

Curriculum Vitae

Justin Tackney

Department of Anthropology
University of Kansas
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Education

2008 – 2016 PhD Biological Anthropology, Defended May 4th 2016, University of Utah, Salt Lake City, UT
2006 – 2008 MS Biological Anthropology, University of Utah, Salt Lake City, UT
2000 – 2004 BA Biochemistry and Molecular Biology, BA Classical Civilizations, Boston University, Boston, MA

Appointments

2019 – Present
Associate Researcher & Laboratory Manager, Department of Anthropology, University of Kansas,
Lawrence, KS

2016 – 2019
Postdoctoral Researcher & aDNA Laboratory Manager, Department of Anthropology, University of
Kansas, Lawrence, KS

2008 – 2016
Graduate Research Assistant, Department of Anthropology, University of Utah, Salt Lake City, UT
Major Projects: *Population Genetics of the North American Arctic*
Ancient DNA Mitochondrial Genotyping

2012 – 2015
Technician, Department of Human Genetics, University of Utah, Salt Lake City, UT
Major Projects: *Genotyping of forensic DNA samples*

2009 – 2016
Laboratory Manager, Department of Anthropology, University of Utah, Salt Lake City, UT

2005 – 2006
Research Technician, Department of Biological Sciences, Florida International University, Miami, FL

2004 – 2005
Assay Development Scientist I, Veridex LLC, Warren, NJ

Research Interests

Population and evolutionary genetics, ancient DNA analysis, peopling/migration events, North American Arctic prehistory, Siberian prehistory, forensic DNA analysis, degraded DNA methodologies

Professional Publications

Articles

Crespo CM, Cardozo DG, Tessone A, Vázquez M, Kisielinski C, Arencibia V, **Tackney J**, Zangrando AF, Dejean CB. Distribution of maternal lineages in hunter-gatherer societies of the southern coast of Tierra del Fuego, Argentina. *Am J Phys Anthropol.* 2020; e24107. DOI: 10.1002/ajpa.24107

- Tackney J**, Jensen AM, Kisielinski C, O'Rourke DH. Molecular analysis of an ancient Thule population at Nuvuk, Point Barrow, Alaska. *Am J Phys Anthropol.* 2019 168:303–317. <https://doi.org/10.1002/ajpa.23746>.
- Eisenberg D, **Tackney J**, Cawthon RM, Cloutier CT, Hawkes K. Paternal and grandpaternal ages at conception and descendant telomere lengths in chimpanzees and humans. *Am J Phys Anthropol.* 2017 Feb; 162(2):201-7.
- Coltrain JB, **Tackney J**, O'Rourke DH. Thule whaling at Point Barrow, Alaska: The Nuvuk cemetery stable isotope and radiocarbon record. *J. Arch. Sci:Reports.* 2016 Oct; 9:681-694.
- Tackney J**, Potter BA, Raff J, Powers M, Watkins S, Warner D, Reuther JD, Irish JD, and O'Rourke DH. Two Contemporaneous Mitogenomes from Terminal Pleistocene Burials in Eastern Beringia. *Proc. Natl. Acad. Sci, USA.* 2015. 112(45):13833–13838.
- Raff, JA, Rzhetskaya, MR, **Tackney J**, and Hayes MG. Mitochondrial diversity of Iñupiat peoples from the Alaskan North Slope provides evidence for the origins of the Paleo- and Neo- Eskimo peoples. *Am J Phys Anthropol.* 2015 Aug; 157(4):603-614.
- Tackney J**, Cawthon RM, Coxworth JE, and Hawkes K. Blood cell telomere lengths and shortening rates of chimpanzee and human females. *Am J Hum Bio.* 2014 Mar; 26(4):452-460.
- Raff JA, Bolnick DA, **Tackney J**, O'Rourke DH. Ancient DNA perspectives on American colonization and population history. *Am J Phys Anthropol.* 2011 Dec; 146(4):503-14.
(*One of the five most accessed articles in the American Journal of Physical Anthropology in 2011.*)
- Raff J, **Tackney J**, O'Rourke DH. South from Alaska: A Pilot aDNA Study of Genetic History on the Alaska Peninsula and the Eastern Aleutians. *Hum Biol.* 2010 82(5-6):677-93.

Invited Articles

- Tackney JC**, Raff, JA. A Different Way: Perspectives on Human Genetic Research from the Arctic. *The SAA Archaeological Record.* 2019 March; 19(2):20-25.

