

Monica H. (Ahsan) Keith, Ph.D.

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Curriculum Vitae

Last updated August 4, 2023

EDUCATION

- 2020 Ph.D., Anthropology, University of Missouri
 Dissertation: *Genetic variation and health in a rural Caribbean village*
 Committee: Gregory E. Blomquist, Mark V. Flinn, Lisa Sattenspiel,
 Jared E. Decker
- 2014 M.A., Anthropology, University of Missouri
 Thesis: *Genetic and maternal effects on neonatal survival in the western lowland gorilla*
 Advisor: Gregory E. Blomquist
- 2012 B.S., Anthropology (Biology minor), Texas State University
 summa cum laude

ACADEMIC APPOINTMENTS

- 2022- Assistant Professor, Vanderbilt University, Department of Anthropology
- 2020-22 Postdoctoral Scholar, University of Washington, Department of Anthropology
 Faculty mentor: Melanie A. Martin

PEER-REVIEWED PUBLICATIONS

Keith MH, Martin MA. (in revision). Social determinant pathways to hypertensive disorders of pregnancy among nulliparous US women. *Women's Health Issues*.

Starkweather KE, **Keith MH**, Zohora FT, Alam N. 2023. Economic impacts and nutritional outcomes of the 2017 floods in Bangladeshi Shodagor fishing families. *American Journal of Human Biology*, 35(1).

Martin MA, **Keith MH**, Pace RM, Smith JE, Ley S, Barbosa-Leiker C, Caffé B, Smith CB, Kunkle A, Lackey KA, Navarette AD, Pace CDW, Gogel AC, Eisenberg D, Fehrenkamp B, McGuire MA, McGuire SK, Meehan CL, Brindle E. 2022. SARS-CoV-2 specific antibody trajectories in mothers and infants over two months following maternal infection. *Frontiers in Immunology*, 13, 1015002.

Martin MA, **Keith MH**, Olmedo S, Edwards D, Barrientes A, Pan A, Vallengia C. 2022. Cesarean section and breastfeeding outcomes in an Indigenous Qom community with high breastfeeding support. *Evolution, Medicine, and Public Health* 10(1): eoab045.

Keith MH, Flinn MV, Durbin HJ, Rowan TN, Blomquist GE, Taylor KH, Taylor JF, Decker JE. 2021. Genetic ancestry, admixture, and population structure in rural Dominica. *PLOS One* 16(11): e0258735.

Starkweather KE, **Keith MH**, Prall SP, Alam N, Zohora F, Thompson ME. 2021. Are fathers a good substitute for mothers? Paternal care and growth rates in Shodagor children. *Developmental Psychobiology: Comparative Perspectives on Paternal Effects* [Special Issue] PMID: 34087947.

Keith MH, Blomquist GE, Flinn MV. 2019. Anthropometric heritability and child growth in a Caribbean village: A quantitative genetic analysis of longitudinal height, weight, and BMI in Bwa Mawego, Dominica. *American Journal of Physical Anthropology* 170:393–403.

Starkweather KE, **Keith MH**. 2019. One piece of the matrilineal puzzle: the socioecology of maternal uncle investment. *Philosophical Transactions of the Royal Society B: The evolution of female-biased kinship in humans and other mammals* [Special Issue] 374: 20180071.

Starkweather KE, **Keith MH**. 2018. Estimating impacts of the nuclear family and heritability of nutritional outcomes in a boat-dwelling community. *American Journal of Human Biology* 30: e23105.

Ahsan MH, Blomquist GE. 2015. Modeling variation in early life mortality in the western lowland gorilla: genetic, maternal and other effects. *American Journal of Primatology* 77: 666–678.

