

## AINASH CHILDEBAYEVA

Curriculum vitae  
February, 2023

Department of Anthropology  
University of Kansas  
1415 Jayhawk Blvd.  
Lawrence, KS 66045-7556

Email: [ainash.childebayeva@ku.edu](mailto:ainash.childebayeva@ku.edu)  
[ainash.childebayeva@gmail.com](mailto:ainash.childebayeva@gmail.com)

### RESEARCH INTERESTS

Ancient DNA, human population genetics, epigenetics, natural selection

### PROFESSIONAL POSITIONS

01/2023 – Present	Assistant Professor, Department of Anthropology, University of Kansas, Lawrence, Kansas
05/2021 – Present	Postdoctoral Researcher, Department of Archaeogenetics, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany
08/2019 – 05/2021	Postdoctoral Researcher, Department of Archaeogenetics, Max Planck Institute for the Science of Human History, Jena, Germany
09/2019 – Present	Senior Researcher, Institute of General Genetics and Physiology, Almaty, Kazakhstan

### EDUCATION

2019	Joint PhD in Anthropology and Toxicology, University of Michigan, Ann Arbor, MI
2017	MA in Anthropology, University of Michigan, Ann Arbor, MI
2013	BA in Anthropology and Molecular and Cellular Biology, Vanderbilt University, Nashville, TN

### PUBLICATIONS

2022	Villalba-Mouco, V., Oliart, C., Rihuete-Herrada, C., Rohrlach, A. B., Fregeiro, M. I., <b>Childebayeva, A.</b> , ... & Haak, W. (2022). Kinship practices in the early state El Argar society from Bronze Age Iberia. <i>Scientific Reports</i> , 12(1), 1-15.
2022	<b>Childebayeva, A.</b> , Rohrlach, A. B., Barquera, R., Rivollat, M., Aron, F., Szolek, A., ... & Haak, W. (2022). Population Genetics and Signatures of Selection in Early Neolithic European Farmers. <i>Molecular Biology and Evolution</i> , 39(6), msac108.
2022	James J. Yu, Amy L. Non, Erica C. Heinrich, Wanjun Gu, Joseph Alcock, Esteban A. Moya, Elijah S. Lawrence, Michael S. Tift, Katie A. O'Brien, Jay F. Storz, Anthony V. Signore, Jane I. Khudyakov, William K. Milsom, Sean M. Wilson, Cynthia M. Beall, Francisco C. Villafuerte, Tsering Stobdan, Colleen G. Julian, Lorna G. Moore, Mark M. Fuster, Jennifer A. Stokes, Richard Milner, John West, Jiao Zhang, John Y. Shyy, <b>Ainash Childebayeva</b> , José Pablo Vázquez-Medina, Luu V. Pham, Omar A. Mesarwi, James E. Hall, Zachary A. Cheviron, Jeremy Sieker, Arlin B. Blood, Jason X. Yuan, Graham R Scott, Paul J. Pongonis, Atul Malhotra, Frank L.

