

Christopher E. Barrett

Curriculum Vitae
christopherbarrett@ku.edu

EDUCATION

- 2016 MA, Biological Anthropology, Western Washington University, Bellingham, WA
Master's Thesis: *Nutritional Intake and Hormone Phenotypes in the Kansas Mennonite*
2014 BA, Biocultural Anthropology - Western Washington University September 2010–June

PUBLICATIONS

- 2015 *Community based pilot study of diagnostic paths to the gluten free diet.* International Journal of Celiac Disease, 3(18), 17. Stevenson, J. C., Rankin-Sunter, K., Maki, C., Bruna, S., Mosher, M. J., & **Barrett, C. E.**

EMPLOYMENT

The University of Kansas

- July 2019 – Present Dept. of Anthropology – Ancient DNA Laboratory – NSF Graduate Research Assistant
January 2018 – Dec. 2018 Dept. of Molecular Biosciences – Human Physiology – Graduate Instructor
August 2017 – Dec. 2017 Dept. of Anthropology – Human Evolution and Variation – Graduate Teaching Assistant
January 2017 – July 2017 Dept. of Molecular Biosciences – Human Physiology – Graduate Instructor

Western Washington University

- Spring 2016 Dept. of Anthropology – Human Origins – Graduate Teaching Assistant
Winter 2016 Dept. of Anthropology – Biological Anthropology Lab – Graduate Teaching Assistant
Fall 2015 Dept. of Anthropology – Research Statistics – Graduate Teaching Assistant
Winter 2015 Dept. of Anthropology – Cultural Anthropology – Graduate Teaching Assistant

GRANTS AND AWARDS

- May 2017 Carrol D. Clark Award – The University of Kansas
January 2015 Enhancement of Graduate Research Grant – Western Washington University
July 2014 Friends in Anthropology Travel Grant – Western Washington University

PROFESSIONAL MEMBERSHIPS

- April 2014 – Present American Association of Anthropological Genetics
January 2013 – Present American Association of Biological Anthropology

LABORATORY TRAINING

Ancient DNA extraction, purification, concentration, PCR – Ancient DNA Laboratory – The University of Kansas

Museum sampling and cataloging – Smithsonian National Museum of Natural History

Contemporary DNA extraction, purification, quantification, PCR, electrophoresis, and gel imaging – Anthropological Genetics Laboratory – The University of Kansas

DNA inventory management – Mosher Laboratory – Western Washington University

Mouse genetics and primer design – Dept. of Biology – Western Washington University

Anatomy, histology, and physiology – Dept. of Biology – Western Washington University

Organic and analytical chemistry – Dept. of Chemistry – Western Washington University

Biological anthropology, hominid evolution, forensic osteology – Stevenson Laboratory – Western Washington University

Scanning electron microscopy and energy dispersive x-ray spectroscopy – Scientific Technical Services – Western Washington University

RESEARCH

July 2019 – Present	Ancient Genomics of the Western Aleutian Islands of Alaska – The University of Kansas
June 2014 – April 2017	Kansas Nutrition Project on Genetics and Chronic Disease – Western Washington University
June 2014 – August 2016	Anthropology Dept. Wet Lab Manager – Western Washington University
June 2013 – December 2014	Research Assistant to Joan C. Stevenson – Western Washington University

ANALYTICAL SOFTWARE AND BIOINFORMATICS

Excel, IBM SPSS® v22-v24, R and R Studio, Sequencher DNA analysis software v5.4, Arlequin integrated software for population genetics data v3.5, Linux command line, Python script v2.7 and v3.6, PLINK

TECHNICAL DEVELOPMENT

August 2018 The University of Kansas Bioinformatics and Genomic Data Workshop
Instructor: Dr. Austin Reynolds – Command line functions, graphical user interfaces, shell environments, managing data files and directories, NGS Illumina data quality control, DNA sequence alignment (mapping), variant calling, ancient genomic data, measures of natural selection, detecting ancient gene flow, phylogenetic tree construction, population structure analyses, F-statistics