FUNDING, AWARDS, AND FELLOWSHIPS

2021	Decoding Maternal Morbidity Data Challenge Award (\$60,000), NIH National Institute of Child Health and Human Development
2021	Research Proposal Award (\$5,000), Center for Studies in Demography and Ecology, University of Washington
2021-22	Data Science Postdoctoral Fellowship (\$7,000), eScience Institute, University of Washington
2020	William S. Pollitzer Student Travel Award, American Association of Physical Anthropologists
2019	Best Paper by a New Investigator, Evolutionary Anthropology Society, American Anthropology Association Annual Meeting, Vancouver, BC.
2019	Conference Travel Award (\$500), Department of Anthropology, University of Missouri
2017	Research Board Grant (\$47,048), University of Missouri

2017	Dorothy (Dot) Tompkins Gelvin, Ph.D., Memorial Research Scholarship (\$1,500), University of Missouri
2017	Conference Travel Award (\$500), Department of Anthropology, University of Missouri
2012-16	Life Sciences Fellowship (\$33,000/year), University of Missouri
2012	Outstanding Undergraduate in Anthropology, Texas State University
2011	Lambda Alpha National Honor Society Induction
2010-11	University Honors Scholarship (\$1,000), Texas State University
2009-12	Texas State Achievement Scholarship (\$2,500/year), Texas State University
2009-12	Top 10% Scholarship (\$2,000/year), Texas State University

TEACHING EXPERIENCE

2023-	Vanderbilt University, Department of Anthropology Introduction to Biological Anthropology Graduate Seminar in Statistical Methods
2016-20	University of Missouri, Department of Anthropology Introduction to General Anthropology Introduction to Multiculturalism Introduction to Biological Anthropology (Laboratory Instructor)
2017-19	University of Missouri, Department of Biological Sciences General Biology Lab (Teaching Assistant) Summer Transition Program Biology Lab (Teaching Assistant)
2011	Texas State University, Student Learning Assistance Center Pre-medical Biology and Chemistry (Tutor)

RESEARCH PROJECTS

2021-	Social determinants of allostatic load, maternal health, and birth outcomes in the US (Project Lead) Collaborators: Melanie A. Martin, Mulubrhan Mogos, Kathryn Lindley
2021-22	COVID-19 and Breastfeeding Study (Data Analyst) Directors: Melanie A. Martin, Eleanor Brindle, Courtney Meehan, Michelle McGuire, Sylvia Ley, Dan T.A. Eisenberg
2020-	Chaco Area Reproductive Ecology (CARE) Program (Data Analyst) Directors: Melanie A. Martin, Claudia Valeggia
2016-	Shodagor Longitudinal Health and Demography Project (Data Analyst) Director: Kathrine E. Starkweather

- 2014- Dominica Longitudinal Health Study (Genetic Project Lead)
Collaborators: Mark V. Flinn, Gregory E. Blomquist, Jared E. Decker
- 2012-14 Taxonomic Investigation of Bornean Loris Variation (Research Assistant)
Directors: Lori S. Eggert, Rachel A. Munds
- 2011 Genetics of Metabolic Health (Intern)
Texas Biomedical Research Institute, Department of Genetics, Comuzzie Lab
Director: Anthony Comuzzie

INVITED LECTURES

- 2022 “A structural equation model of social determinant pathways to hypertensive disorders of pregnancy”. Presented for the Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health. March 16, 2022.
- 2021 “Health equity and case studies in biocultural anthropology”. Presented for the Levin Graduate Urban Colloquium, Cleveland State University. November 22, 2021.
- 2020 “Longitudinal Health in Two Small-Scale Societies”. Presented for the Genes for Good Research Group, University of Michigan. February 3, 2020.
- 2019 “Health, Genes, and Ancestry in a Caribbean Village”. Presented for the Department of Anthropology, University of Pittsburgh. January 28, 2019.

CONFERENCE PRESENTATIONS

- 2023 **Keith MH**, Martin MA. Socio-ecology of pregnancy planning among nulliparous US women. Presented at the 48th annual Human Biology Association meetings, Reno, NV.
- 2023 Starkweather KE, **Keith MH**, Zohora FT, Alam N. Economic impacts and nutritional outcomes of the 2017 floods in Bangladeshi Shodagor fishing families. Presented at the 48th annual Human Biology Association meetings, Reno, NV.
- 2023 Martin MA, **Keith MH**, Pace RM, Williams JE, Ley SH, Barbosa-Leiker C, Caffè B, Smith CB, Kunkle A, Lackey KA, Navarrete AD, Pace CD, Gogel AC, Eisenberg DT, Fehrenkamp BD, McGuire MA, McGuire MK, Meehan CL, Brindle E. Maternal and infant SARS-CoV-2 antibody responses following maternal COVID-19 infection. 92nd annual American Association of Biological Anthropology meetings, Reno, NV.

