

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

University of Washington

Department of Anthropology

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## EDUCATION

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- 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

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

## RESEARCH PROJECTS

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- 2020-      Chaco Area Reproductive Ecology (CARE) Program (Data Analyst)  
            Directors: Melanie A. Martin, Claudia Vaggia  
            Duties: Child growth analysis, Bayesian modeling
- 2016-      Shodagor Longitudinal Health and Demography Project (Data Analyst)  
            Director: Kathrine E. Starkweather  
            Duties: Longitudinal data analysis, Bayesian modeling
- 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

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**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

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- 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

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- 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

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- 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

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- 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 89<sup>th</sup> 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 88<sup>th</sup> 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 86<sup>th</sup> 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 85<sup>th</sup> 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 27<sup>th</sup> 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

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- 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 Transition Program Biology Lab, Teaching Assistant
- 2011        Texas State University, Student Learning Assistance Center  
                  Pre-medical Biology and Chemistry, Tutor

## TECHNICAL SKILLS

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### 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**

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American Association of Physical Anthropologists

American Society of Human Genetics

Human Behavior and Evolution Society