

Elizabeth Okrutny Cho, PhD

Curriculum Vitae

Center for Anatomical Sciences, Univ. of North Texas Health Science Center
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EDUCATION

- 2022 University of Missouri
Doctor of Philosophy, Anthropology
Committee: Dr. Libby Cowgill (Advisor), Dr. Gregory Blomquist, Dr. Karthik Panchanathan, and Dr. Kevin Middleton
Dissertation: *The influence of climate and population structure on East Asian skeletal morphological variation*
- 2012 University of Central Florida
Master of Arts, Anthropology
Advisor: Dr. Tosha Dupras
Thesis: *Postcranial osteometric assessment of Korean ancestry*
- 2010 Ohio Northern University
Bachelor of Science with High Distinction, Forensic Biology
Minors in Chemistry and Biochemistry
Advisor: Dr. Dennis De Luca

PROFESSIONAL APPOINTMENTS

- 2022-pres. Adjunct Instructor of Anatomy
Center for Anatomical Sciences, University of North Texas Health Science Center,
Fort Worth, TX
- 2021-pres. Research Associate/Postdoctoral Researcher
Center for Anatomical Sciences, University of North Texas Health Science Center,
Fort Worth, TX
- 2020-2021 Senior Biological Anthropologist
Museum of Anthropology, University of Missouri, Columbia, MO
- 2017-2018 Biological Anthropologist
Museum of Anthropology, University of Missouri, Columbia, MO

- 2014-2015 Alternate Evidence Coordinator
Joint POW/MIA Accounting Command Central Identification Laboratory, Honolulu,
HI
- 2013-2015 K208 DNA Coordinator
Joint POW/MIA Accounting Command Central Identification Laboratory, Honolulu,
HI
- 2012-2015 Forensic Anthropologist
Joint POW/MIA Accounting Command Central Identification Laboratory, Honolulu,
HI
Project: K208 (Korean War) commingled skeletal assemblage

RESEARCH GRANTS

- 2022 Climatic adaptation and the human nose: An experimental investigation in living humans. National Science Foundation (SBE – Postdoctoral Research Fellowship Program, #2203808). **E.O. Cho**, Principal Investigator; S.D. Maddux, C. Ocobock, B. Dennis, Co-Sponsors. \$138,000.00.
- 2019 Doctoral Dissertation Research: Influence of environment and population structure on human skeletal variation. National Science Foundation (Biological Anthropology Doctoral Dissertation Research Improvement Grant, #1847486). L.W. Cowgill, Principal Investigator; **E.O. Cho**, Co-Principal Investigator. \$23,814.
- 2018 Influence of climate and population structure on morphological variation of Asian body form. Wenner-Gren Foundation (Dissertation Fieldwork Grant, #9693). **E.O. Cho**, Principal Investigator. \$20,000.

PUBLICATIONS

- 2022 **Cho EO**, Cowgill LW, Middleton KM, Blomquist GE, Savoldi F, Tsoi J, and Bornstein MM. The influence of climate and population structure on East Asian skeletal morphology. *Journal of Human Evolution*, 173, 103268.
- 2019 **Cho EO**. Sex estimation of East Asian individuals using bones of the hands and feet. *Forensic Anthropology*, 2(4), 261-273.
- 2014 Jin J, Burch A, LeGarde C, and **Okrutny E**. The Korea 208: A large-scale commingling case of American remains from the Korean War. In: Adams BJ and Byrd JE, editors. *Commingled Human Remains: Methods in Recovery, Analysis, and Identification*. Academic Press. p 407-424.

- In prep* **Cho EO**, Butaric LN, and Maddux SD. One of these is not like the others: Re-evaluating nasal morphological variation and the association of nasal projection with climate. *American Journal of Biological Anthropology*.
- In prep* McCullough JD, Ward L, **Cho EO**, and Maddux SD. Investigating associations between asthma and nasal abnormalities: A computed tomography (CT) approach. *Clinical Anatomy*.
- In prep* **Cho EO**, Cowgill LW, Savoldi F, Tsoi J, and Bornstein MM. Sexual dimorphism, body size, and climate: An evaluation of variation within and among East Asian populations. *American Journal of Biological Anthropology*.

