

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

University of Washington

Department of Anthropology

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EDUCATION

- 2020 Ph.D., Anthropology, University of Missouri
 Dissertation: *Genetic variation and health in a rural Caribbean village*
 Advisor: Gregory E. Blomquist
- 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

- 2020- Postdoctoral Scholar, University of Washington, Department of Anthropology
 Faculty mentor: Melanie A. Martin

RESEARCH PROJECTS

- 2020- Chaco Area Reproductive Ecology (CARE) Program (Collaborator)
 Directors: Melanie A. Martin, Claudia Vaggia
 Duties: Child growth analysis, Bayesian modeling, database management
- 2016- Shodagor Longitudinal Health and Demography Project (Collaborator)
 Director: Kathrine E. Starkweather
 Duties: Project development, longitudinal data analysis, Bayesian modeling, database management
- 2014- Dominica Longitudinal Health Study (Genetic Project Lead)
 Collaborators: Mark V. Flinn, Gregory E. Blomquist, Jared E. Decker
 Duties: Grant-writing, research approvals, field data collection, longitudinal data management and analysis, DNA extractions, genotype data management and analysis

- 2012-14 Taxonomic Investigation of Bornean Loris Variation (Research Assistant)
Directors: Lori S. Eggert, Rachel A. Munds
Duties: Ancient DNA extraction from museum tissue, PCR, gel electrophoresis, sequence alignment, phylogenetic reconstruction
- 2011 Genetics of Metabolic Health (Intern)
Texas Biomedical Research Institute, Department of Genetics, Comuzzie Lab
Director: Anthony Comuzzie
Duties: Pedigree/genealogical analysis, cardiac data analysis, serum processing, metabolic profiling in captive baboons, uric acid assay configuration

PUBLICATIONS

Keith MH, Flinn MV, Durbin HJ, Rowan TN, Blomquist GE, Taylor KH, Taylor JF, Decker JE. (in prep). Genetic ancestry and population structure in rural Dominica.

Starkweather KE, **Keith MH**, Prall SP, Alam N, Thompson ME. (in prep). Complementary, but not substitutive, paternal care leads to faster growth but smaller body size in Shodagor children. *Developmental Psychology: Comparative Perspectives on Paternal Effects* [Special Issue].

Keith MH, Flinn MV, Taylor JF, Taylor KH, Blomquist GE. (in prep). Genome-wide association (GWA) tests of cardiometabolic traits in a Caribbean community show potential association between Ankyrin-3 (ANK3) and body mass index (BMI).

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.

GRANTS AND FELLOWSHIPS

- 2017 Research Board Grant (\$47,048), University of Missouri
2017 Dorothy (Dot) Tompkins Gelvin, Ph.D., Memorial Research Scholarship (\$1,500), University of Missouri
2012-16 Life Sciences Fellowship (\$33,000/year), University of Missouri

HONORS AND AWARDS

- 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 Conference Travel Award (\$500), Department of Anthropology, University of Missouri
2012 Outstanding Undergraduate in Anthropology, Texas State University
2012 Golden Key International Honour Society Induction
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
2009-12 Dean's List, Texas State University

INVITED LECTURES

- 2020 "Longitudinal Health in Two Small-Scale Societies". Presented for the University of Michigan, Genes for Good Research Group. February 3, 2020.
2019 "Health, Genes, and Ancestry in a Caribbean Village". Presented for the University of Pittsburgh, Department of Anthropology. January 28, 2019.

CONFERENCE PRESENTATIONS

- 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.
- 2014 **Ahsan MH**, Blomquist GE. Heritability and maternal effects of neonatal survival in the western lowland gorilla. Presented at Missouri Life Sciences Week, Columbia, MO.

TEACHING EXPERIENCE

- 2016-20 University of Missouri, Department of Anthropology
 Introduction to General Anthropology, Instructor of Record
 Introduction to Multiculturalism, Instructor of Record
 Introduction to Biological Anthropology, Laboratory Instructor
- 2017-19 University of Missouri, Department of Biological Sciences
 General Biology Lab, Teaching Assistant
 Summer Bridge Program Biology Lab, Teaching Assistant
- 2011 Texas State University, Student Learning Assistance Center
 Pre-medical Biology and Chemistry, Tutor

TECHNICAL SKILLS

Laboratory

Ancient DNA extractions from tissue
 DNA extractions from tissue, buccal swabs
 PCR, gel electrophoresis
 Serum processing, biochemical assays
 Anthropometric data collection, osteological measurements

Computational and Statistical

Proficient in Program R, Linux, SAS, Systat, PEDSYS, SOLAR, and Excel; basic Perl script

Longitudinal phenotype database and genotype data management

Bayesian modeling, mixed models, multivariate analysis

Pedigree analysis, heritability estimation

Admixture dating and analysis

Genome-wide association studies

Phylogenetic reconstructions, comparative methods

PROFESSIONAL MEMBERSHIPS

American Association of Physical Anthropologists

American Society of Human Genetics

Human Behavior and Evolution Society