • Administered interviews using free, open source data collection system KoBo Toolbox
 • Performed anthropometric measurements on women and infants
- 2008-09 Karare, Parkishon, and Kituruni, Marsabit District, Kenya
 • Collected saliva, dried blood spots and breastmilk in Ariaal mother-infant pairs (n = 251 pairs)
 • Administered comprehensive survey of maternal and infant characteristics, health, family structure, socioeconomic status, and knowledge of healthcare practices
 • Performed anthropometric measurements on women and infants
- 2007 Karare and Parkishon, Marsabit District, Kenya
 • Pilot interviews among Ariaal women (n = 41)
- 2006 Karare, Marsabit District, Kenya
 • Pilot anthropometry among Ariaal women and infants (n = 80)

Laboratory Experience

- 2012- Director, Health and Human Biology Laboratory, Department of Anthropology, University of South Florida
- Novel, field-friendly research of population biomarkers
 - Specialization in human milk, saliva, and dried blood spot immunoassays
- 2011-12 Laboratory for Human Biology Research, Department of Anthropology, Northwestern University
- Developed single and multiplex immunoassay protocols for evaluating cytokines in dried blood spots
 - Assayed inflammatory markers in dried blood spot samples to assess changes in health disparities in the Tsimane' population of Bolivia
- 2006-10 Clinical Ligand Assay Satellite Service (CLASS) Laboratory, Department of Epidemiology and Reproductive Sciences Program, University of Michigan
- Developed sandwich enzyme-linked immunosorbent assay (ELISA) for immunoglobulin A (IgA)
 - Tested various storage methods for breastmilk and saliva including filter paper
 - Learned laboratory management and quality control
- 2004-11 Human Adaptation Laboratory, Department of Anthropology, University of Michigan

Research Interests

Human biology, immune function, maternal and infant health, breastfeeding, maternal iron deficiency, microbiomes, nutrition, reproduction, growth and development, life history theory, evolutionary ecology, field and laboratory methods, East Africa, United States

TEACHING EXPERIENCE

University of South Florida

- 2012- Assistant Professor, Department of Anthropology (7 semesters)
- Biological Anthropology (UG)*
 - Evolution and Health (UG)*
 - Human Sexuality and Culture (UG)*
 - Human Reproductive Ecology (UG/G)*
 - Human Variation (UG/G)*
 - Evolution and Life History Theory (G)*

Northwestern University

- 2012 Lecturer, Global Health Studies (1 semester)
- Global Maternal and Child Health (UG)*
- 2011 Instructor, Science and Engineering Teaching and Research Synthesis workshops, Department of Anthropology (1 semester)
- On the Move: Locomotion and Human Evolution (UG)*

University of Michigan

- 2011 Grader, Center for African and African American Studies (1 semester)
Introduction to African Studies (UG)
- 2010 Instructor of Record, Department of Anthropology (1 semester)
Darwin, MD: Evolution and Health (UG)
- 2005-10 Graduate Student Instructor, Department of Anthropology (5 semesters)
Introduction to Biological Anthropology (UG and G)
Human Adaptation (UG/G)
Nutrition and Evolution (UG)

Professional and Teaching Development

- 2014 Summer Teaching Symposium, Academy for Teaching and Learning Excellence (ATLE), University of South Florida
- 2009 Graduate Teacher Certificate, Center for Research on Learning and Teaching, University of Michigan

ADVISING

Current Students

- 8 Ph.D. (as committee member)
- 3 M.A. (as major adviser)

Past Students

- 1 Ph.D. (as committee member)
- 4 M.A. (as committee member)
- 5 Undergraduate Honors (as major adviser)

EXTERNAL TALKS AND LECTURES

- 2015 Lactogenesis and Family Planning. Maternal and Child Health Student Organization Symposium, University of South Florida. With the Hillsborough County Breastfeeding Task Force. March 20, 2015.
- 2012 The Assessment of Cytokines in Dried Blood Spots (DBS). Biomarker Network Meeting, Population Association of America 2012 Meeting, San Francisco, May 2, 2012.
- 2012 Human Variation and Infectious Disease. Lecture, Human Variation, Northeastern Illinois University. November 10, 2012.

INTERNAL TALKS AND LECTURES

- 2015 The Ecology of Immunity among the Ariaal of Northern Kenya. Occasional Lecture Series, Department of Anthropology, University of South Florida. February 17, 2015.
- 2014 The Ecology of Immunity among the Ariaal of Northern Kenya. Integrative Biology Seminar Series, Department of Integrative Biology, University of South Florida. January 23, 2014.
- 2011 Breastfeeding and Anthropology in the Ariaal People of Northern Kenya, Four-Field Graduate Talks, University of Michigan. February 17, 2011.

PROFESSIONAL ASSOCIATIONS

- 2013- International Society for Research on Human Milk and Lactation
2009- Sigma Xi
2005- American Association of Physical Anthropology
2005- Human Biology Association

PROFESSIONAL SERVICE

- 2015- Program committee, Human Biology Association's 2016 Annual Meeting
2015- Program committee, American Association of Physical Anthropologists' 2016 Annual Meeting
- 2013- Ad hoc grant reviewer for Sigma Delta Epsilon Graduate Women in Science National Fellowships Program, National Science Foundation Cultural Anthropology, Leakey Foundation
- 2011- Ad hoc journal reviewer for *American Journal of Human Biology*; *American Journal of Physical Anthropology*; *Current Anthropology*; *Ecology of Food and Nutrition*; *Ethnomedicine and Ethnobiology*; *Evolutionary Anthropology*; *Evolution, Medicine, and Public Health*; *Journal of Human Lactation*; *Human Organization*; *Maternal and Child Nutrition*; *Medical Anthropology Quarterly*; *Journal of Pediatric Gastroenterology and Nutrition*; *Social Science & Medicine*
- 2011-12 Reviewer for American Association of Physical Anthropologists' Undergraduate Research Symposium

COMMUNITY-ENGAGED SERVICE

- 2015 Panel discussion, Healthy Start of Manatee County
2013- Executive committee member, Hillsborough County Breastfeeding Task Force, Tampa, FL
2012-13 Member, Hillsborough County Breastfeeding Task Force, Tampa, FL