- 2022 **Keith MH**, Martin MA. Pathways between social determinants of health, allostatic load, and hypertensive disorders of pregnancy vary among US racial/ethnic groups. Presented at the 91st annual American Association of Biological Anthropology meetings, Denver, CO.
- 2022 **Keith MH**, Corley M, Daniel S, Glass DJ, Lipton S, Ellison P, Vallengia C, Martin MA. Estimating precision in hormone sampling design. Poster at the 47th annual Human Biology Association meetings, Denver, CO.
- 2022 Martin MA, **Keith MH**, Olmedo S, Vallengia C. Cesarean birth and breastfeeding outcomes in an Indigenous community with high breastfeeding support. 47th annual Human Biology Association meetings, Denver, CO.
- 2021 **Keith MH**, Martin MA, Vallengia C. How precise is your sample? A mixed model approach to assess sampling precision using pubertal hormone data. Presented at the 7th annual Northwest Evolution, Ecology, and Human Behavior Symposium, virtual.
- 2020 **Keith MH**, Durbin HJ, Rowan TN, Blomquist GE, Flinn MV, Taylor JF, Decker JE. Genetic ancestry and demographic history of a rural Caribbean village. Abstract for the 89th annual American Association of Physical Anthropology meetings.
- 2019 Starkweather KE, **Keith MH**. Shodagor women's work and reproductive decision-making. Presented at the American Anthropology Association Annual Meetings, Vancouver, BC.
- 2019 **Keith MH**, Starkweather KE. Socio-ecological predictors of maternal uncle investment in the bilateral, semi-nomadic Shodagor. Presented at the 88th annual American Association of Physical Anthropology meetings, Cleveland, OH.
- 2017 **Ahsan MH**, Starkweather KE. Effects of genetics and the nuclear family environment on Shodagor health. Presented at the 86th annual American Association of Physical Anthropology meetings, New Orleans, LA.
- 2016 **Ahsan MH**, Bain JC, Flinn MV. Heritable traits and their impacts on child health in a Caribbean village. Poster at the 85th annual American Association of Physical Anthropology meetings, Atlanta, GA.
- 2015 **Ahsan MH**, Blomquist GE. Survival of the infants: An analysis of early life mortality in captive western lowland gorillas. Presented at the 27th annual Human Behavior and Evolution Society meetings, Columbia, MO.

POPULAR MEDIA

- 2023 Evolutionary Studies News at VU "[Vanderbilt Anthropologist Discovers Lasting Effects from Disasters in Bangladesh](#)"
- 2022 Human Biology Association Podcast "[The Sausage of Science, Episode 178: Modeling Health Outcomes in Pregnancy with Dr. Monica Keith](#)"

TECHNICAL SKILLS

Wet Lab

Ancient DNA extractions from tissue, DNA extractions from tissue and buccal swabs
Anthropometric, osteological measurements
PCR, gel electrophoresis
Point-of-care biomarker testing, dried blood spot collection
Serum processing, biochemical assays

Dry Lab

Proficient in Program R, Linux, SAS, Systat, PEDSYS, SOLAR, and Excel; basic Perl script
Longitudinal phenotype database and genotype data management
Bayesian modeling, linear and nonlinear multilevel models
Multivariate and structural equation modeling
Pedigree analysis, heritability estimation
Genome-wide association studies, genetic ancestry and admixture analysis

MENTORSHIP

Graduate

Committee member	Katie McCormack, VU Anthropology (in progress)
	Ro de la Rosa, VU Anthropology (in progress)

Undergraduate

Major advisor	Lauren Solecki, VU Anthropology (in progress)
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SERVICE

Departmental

2023-24	Immersion Liaison, VU Anthropology
2023	Co-host, Anthro Hour Talk Series, VU Anthropology
2022-23	Speaker's Committee, VU Anthropology

Journals Refereed

Evolution, Medicine, and Public Health
Human Nature
Journal of Adolescent Health
Journal of Racial and Ethnic Health Disparities

AFFILIATIONS AND MEMBERSHIPS

American Association of Biological Anthropologists
Human Biology Association
American Society of Human Genetics
Human Behavior and Evolution Society
Center for Studies in Demography and Ecology, University of Washington