Invited Book Chapters

- Tackney J**, Fair E, O'Rourke DH. Molecular Genetic Analysis of the Human Remains from Swift Water Place. In: life at swift water place. 2019. Douglas D. Anderson & Wannu W. Anderson, Editors. University of Alaska Press.
- Tackney JC**. Electrophoresis. In: The International Encyclopedia of Biological Anthropology. 2018. Wenda Trevathan, Editor. John Wiley & Sons, Inc.
- Tackney JC**. Massively parallel sequencing. In: The International Encyclopedia of Biological Anthropology. 2018. Wenda Trevathan, Editor. John Wiley & Sons, Inc.
- Tackney JC**, Coltrain, JB, Raff JA, and O'Rourke DH. Ancient DNA and stable isotopes: Windows on Arctic prehistory. In: Oxford Handbook of Arctic Archaeology. 2016. Max Friesen and Owen Mason, Editors. Oxford University Press.
- Weiss ML and **Tackney J**. An Introduction to Genetics. In: Human Biology: An Evolutionary and Biocultural Perspective, 2nd Edition. 2012. Sara Stinson, Barry Bogin, and Dennis O'Rourke, Editors. Wiley-Blackwell.

Grants Awarded

- 2019 *Genetic analysis of the Upper Paleolithic Badegoule 5 Individual*. National Geographic Society Early Career

Grant. PI \$8,500 (12 mo)

2018 *Ancient Alaskan Origins and Expansion: Re-Aligning Archaeological and Genetic Evidence*. The Research Excellence Initiative, College of Liberal Arts & Sciences, University of Kansas. Co-PI \$12,000 (12 mo)

Field Experience

2008 Nuvuk Archaeological Project, Pt. Barrow, Alaska. Dr. Anne Jensen, Principle Investigator. Assisted in Bioarchaeological excavation for the summer field season.

Professional Service Positions

2012-2016 University of Utah Anthropology Student Advisory Committee (SAC) Chair

Professional Affiliations

American Society of Human Genetics
American Association of Physical Anthropologists
Society for Molecular Biology and Evolution
American Association of Anthropological Genetics

Referee Contributions

American Journal of Physical Anthropology
Molecular Ecology Resources
American Journal of Human Biology
PLOS ONE
BioEssays

Synergistic Activities

1. Participated in a documentary project on the peopling of the Americas for Decouverte, Radio-Canada, Montreal, broadcast in French and English in Canada (2017)
2. Contributed to the undergraduate textbook *Human Biology* (2012), as well as the multidisciplinary *Oxford Handbook of Arctic Archaeology* (2016) and the *International Encyclopedia of Biological Anthropology* volumes (2018)
3. Participated in the bilingual *International Human Migration Conference* in Mexico City, MEX, jointly held by the University of Kansas and the Center for Research and Advanced Studies of the National Polytechnic Institute (CINVESTAV), and which specifically involved undergraduate and graduate researchers from both countries (2017)
4. Twice managed and taught the *Biological Anthropology* section of the *Natural History Museum of Utah Behind the Scenes* annual weekend, where all ages of the public were invited to explore laboratory protocols and ancestry analysis (2011, 2012)

Invited Symposia Contributions

D.H. O'Rourke, **J. Tackney**, L. Norman, and S. Ragsdale
2017 *An Arctic Lens for American Migration: Integrating Genomics, Archaeology and Paleoecology*.
IN: 2nd International Human Migration Conference. Michael H. Crawford and Maria de Lourdes Munoz, organizers.
Mexico City, MEX. October 17-21.

J. Tackney, A.M. Jensen, W.S. Watkins, E. Fair, J. Brenner-Coltrain, D. Anderson and D.H. O'Rourke
2016 *Northern genomes: Ancient mitogenomes and arctic prehistory*.
IN: *Evolutionary Approaches to Bioarchaeology*. J.T. Watson and R.M. Byrd, organizers.

85th Annual Meeting of the American Association of Physical Anthropologists, Atlanta, GA. April 13-16.

J. Tackney, A.M. Jensen, W.S. Watkins, E. Fair, J.B. Coltrain, D. Anderson and D.H. O'Rourke
2016 *Sweet aDNA O'Mine: The Rise and Fall of Ice Sheets and the Arctic Peopling from Beringia*.
IN: Primer of the Ancient Mariner: New Perspectives on aDNA Research and the Prehistoric Colonization of
Islands. J.H. Stone and S.M. Fitzpatrick, organizers.
81st Annual Meeting of the Society for American Archaeology, Orlando, FL. April 7-10.