- Powell, Tatum S. Simonson. (2022). Time Domains of Hypoxia Responses and -Omics Insights. *Frontiers in Physiology*, 1177.
- 2022 He Yu, Marieke S van de Loosdrecht, Marcello A Mannino, Sahra Talamo, Adam B Rohrlach, **Ainash Childebayeva**, ... & Johannes Krause. (2022). Genomic and dietary discontinuities during the Mesolithic and Neolithic in Sicily. *iScience*, 104244.
- 2021 Villalba-Mouco, V., Oliart, C., Rihuete-Herrada, C., **Childebayeva, A.**, Rohrlach, A. B., Fregeiro, M. I., ... & Haak, W. (2021). Genomic transformation and social organization during the Copper Age-Bronze age transition in Southern Iberia. *Science Advances* 7 (47), eabi7038.
- 2021 Rohrlach, A.B., Papac, L., **Childebayeva, A.** et al. Using Y-chromosome capture enrichment to resolve haplogroup H2 shows new evidence for a two-path Neolithic expansion to Western Europe. *Sci Rep* 11, 15005 (2021). <https://doi.org/10.1038/s41598-021-94491-z>
- 2021 **Childebayeva, A.**, Harman, T., Weinstein, J., Day, T., Brutsaert, T. D., & Bigham, A. W. (2021). Genome-Wide DNA Methylation Changes Associated with High-Altitude Acclimatization During an Everest Base Camp Trek. *Frontiers in Physiology*, 12.
- 2021 **Childebayeva, A.**, Goodrich, J. M., Chesterman, N., Leon-Velarde, F., Rivera-Ch, M., Kiyamu, M., ... & Dolinoy, D. C. (2021). Blood lead levels in Peruvian adults are associated with proximity to mining and DNA methylation. *Environment International*, 155, 106587.
- 2021 **Ainash Childebayeva**, Jaclyn M. Goodrich, Fabiola Leon-Valerde, Maria Rivera-Chira, Melisa Kiyamu, Tom D. Brutsaert, and Dana C. Dolinoy, Abigail W. Bigham. Genome-Wide Epigenetic Signatures of Adaptive Developmental Plasticity in the Andes. *Genome Biol Evol.* 2021
- 2020 Khamdiyeva, O.K., Tileulesa, Z.B., Baratzhanova, G.S., Murzataeva, S.S., Khussainova, E.M., Abdikerim, S., **Childebayeva, A.** and Djansugurova, L.D., 2020. Next Generation Sequencing in diagnosis of mitochondrial epilepsy. *International Journal of Biology and Chemistry*, 13(2), pp.53-58.
- 2019 **Ainash Childebayeva**, Taylor Harman, Julien Weinstein, Jaclyn M. Goodrich, Dana C. Dolinoy, Abigail W. Bigham, Tom D. Brutsaert. DNA methylation changes are associated with an incremental ascent to high altitude. *Front Genet.* 10:1062.
- 2019 **Ainash Childebayeva**, Tamara R. Jones, Jaclyn M. Goodrich, Fabiola Leon-Valerde, Maria Rivera-Chira, Melisa Kiyamu, Tom D. Brutsaert, and Dana C. Dolinoy, Abigail W. Bigham. EPAS1 and LINE1 DNA Methylation Signatures of High-Altitude Adaptation in the Andes. *Epigenetics*: 1-15.
- 2016 Non, A., Hollister, B., Humphreys, K., **Childebayeva, A.**, Esteves, K., Zeanah, C., Fox, N., Nelson, C., Drury, S. (2016). DNA methylation at stress-related genes is associated with exposure to early life institutionalization. *American Journal of Physical Anthropology*, 161(1), 84–93.

## **PUBLICATIONS IN PREPARATION/REVIEW**

2023 **Ainash Childebayeva**, Adam Benjamin Rohrlach, Fabian Fricke, Lena Semerau, Franziska Aron, Lei Huang, Vyacheslav Moiseyev, Valery Khartanovich, Sergey Kuzminykh, Igor Kovtun, Johannes Krause, Wolfgang Haak (2023). The Genetic Perspective on the Seima-Turbino Transcultural Phenomenon and the Spread of the Uralic Languages (under review).

## **GRANTS**

2020 Grant financing of fundamental and applied research for scientific projects (Kazakhstan). Paleogenetic analysis of pathogenic microorganisms in human archaeological human remains representing the Central Eurasian region. Awarded. (Co-wrote the grant)

2018 National Geographic Early Career Grant

2017 Wenner-Gren Foundation for Anthropological Research Dissertation Fieldwork Grant: Epigenetic Signatures of High-Altitude Adaptation

2016 National Science Foundation Doctoral Dissertation Improvement Grant: Epigenomics of Andean High-Altitude Adaptation

2016 Leakey Foundation: Franklin Mosher Baldwin Memorial Fellowship, Second-year renewal

2015 Leakey Foundation: Franklin Mosher Baldwin Memorial Fellowship

## **AWARDS and HONORS**

2019 - 2021 Stipend from the Max Planck Institute for the Science of Human History

2019 Outstanding Student Presentation in Anthropological Genetics. 2019 meeting of the American Association of Physical Anthropologists. Cleveland, Ohio

2018 Best poster presentation prize, 8th International Symposium on Biomolecular Archaeology ISBA 2018, Jena, Germany.

2018 Marshall Weinberg Dissertation Writing Award, University of Michigan

2016 Rackham International Research Award, University of Michigan

2015 University of Michigan International Institute Individual Fellowship

2014 First-year Fellowship from the Department of Anthropology, University of Michigan, Ann Arbor, MI

2013 Highest Honors in Anthropology

## **INVITED TALKS**

2022 Epigenetics and high-altitude acclimatization. International Union of Physiological Sciences. Beijing. 11-05-2022. Invited speaker

2021 Epigenetics of High-Altitude Adaptation. XIII World Congress On Mountain Medicine, Interlaken, Switzerland. 16-07-2021.

