Cristina M. Gildee, Ph.D.

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Education

Ph.D., Biological Anthropology, 2025
University of Washington, Seattle, WA
Dissertation: *Bone Functional Adaptation: Life History Constraints and Implications for Aging Research*
Committee: Dr. Patricia Ann Kramer (chair), Dr. Melanie Martin, and Dr. Dan T.A. Eisenberg

M.A., Biological Anthropology, 2021
University of Washington, Seattle, WA

B.S., Biological Anthropology, 2019
Human Evolutionary Biology; Medical Anthropology & Global Health
University of Washington, Seattle, WA

A.A., 2016
Green River College, Auburn, WA

Academic Appointments

Postdoctoral Scholar-Fellow (August 2025-present; renewed through August 2027)
Biological Mechanisms of Healthy Aging Program (NIH/NIA T32 AG066574)
Department of Anthropology, University of Washington
Co-Advisors: Dr. Patricia Ann Kramer and Dr. Melanie Martin
Additional support from the Jerome H. Debs II Endowed Chair in Orthopaedic Traumatology

Adjunct Faculty (Autumn 2025-present)
Anthropology, Green River College, Auburn, WA

Postdoctoral Lecturer (Part-Time) (Autumn 2025)
Department of Anthropology, University of Washington

Research Experience

Co-Lead, BMHA Trainee Pilot Project (2026-present)
Telomere Length in the Vietnam Health and Aging Study (VHAS)
Eisenberg Molecular Anthropology Lab, University of Washington
With Dr. Robert Tennyson (co-lead); Faculty Supervisors: Dr. Dan T.A. Eisenberg and Dr. Tiffany Pan

Pre-Doctoral Research Associate (2022-2025)
Biological Mechanisms of Healthy Aging Program (NIH/NIA T32 AG066574)
Department of Anthropology, University of Washington
Principal Investigator: Dr. Patricia Ann Kramer

Graduate Research Assistant (2022-2023)
Sleep and Homelessness Project, University of Washington
Principal Investigators: Dr. Horacio de la Iglesia, Dr. Melanie Martin, Dr. Zack Almquist
Funded by the UW Population Health Initiative Tier 1 Pilot Research Grant

Graduate Research Assistant (2021-2022)
Department of Orthopaedics and Sports Medicine, University of Washington
Principal Investigator: Dr. Patricia Ann Kramer
Funded by the Jerome H. Debs II Endowed Chair Fellowship

Graduate Research Assistant (2019-2021)
Primate Evolutionary Biomechanics Laboratory (PEBL), University of Washington
Principal Investigator: Dr. Patricia Ann Kramer
Funded in part by the Graduate Student Equity & Excellence Fellowship

Undergraduate Research Assistant (2018-2019)
Primate Evolutionary Biomechanics Laboratory (PEBL) and Harborview Foot and Ankle Clinic, University of Washington
Principal Investigator: Dr. Patricia Ann Kramer

Publications (peer-reviewed)

∗ = undergraduate or graduate mentee; † = equal contribution

Gildee, C.M.,† & Kramer, P.A.† (2026). Testing the limits: the impact of extreme functional hip width on the muscular demands of walking. *Biology Open*, 15, bio062747. doi.org/10.1242/bio.062747

Gildee, C.M., & Kramer, P.A. (2025). Bone mineral density variation across anatomical regions: Insights from the National Health and Nutrition Examination Survey. *American Journal of Biological Anthropology*, 187(4), e70103. doi.org/10.1002/ajpa.70103

Gildee, C.M., & Kramer, P.A. (2025). Association between parity and bone mineral density in the National Health and Nutrition Examination Survey. *American Journal of Human Biology*, 37(3), e70030. doi.org/10.1002/ajhb.70030

Manuscripts Submitted and in Preparation

Hinton, H.M.,∗ **Gildee, C.M.**, Garcia, A.R., Trumble, B.C., Gurven, M., & Martin, M.A. (*revised and resubmitted*). Developmental patterns of fecal neopterin among Tsimane infants. *American Journal of Human Biology*.