Stone JH, O'Rourke DH, **Tackney J**, Krigbaum J, Burnett S, and Fitzpatrick SM
2015 *Prehistoric Population Mobility in the Caribbean: Genetic and Isotopic Investigations at Grand Bay, Carriacou, West Indies*
IN: Migration and Mobility in the New World, J.H. Stone and A.M. Offenbecker, organizers.
80th Annual Meeting of the Society for American Archaeology. San Francisco, CA. April 15-19.

Hayes MG, **Tackney J**, Raff J, Rzhetskaya M, O'Rourke DH.
2015 *Current developments in anthropological genetics of the North American Arctic*.
IN: Human Biology, Anthropological Genetics, and Beyond: A Multi-generational Perspective. HBA/AAPA Joint
Poster Symposium in Honor of Michael H. Crawford, W.R. Leonard and D.H. O'Rourke, organizers.
84th Annual Meeting of the American Association of Physical Anthropologists. St. Louis, MO. March 25-28.

JC Tackney, JA Raff, M Rzhetskaya, AM Jensen, DH O'Rourke and MG Hayes
2012 *Ancient and modern genetic diversity of Iñupiat populations from the Alaskan North Slope*.
IN: Innovation, Challenges, and New Directions in Genetic Research with Indigenous Populations, Deborah
Bolnick, organizer. AAAG Symposium.
81th Annual Meeting of the American Association of Physical Anthropologists, Portland, OR. April 11-14.

DH O'Rourke, **J Tackney**, and G Figueiro
2012 *Ancient DNA Perspectives on the Peopling of South America*
IN: Early Man in South America: New Paradigms in Late Pleistocene/Early Holocene Biological Anthropology,
Mark Hubbe and Andre Strauss, organizers.
81th Annual Meeting of the American Association of Physical Anthropologists, Portland, OR. April 11-14.

Dennis H. O'Rourke, **Justin Tackney** and Jennifer Raff
2010 *Ancient DNA insights into American colonization*.
IN: New Developments in the Origins and Evolution of Native American Populations, Jeffrey C. Long and Maria
Cátira Bortolini, organizers.
79th Annual Meeting of the American Association of Physical Anthropologists, Albuquerque, NM. April 14-17

Dennis O'Rourke, **Justin Tackney** and Anne Jensen
2008 *Molecular Analysis of Early Thule at Nuvuk, Pt. Barrow, Alaska*
IN: Ancient DNA for Archaeologists, Dongya Yang, organizer.
73rd Annual Meeting of the Society for American Archaeology, Vancouver, BC. March 26-30.

O'Rourke, DH, E Marchani, and **J Tackney**
2008 *mtDNA Diversity in Prehistoric Inhabitants of the Alaska Peninsula*.
IN: Symposium in honor of Don Dumond, H. Mashner, Organizer.
Alaska Anthropology Association Meetings, Anchorage, AK. February 28 - March 1

Tackney, J. and D.H. O'Rourke
2007 *Molecular Variation and prehistory at Nuvuk, Pt. Barrow, AK*.
IN: Archaeological Investigations at Nuvuk, A. Jensen, organizer.
Alaska Anthropological Meetings, Fairbanks, AK. March 16-17.