2020 Leakey Foundation Lunch Break Science Series. 27-08-2020

2020 **Ainash Childebayeva**, Taylor Harman, Julien Weinstein, Jaclyn M. Goodrich, Dana C. Dolinoy, Trevor A. Day, Abigail W. Bigham, Tom Brutsaert. DNA methylation changes are associated with an incremental ascent to high altitude. The 89th Annual Meeting of the American Association of Physical Anthropologists (Los Angeles, CA). Online podium presentation

2020 Epigenetics and High Altitude. University of California, San Diego. 30-04-2020

## SELECTED PRESENTATIONS

2022 How to Apply for a PhD Program/Graduate School. Steppe Sisters Early Career Conference Speaker. Tashkent, Uzbekistan

2022 **Ainash Childebayeva**, Adam Benjamin Rohrlach, Fabian Fricke, Lena Semerau, Franziska Aron, Sergey Kuzminykh, Igor Kovtun, Johannes Krause, Wolfgang Haak. Genetics of the Sejma-Turbino Transcultural Phenomenon and its Connection to the Spread of the Uralic Languages. EMBO | EMBL Symposium: Reconstructing the human past: using ancient and modern genomics. Poster presentation

2018 **Childebayeva, Ainash**, Kelly Harkins, Jannine Novak, Abigail W. Bigham, Tiffany Tung, Martha Cabrera, Jose Ochatoma, and Lars Fehren-Schmitz. aDNA Analysis Indicates Genetic Discontinuity After the Collapse of the Wari Empire. 8th International Symposium on Biomolecular Archaeology ISBA 2018 (Jena, Germany). Poster presentation.

2018 **Childebayeva, Ainash**, Kelly Harkins, Jannine Novak, Abigail W. Bigham, Tiffany Tung, Martha Cabrera, Jose Ochatoma, and Lars Fehren-Schmitz. aDNA Analysis Indicates Genetic Discontinuity After the Collapse of the Wari Empire. The 87th Annual Meeting of the American Association of Physical Anthropologists (Austin, TX). Podium talk.

2017 **Ainash Childebayeva**, Dana C. Dolinoy, Jaclyn M. Goodrich, Maria Rivera-Chira, Fabiola Leon Valerde, Melisa Kiyamu, Tom Brutsaert and Abigail W. Bigham. Genome-wide epigenetic signatures of high-altitude adaptation in Peru. The 86th Annual Meeting of the American Association of Physical Anthropologists (New Orleans, LA). Podium talk.

2016 **Ainash Childebayeva**, Dana C. Dolinoy, Jaclyn M. Goodrich, Abigail W. Bigham. Epigenomic signatures of high-altitude adaptation in the Andes. American Society of Human Genetics 2016 meeting (Vancouver, Canada). Poster.

## TEACHING

2022 2022 AGAR Workshop on Computational Genetics. Instructor

2018 The Ghost in Your Genes: Epigenetics. Designed the course. Primary Instructor

2017 Evolution, Environment, and Global Health. Graduate Student Instructor

2016 Nature/Culture Now! Graduate Student Instructor

2015 Introduction to Biological Anthropology. Graduate Student Instructor

**CERTIFICATIONS**

January, 2017	Advanced Gene Mapping Course, The Rockefeller University, New York
July 4-8, 2016	Complex Trait Analysis of Next Generation Sequence Data, Max Delbrück Center (MDC) for Molecular Medicine, Berlin, Germany

**PROFESSIONAL SERVICE**

2020 – present	Steppe Sisters Network. Steering Committee member
2019 – present	Max Planck Institute Department of Archaeogenetics Ethics Group member
2019	“Epigenetics: bridging biological and cultural anthropology” co-organizer of a symposium for the 2019 annual meeting, American Association of Physical Anthropologists
2019	“Integrating Epigenetic Data with Anthropological Research” workshop co-organizer for AAAG 2019 meeting
2017-2018	Biological Anthropology Sexual Misconduct Policy co-creator, Department of Anthropology, University of Michigan
2016 – 2017	Outreach Committee member, American Association of Anthropological Genetics
2014	Graduate Student Executive Committee Representative, Department of Anthropology, University of Michigan

**PROFESSIONAL MEMBERSHIPS**

American Association of  
Anthropological Genetics  
American Association of  
Physical Anthropologists

**LANGUAGES**

English, Russian, Kazakh,  
Spanish