July 2017 The University of Washington's 22nd Summer Institutes in Statistical Genetics –
Instructors: Dr. Ken Rice and Dr. Timothy Thornton – Module 1: R Statistical Software Environment, data management, data visualization, R script, R package installment
Instructors: Dr. Bruce Weir and Dr. Jérôme Goudet – Module 2: Bayesian bioinformatics methods for analyzing discrete genetic data, allele variance, linkage disequilibrium, population structure, F-statistics
Instructors: Dr. Timothy Thornton and Dr. Michael Wu – Module 3: Genome-wide association studies (GWAS), next-generation sequencing (NGS) data, case-control association, quantitative traits, data quality control, multi-locus testing, ancestry inferences, gene-gene interactions, rare variant association analysis, meta-analysis, design considerations, PLINK
Instructors: Dr. Carolyn Hutter and Dr. Karen Edwards – Module 4: Genetic epidemiological study design, analysis, and interpretations of complex diseases, twin studies, familial patterns of disease, linkage analysis, population-based association studies, gene-environment interactions, precision medicine applications

GUEST LECTURES

December 2017	Introgession and Human Variation – The University of Kansas
November 2017	Evolutionary Developmental Biology – The University of Kansas
November 2017	Evolution of Human Life History – The University of Kansas
October 2017	Nutrition in Human Health and Adaptation – The University of Kansas
June 2016	Biogeography in Primate Evolution – Western Washington University
March 2015	Human Epigenetics – Western Washington University
September 2014	Biocultural Perspectives in Epidemiology – Western Washington University

CONFERENCE PRESENTATIONS

- **Water Soluble Micronutrients and Leptin Phenotypes in the Kansas Mennonite**, poster presentation, Association of Physical Anthropology, April 2017, New Orleans, Louisiana
- **Vitamin D Intake and Serum Leptin Levels: The Kansas Nutrition Project**, poster presentation, Association of Physical Anthropology, April 2016, Atlanta, Georgia
- **Dietary Vitamin D Intake and Metabolic Syndrome**, poster presentation, Society for Applied Anthropology, Vancouver Canada, March 2016
- **Osteological Complexity: Testing Allometric Hypotheses on Pterion - Preliminary Study**, poster presentation, Northwest Anthropology Conference, March 2016, Tacoma, Washington
- **Kerf Patterning on Animal Cremains: Preliminary Analysis of Microscopy Methods**, poster presentation, Northwest Anthropology Conference, April 2015, Eugene, Oregon
- **A Review on the Complex Phenotype of Aging: Nutrigenomic and Molecular Mechanisms**, poster presentation, American Association of Physical Anthropology Conference, April 2014, Calgary, Alberta Canada
- **Diagnostic Trajectories to Celiac Disease and Gluten Sensitivity, Symptom Levels and the Gluten Free Diet: Persisting Challenges**, podium presentation, Northwest Anthropology Conference, March 2014, Bellingham Washington
- **The Mysteries of Aging Scrutinized: A Biological Anthropology and Behavioral Approach**, podium presentation, Washington State University - Interdisciplinary Conference of Anthropology and Sciences, September 2013, Pullman Washington

SYMPOSIA

- **Designing an Anthropological Epigenetic Study**, invited speaker, American Association of Biological Anthropologists, March 2019, Cleveland, Ohio
- **Epigenetics: Bridging Cultural and Biological Anthropology**, co-organizer, American Association of Biological Anthropologists, March 2019, Cleveland, Ohio

RESEARCH INTERESTS

Genomics, epigenomics, ancient DNA, Neanderthal and Denisovan introgression, Arctic archaeology, human adaptation and physiology, epidemiology, bioethics, stem cell biology, Eurasia, Siberia, Beringia, Aleutian Islands, Alaska, Canadian Arctic, western North America