Rice, A., Casiraghi, L.P., Rodríguez Ferrante, G., Kahn, J., **Gildee, C.**, Almquist, Z.W., Hagopian, A., Martin, M.A., & de la Iglesia, H.O. (*revised and resubmitted*). Actigraphy-based objective sleep profiles in people experiencing homelessness under different conditions and seasons. *SLEEP*. Preprint: doi.org/10.1101/2025.01.23.634551

Gildee, C.M., Harper, C.M., & Kramer, P.A. (*in preparation; submission November 2026*). Muscle forces in a Neandertal-like hip and femur. *American Journal of Biological Anthropology*.

Gildee, C.M., Watowich, M.M., Holowka, N.B., Lim, Y.A.L., Stieglitz, J., Trumble, B.C., Lea, A.J., Ayroles, J.F., Kraft, T.S., Kaplan, H., Gurven, M., Venkataraman, V.V., & Wallace, I.J. (*in preparation*). Parity and bone status across three subsistence populations with natural fertility. *Bone*.

Gildee, C.M., Tennyson, R.L., & Eisenberg, D.T.A. (*in preparation*). Telomere length and bone remodeling: Implications for aging research. *American Journal of Human Biology*.

Tennyson, R.L., Nanda, A.N.,∗ **Gildee, C.M.**, Rainsberger, K.,∗ & Eisenberg, D.T.A. (*in preparation*). Physical activity moderates the association between childhood psychosocial stress and adult telomere length in NCAA student-athletes and non-athlete college students. Preregistration and results: osf.io/s2cuj

Teaching Experience

As Instructor of Record, designed and taught each course as sole instructor.

Instructor of Record - ANTH& 236: Forensic Anthropology
Green River College, Auburn, WA (Winter 2027, scheduled)

Instructor of Record - ANTH& 205: Biological Anthropology
Green River College, Auburn, WA (every quarter, Winter 2026-Autumn 2026, including Summer; Winter 2027, scheduled) ~30 students per section

Instructor of Record - ANTH& 100: Survey of Anthropology
Green River College, Auburn, WA (every quarter, Autumn 2025-Autumn 2026, including Summer) ~30 students per section

Instructor of Record - BIO A 469: Human Skeletal Adaptation: Implications for Health & Aging
University of Washington, Seattle (Autumn 2025) ~30 students

Teaching Associate - BIOL 310: Survey of Human Anatomy
University of Washington, Seattle (Autumn 2022)
Instructor: Dr. Casey Self
Designed and facilitated weekly cadaver-based lab sessions; developed lab assignments and exam questions. ~40 students.

Teaching Assistant - BIO A 201: Principles of Biological Anthropology
University of Washington, Seattle (Autumn 2021)
Instructor: Dr. Andrea Duncan
Designed and facilitated weekly lab sessions; developed and graded lab assignments and exam questions. ~100 students.

Teaching Assistant - BIO A 355/BIOL 385: Evolutionary Medicine and Public Health
University of Washington, Seattle (Spring 2021)
Instructor: Dr. Dan T.A. Eisenberg
Facilitated weekly online reading-group discussions; helped develop exam questions; graded all assignments and exams. ~100 students.

Teaching Assistant - BIO A 344: Applied Biomechanics of Human Movement
University of Washington, Seattle (Winter 2021)
Instructor: Dr. Patricia Ann Kramer
Facilitated weekly online lab sessions; reviewed and graded lab assignments and exams. ~30 students.

Teaching Assistant - BIO A 454/455: Laboratory Methods in Hormones and Behavior
University of Washington, Seattle (Autumn 2020)
Instructor: Dr. Melanie Martin
Facilitated weekly online lab sessions; reviewed and graded all lab assignments and exams. ~30 students.

Invited Talks

- **Gildee, C.M.** (2025). "Anthropological insights into skeletal aging: Leveraging human diversity for geroscience." Invited podium presentation, Annual George M. Martin Memorial Geroscience Symposium, Nathan Shock Center, University of Washington, Seattle, WA.
- **Gildee, C.M.** (2025). "Anthropological insights into skeletal aging: Leveraging human diversity for geroscience." Invited lecture, ANTH 534: Current Issues in Medical Anthropology & Global Health, University of Washington, Seattle, WA.