Contributed Papers

- Kisielinski C, **Tackney J**, Norman L, O'Rourke DH
2019 *Application of sedaDNA to differentiate between ancient arctic material cultural traditions*.
IN: American Geophysical Union Fall Meeting, San Francisco, CA. December 9-13.
- Kisielinski C, **Tackney J**, O'Rourke DH, Mandel R.
2019 *eDNA analysis at mid-latitude sites for paleoenvironmental reconstruction*.
IN: International Union for Quaternary Research Congress, Dublin, Ireland. Jul 25-31.
- Stone JH, Kisielinski C, **Tackney J**, Fitzpatrick SM, Ting N, and O'Rourke DH
2019 *Exploring population origins and dispersals using ancient DNA at Chelechol ra Orrak*
IN: 88th Annual Meeting of the American Association of Physical Anthropologists, Cleveland, OH. March 27-30.
- Ragsdale SL, Norman LE, **Tackney JC**, O'Rourke DH
2019 *Ancient Genetic Analysis of the Northwest Alaskan Birnirk to Thule Archaeological*
IN: 88th Annual Meeting of the American Association of Physical Anthropologists, Cleveland, OH. March 27-30.
- Alden S, Beaty K, Barrett C, **Tackney J**, Crawford M, O'Rourke D, and Raff J
2019 *Genetic structure of the Unangan population of the Aleutian Islands*
IN: 46th Annual Meeting of the Alaska Anthropological Associations, Nome, AK. February 27th – March 2nd.
- Stone JH, Kisielinski C, **Tackney J**, Fitzpatrick SM, and O'Rourke DH
2018 *New Ancient DNA from Palau Shed Light on Early Micronesian Settlement*
IN: 87th Annual Meeting of the American Association of Physical Anthropologists, Austin, TX. April 10-14.
- Stone J, Kisielinski C, **Tackney J**, and Fitzpatrick S
2016 *Ghost of the Navigator: Tracking Initial Human Population Dispersal to the Palauan Archipelago*.
IN: 81st Annual Meeting of the Society for American Archaeology, Orlando, FL. April 7-10.
- Stone JH, **Tackney J**, O'Rourke DH, Krigbaum J, Fitzpatrick SM, and Nelson GC.
2015 *Ancient DNA and isotopic analyses of human skeletal remains from Chelechol ra Orrak, Republic of Palau*.
IN: 84th Annual Meeting of the American Association of Physical Anthropologists. St. Louis, MO. March 25-28.
- Witherspoon DJ, **Tackney JC**, Parsons TJ, and Jorde LB.
2014 *Relationship detection with high-density SNP genotypes obtained from sub-nanogram amounts of fragmented DNA*.
IN: 64th Annual Meeting of the American Society of Human Genetics. San Diego, CA. October 18-22
- Tackney J**, Jensen AM, Watkins S, Coltrain JB, and O'Rourke DH.
2014 *Full ancient mitochondrial genomes using the Ion Proton platform: Analyzing the genetic diversity of the Neo-Eskimo*.
IN: 63rd Annual Meeting of the American Society of Human Genetics. Boston, MA. October 22-26.
- Hawkes K, **Tackney J**, Coxworth JE, Cawthon RM.
2014 *Telomere lengths and attrition rates in our closest living relatives: A comparison of chimpanzee and human females*
IN: 83rd Annual Meeting of the American Association of Physical Anthropologists. Calgary, Alberta Canada. April 8-12.
- Tackney J**, Jensen AM, Coltrain, JB, and O'Rourke DH.
2014 *Ancient DNA sequencing on the Ion Torrent PGM and Proton Platforms: Genetic diversity of haplotype D4b1a2a1a at Nuvuk, an ancient Thule Village*
IN: 83rd Annual Meeting of the American Association of Physical Anthropologists. Calgary, Alberta Canada. April 8-12.
- Tackney JC**, Witherspoon DJ, and Jorde LB.

2013 *Successful Illumina Infinium Beadchip high-density genotyping from fragmented and low concentration samples.*

IN: 63rd Annual Meeting of the American Society of Human Genetics. Boston, MA. October 22-26.

Witherspoon DJ, **Tackney J**, Parsons TJ, and Jorde LB.

2013 *High-confidence detection of distant relationships using high-density SNP genotypes obtained from small amounts of degraded DNA*

IN: 25th International Congress of the International Society for Forensic Genetics. Melbourne, Australia. September 2-7.

Raff JA, **Tackney JC**, Rzhetskaya MR, and Hayes MG.

2012 *Analysis of whole mitochondrial genomes from Inupiat populations of the Alaskan North Slope.*

IN: 62nd Annual Meeting of the American Society of Human Genetics. San Francisco, CA. November 6-10.

Tackney J, Jensen AM, Raff JA, Hayes MG, and O'Rourke DH.

2012 *Ancient Genetic Diversity of the Thule at Nuvuk, Point Barrow, Alaska*

IN: 18th Inuit Studies Conference. Washington, D.C. October 24-28

Raff, JA, Rzhetskaya, MR, **Tackney, JC**, O'Rourke, D.H., and Hayes, M.G.

2012 *Mitochondrial and Y-chromosome diversity in Inupiat populations of the Alaskan North Slope: Implications for North American Arctic prehistory.*

IN: 18th Inuit Studies Conference. Washington, D.C. October 24-28

Raff, JA, Rzhetskaya, MR, **Tackney, JC**, O'Rourke, D. H., and Hayes MG

2012 *Human migrations in the Arctic: Mitochondrial DNA evidence for the origins of the Paleo- and Neo- Eskimo peoples.*

IN: 39th Annual Conference of the Alaskan Anthropological Association. Seattle, WA. February 29-March 3.