Conference Presentations

$*$ = *undergraduate or graduate mentee*

- **Gildee, C.M.**, Harper, C.M., & Kramer, P.A. (2027). "Muscle and joint reaction forces in a Neandertal-like pelvis and femur." Abstract submitted to the Annual Meeting of the American Association of Biological Anthropologists, Philadelphia, PA.
- **Gildee, C.M.**, Watowich, M.M., Holowka, N.B., Lim, Y.A.L., Stieglitz, J., Trumble, B.C., Lea, A.J., Ayroles, J.F., Kraft, T.S., Kaplan, H., Gurven, M., Venkataraman, V.V., & Wallace, I.J. (2027). "Parity and bone status across three subsistence populations with natural fertility." Abstract submitted to the Annual Meeting of the Human Biology Association, Philadelphia, PA.
- **Gildee, C.M.**, Tennyson, R.L., Pan, T.D., & Eisenberg, D.T.A. (2026). "Telomere length and the Vietnam Health and Aging Study." Poster presentation, George M. Martin Memorial Geroscience Symposium, Nathan Shock Center, University of Washington, Seattle, WA.
- **Gildee, C.M.**, Harward, A.,$*$ & Kramer, P.A. (2026). "Pelvic tilt effects on hip forces in musculoskeletal modeling." Poster presentation at the Annual Meeting of the American Association of Biological Anthropologists, Denver, CO.

- Kramer, P.A., & **Gildee, C.M.** (2026). "Testing the limits: the impact of extreme functional hip width on the muscular demands of walking." Poster presentation at the Annual Meeting of the American Association of Biological Anthropologists, Denver, CO.
- **Gildee, C.M.** (2026). "Anthropological insights into skeletal aging: Leveraging human diversity for geroscience." Podium presentation, 9th Annual Northwest Evolution, Ecology, and Human Behavior Symposium (NWEEHB9), Pack Forest Conference Center, Eatonville, WA.
- **Gildee, C.M.**, & Kramer, P.A. (2025). "Racialized group and lifestyle differences predict fracture risk similarly to bone mineral density." Accepted poster, Annual Meeting of the American Association of Biological Anthropologists, Baltimore, MD (not presented).
- **Gildee, C.M.**, & Kramer, P.A. (2024). "Association between parity and bone mineral density in NHANES." Flash talk at the Annual Meeting of the Human Biology Association, Los Angeles, CA.
- **Gildee, C.M.**, & Kramer, P.A. (2024). "Differences in regional bone mineral density with age in NHANES." Podium presentation at the Annual Meeting of the American Association of Biological Anthropologists, Los Angeles, CA.
- Hinton, H.,∗ **Gildee, C.M.**, Rice, A., Almquist, Z., Hagopian, A., de la Iglesia, H., & Martin, M.A. (2024). "Health markers among people experiencing homelessness." Poster presentation at the Annual Meeting of the American Association of Biological Anthropologists, Los Angeles, CA.
- **Gildee, C.M.**, Martin, M.A., Tennyson, R.L., Brindle, E., & Pan, T.D. (2023). "Does pre-analytical variation in dried blood spot collection impact C-reactive protein measurement?" Poster presentation at the Annual Meeting of the Human Biology Association, Reno, NV.
- Hinton, H.,∗ **Gildee, C.M.**, Garcia, A., Trumble, B., Gurven, M., & Martin, M.A. (2023). "Tsimane fecal neopterin levels decline during infancy." Poster presentation at the Annual Meeting of the American Association of Biological Anthropologists, Reno, NV.
- **Gildee, C.M.**, Hammerberg, A.G., & Kramer, P.A. (2022). "Ground reaction force and contact time improve energetic expenditure prediction." Poster presentation at the Annual Meeting of the American Association of Biological Anthropologists, Denver, CO.
- **Gildee, C.M.**, Ochoa, M., Zaehringer, H., Feuerriegel, E.M., & Kramer, P.A. (2020). "Ankle kinematics during bipedal incline walking with burden." Accepted presentation, Annual Meeting of the American Association of Physical Anthropologists, Los Angeles, CA (meeting canceled).
- **Gildee, C.M.**, Feuerriegel, E.M., Rajopadhye, K., & Kramer, P.A. (2019). "Reliability of goniometer measurements to determine ankle dorsiflexion: Implications for assessment of gastrocnemius equinus." Poster presentation at the Annual Meeting of the American Association of Physical Anthropologists, Cleveland, OH.