J Tackney, JA Raff, M Rzhetskaya, DH O'Rourke, MG Hayes

2011 *Ancient and modern genetic diversity of Inupiat populations from the Alaskan North Slope: insights into Paleo- and Neo-Eskimo origins*

IN: Comparing Ancient and Modern DNA Variability in Human Populations: 5th Conference of DNA Polymorphisms in Human Populations, Porto, Portugal. November 23-25.

JC Tackney, JA Raff, JB Contrain, A.M. Jensen, D.H. O'Rourke

2011 *Molecular analysis of an ancient Thule population at Point Barrow, Alaska.*

IN: 12th International Congress of Human Genetics, Montreal, Canada. October 11-15

Justin Tackney, Anne M Jensen, Jennifer A Raff and Dennis H O'Rourke

2011 *Ancient mtDNA analysis at Nuvuk, an ancient Thule village at Point Barrow, Alaska.*

IN: 80th Annual Meeting of the American Association of Physical Anthropologists, Minneapolis, MN. April 12-16

Jennifer Raff, **Justin Tackney** and Dennis H. O'Rourke

2011 *South from Alaska: an aDNA study of the genetic history of the Alaska peninsula and eastern Aleutians.*

IN: 80th Annual Meeting of the American Association of Physical Anthropologists, Minneapolis, MN. April 12-16

Justin Tackney, Joan Brenner Coltrain, Jennifer A. Raff, Anne M. Jensen, Dennis H. O'Rourke

2010 *Ancient mtDNA analysis at Nuvuk: An ancient Thule village at Point Barrow, AK.*

IN: 18th Arctic Conference, Bryn Mawr, PA. Nov 12-13

Tackney, Justin and O'Rourke, Dennis H

2009 *Molecular Genetic Analysis at Nuvuk: Further Insights into Thule Diversity and Dispersal*

IN: 17th Arctic Conference, Boulder, CO November 13-14.

Tackney, J, Anne Jensen and DH O'Rourke

2007 *Molecular Variation of Prehistoric Thule at Nuvuk, Pt. Barrow, AK.*

IN: 15th Arctic Conference at Idaho State University, Pocatello, Idaho. November 1-3.

Student Committee Participation

UTAH

Student	Degree	Year	Role
Ellie Fair	Ph.D.	Current	Committee member

Mentoring Experience

I have trained individuals in laboratory methods and data analysis. These sessions have varied from between 3-6 week dedicated blocs for visiting researchers, to continuous multi-year long mentoring relationships. Over the course of my career, I have trained 8 undergraduate students, 18 graduate students, and 5 postdoctoral researchers in one or more of the above skills.

Campus and Departmental Talks

“Peopling of the Americas: The late Pleistocene dispersal” Department of Anthropology, University of Utah. 2010

“Using ancient DNA to study the genetic diversity of the past” Department of Anthropology, University of Utah. 2014

“Genes and their Evolution” Department of Anthropology, University of Utah. 2015

“The Modern Evolutionary Synthesis” Department of Anthropology, University of Utah. 2015

“Human Variation and Adaptation” Department of Anthropology, University of Utah. 2015

“The Arctic Migration History and Adaptation of Native Americans” Department of Anthropology, University of Utah. 2016

“Population Genetics: The Modern Evolutionary Synthesis” Department of Anthropology, University of Kansas. 2016

“Arctic Migrations from Beringia” Department of Anthropology, University of Kansas. 2017

“Molecular Anthropology: What we do, How we do it, and What we know about the initial human migrations into the Americas” Department of Anthropology, University of Kansas. 2017

“The Human Migrations into North and South America” Department of Anthropology, University of Kansas. 2017

Media Coverage

Appearances on documentaries, radio, and podcasts

3/27/17 “Les premiers Canadiens” Decouverte, Radio-Canada, Montreal (A Documentary Film)

10/26/15 KUTV Report (A Utah CBS-affiliated television station report)

Appearances in print news articles

Arctic Today (1/21/19), Live Science (8/9/18, 10/10/16, 10/26/15), The Guardian (1/3/18), Phys.org (10/19/16), History Channel (10/29/15), The Scientist (10/28/15), Smithsonian Mag (10/28/15), Alaska Native News (10/28/15), The Christian Science Monitor (10/27/15), Ancient-Origins.net (10/27/15), NWR (10/27/15), The Washington Post (10/27/15), Forbes (10/27/15), The Salt Lake Tribune (10/26/15), The New York Times (10/26/15), The Salt Lake City Tribune (10/26/15), Science 2.0 (10/26/15), KU Today (10/26/15), University of Utah News (10/26/15), Science Magazine (10/26/15)