Fellowships

Postdoctoral Fellowship (2025-present)

Biological Mechanisms of Healthy Aging Program (NIH/NIA T32 AG066574), Department of Anthropology, University of Washington

Pre-Doctoral Traineeship (2023-2025)
Biological Mechanisms of Healthy Aging Program (NIH/NIA T32 AG066574)
Department of Anthropology, University of Washington

Pre-Doctoral Training Fellowship (2023-2025)
Jerome H. Debs II Endowed Chair in Orthopaedic Traumatology
Department of Orthopaedics, University of Washington

Graduate Student Equity and Excellence (GSEE) Fellowship (2019-2020)
University of Washington

Grants and Awards

BMHA Trainee Pilot Project Award (2026) - $5,000
Role: Co-Lead (with Dr. Robert Tennyson)
Biological Mechanisms of Healthy Aging Program and UW Nathan Shock Center, Department of Laboratory Medicine and Pathology, University of Washington

College of Arts and Sciences Dean's Graduate Medal (2025)
University of Washington

Graduate School Medal, Nominee (2025)
University of Washington

Graduate and Professional Student Senate Travel Award (2022, 2023)
University of Washington

Pre-Dissertation Pilot Research Award (2021-2022) - $3,428
"A Variable Terrain Treadmill: Development and Validation"
Department of Anthropology, University of Washington

Student Technology Award (2021) - $9,301
"Primate Evolutionary Biomechanics Lab Computing Refresh"
Student Technology Fee (STF), University of Washington

Provost's Ph.D. Fellowship Grant (2020-2021) - $10,000
University of Washington

Student Technology Award (2019) - $29,044
"Updating and Expanding 3D Scanning and Printing Capabilities"
Student Technology Fee (STF), University of Washington

Eck Student Support Grant (2019) - $5,000
Department of Anthropology, University of Washington

Committee on Diversity Undergraduate Research Symposium Travel Award (2019) - $500
American Association of Biological Anthropologists

Academic Excellence Award (2018-2019) - $8,000
University of Washington

Mentorship

∗ = co-authored presentation or publication

Current Mentees

VHAS Telomere Project Trainees (2026-present). Nine undergraduate and recent-graduate students co-mentored with Dr. Robert Tennyson in the Eisenberg Molecular Anthropology Lab, University of Washington. Funded by a BMHA Trainee Pilot Project Award. Training covers assay workflow, quality control, data management, and hypothesis development with cohort data. At least four trainees are preparing abstracts for the 2027 UW Mary Gates Undergraduate Research Symposium and the AABA Committee on Diversity Undergraduate Research Symposium (2027). Trainees include:

- **Kaila Buchanan**, B.S., Anthropology (Human Evolutionary Biology), University of Washington (2026); currently Lab Assistant, Think Fertility USA
- **Addie Lomax**, B.A., Human Evolutionary Biology and Psychology, University of Washington (2026)
- **Elena-Genevieve Harris**, B.A., Anthropology (Medical Anthropology & Global Health), University of Washington (2025)

Abigail Harward∗, Ph.D. Candidate, Biological Anthropology, University of Washington (2024-present). *Pelvic tilt and hip forces in musculoskeletal modeling.* A.A., Green River College.

Tessa Herbert, Graduate Student, Primate Evolutionary Biomechanics Lab, University of Washington (2026-present). *Student lead on a Student Technology Fee grant proposal for a portable bone densitometer.*

Ammon Thompson, A.A. student, Green River College (expected 2027) (2025-present). *Bone health and aging among Latter-day Saint (LDS) men.*

Kenwyn Smith, A.A. student, Green River College (expected 2027) (2026-present). *Neandertal lower limb morphology and environmental adaptation.*

Former Mentees

Hannah M. Hinton∗, B.S., Anthropology (Human Evolutionary Biology), University of Washington (2023). *Fecal neopterin and infant growth among the Tsimane.* NSF Graduate Research Fellowship (awarded 2025). Now, Graduate Student, MRes in Biomedical Research, Imperial College London.

Lyle Shineman, A.A., Green River College (2026). Now: Sociology major, University of Washington.

Isabel Wiebe, B.S., Anthropology (Human Evolutionary Biology), University of Washington (2023). Now: Research Technician, Washington National Primate Research Center.

Service

Frontiers in Public Health (2026)
Ad hoc Reviewer

Committee on Diversity Undergraduate Research Symposium (COD-URS) (2026)
American Association of Biological Anthropologists
Poster Mentor

Student Reception, Annual Meeting of the Human Biology Association (2026)
Table Co-Lead, Science Communication

Interdisciplinary Directives for Excellence in Anthropological Studies (IDEAS) Committee,
Formerly the Diversity Committee (2021-2026)
Department of Anthropology, University of Washington
Postdoctoral Member and Biological Anthropology Representative (2025-2026)
Graduate Student Member and Biological Anthropology Representative (2021-2025)

Human Biology of Stress and Sports Research Team (2020-present)
Graduate and Postdoctoral Mentor

Biological Anthropology Graduate Student Representative (2024-2025)
Department of Anthropology, University of Washington

Biological Anthropology Tenure-Track Faculty Search Committee (2023-2024)
Department of Anthropology, University of Washington
Graduate Student Member

Transfer Student Event (September 2021)
University of Washington
Graduate Student Guide

Harborview Foot and Ankle Clinic (2018)
University of Washington Medical Center
Volunteer Researcher; Supervisor: Kalyani Rajopadhye, P.T., M.H.S., O.C.S.

Science Communication and Outreach

The Sausage of Science Podcast (2022-present)
Human Biology Association
Co-host and trainer of incoming Junior Service Fellows and production team members (2025-present); Co-producer and Public Relations Committee Service Fellow (2022-2025)

Research Skills

Field and study design: human-subjects study design and IRB protocol development; survey data collection; point-of-care biomarker measures; dried blood spot (DBS) collection
Laboratory methods: telomere length by monochrome multiplex qPCR, including DNA sample preparation, high-throughput plate setup, thermocycling, quality control, and reliability analysis; C-reactive protein (CRP) assay; biospecimen handling, sample tracking, and laboratory data management
Biomechanics and modeling: motion capture and force-plate data; subject-specific musculoskeletal modeling and inverse dynamics (AnyBody Modeling System); landmark-based morphing of skeletal models toward fossil hominin morphology; muscle metabolic energy models; statistical parametric mapping
Statistical analysis: large national survey data (NHANES, $n > 12{,}000$); multiple linear regression with sequential adjustment; interaction models, restricted cubic splines, and joint Wald tests; heteroskedasticity-robust estimation; linear mixed-effects models with random intercepts; SPM ANOVA; multiple-comparison correction
Software: Stata; MATLAB; AnyBody Modeling System
Data resources: NHANES; Tsimane Health and Life History Project; Turkana Health and Genomics Project; Orang Asli Health and Lifeways Project; Vietnam Health and Aging Study

Languages

English (fluent); Spanish (non-fluent); German (non-fluent)

Memberships

- American Association of Biological Anthropologists (AABA)
- Human Biology Association (HBA)
- American Anthropological Association (AAA)
- American Aging Association (AGE)
- Association for Feminist Anthropology
- Association of Black Anthropologists
- International Union, United Automobile, Aerospace and Agricultural Implement Workers of America (UAW Local 4121)