PUBLISHED ABSTRACTS

- 2022 **Cho EO**, Cowgill LW, and Blomquist GE. The impact of precipitation and humidity on East Asian skeletal variation. *American Journal of Biological Anthropology*, 177(S73): 31.
- 2021 **Cho EO**, Cowgill LW, Blomquist GE, and Middleton KM. The influence of climate and population structure on East Asian skeletal morphology. *American Journal of Physical Anthropology*, 174(S71): 18.
- 2020 **Cho EO** and Cowgill LW. Pelvic variation and sexual dimorphism in East Asian populations. *American Journal of Physical Anthropology*, 171(S69): 51.
- 2018 **Cho EO**, Blomquist GE, and Cowgill LW. Multivariate selection on human size and shape in East Asia. *American Journal of Physical Anthropology*, 165(S66): 48.
- 2017 **Cho EO**, Nalley TK, Middleton ER, and Ward CV. Assessment of the thoracolumbar transition in modern humans. *American Journal of Physical Anthropology*, 162(S64): 142-143.
- 2013 Burch A, Jin J, LeGarde C, and **Okrutny E**. Don't be fooled by taphonomy. Abstracts of the 78th Annual Meeting of the Society for American Archaeology, 84.
- 2013 **Okrutny E** and Byrd JE. Postcranial osteometric assessment of Korean ancestry. *Proceedings of the American Academy of Forensic Sciences*, 49: 422.
- 2012 **Okrutny E**, Byrd JE, and Jin J. Ancestry and the osteometric assessment of the femur. *American Journal of Physical Anthropology*, 147(S54): 229.
- 2011 Minetz JA, Lanning BI, Puzzuto K, and **Okrutny E**. Osteometric assessment of the vertebral column. *Proceedings of the American Academy of Forensic Sciences*, 17.

LOCAL CONFERENCE PRESENTATIONS

- 2022 **Cho EO**, Cowgill LW, and Blomquist GE. Skeletal variation in East Asian populations: Evaluating the influence of precipitation and humidity. Texas Association of Biological Anthropologists (TABA) Conference, Austin, TX. November 12.
- 2022 McCullough JD, Ward L, **Cho E**, and Maddux S. Investigating associations between asthma and nasal abnormalities: A computed tomography (CT) approach. American College of Osteopathic Surgeons Medical Student Section Fall Conference, Austin, TX. September 16-17.
- 2022 Loreda A, Oliver H, Ward L, **Cho EO**, and Maddux S. Assessing covariation of neurocranial and nasal morphology in relation to climate. SRIP Research Appreciation Day, UNTHSC. July 14.
- 2022 Oliver H, Loreda A, Ward L, **Cho E**, and Maddux S. Ecogeographic variation in neurocranial anatomy: Implications for climatic adaptation in brain size and shape. SRIP Research Appreciation Day, UNTHSC. July 14.
- 2022 **Cho EO**, Cowgill LW, and Blomquist GE. The influence of humidity and precipitation on skeletal morphological variation in East Asia. Research Appreciation Day, UNTHSC. March 21-25.

RESEARCH AWARDS AND FELLOWSHIPS

- 2021 Mildred Trotter Prize, American Association of Physical Anthropologists – for outstanding presentation on bones or teeth (\$500)
- 2018 Dorothy (Dot) Tompkins Gelvin PhD Memorial Scholarship, Department of Anthropology, University of Missouri (\$1,500)
- 2015-2019 Life Sciences Fellowship, University of Missouri (\$25,000/year)
- 2012-2015 Oak Ridge Institute for Science and Education (ORISE) Post-Master’s Fellowship

RESEARCH STUDENT MENTORSHIP

- 2022 PhD students
- Alexa Kelly, PhD student (UNTHSC)
 - Lyndee Ward, PhD student (UNTHSC)
 - Baonhu Tran, PhD student (UNTHSC)
- 2022 Medical students
- Jason “Drew” McCullough, osteopathic medical student (UNTHSC)
- 2022 Undergraduate students
- Alyssa Loreda, SOAR student (Texas State University)
 - Hannah Oliver, SOAR student (Stony Brook University)

ANATOMY TEACHING EXPERIENCE

- 2023 Center for Anatomical Sciences, University of North Texas HSC
- Gross Anatomy Lectures:
- Pelvis (1 hour DSA: pelvis - musculoskeletal) – TCOM
 - Pelvis (1 hour DSA: pelvis - shared internal structures) – TCOM
 - Pelvis (3 hour DSA: pelvis – reproductive anatomy) – TCOM
 - Pelvis (2 hour MLM: reproductive anatomy) – TCOM
- Gross Anatomy Cadaver Labs:
- Reproductive system (3 Labs) – TCOM
- 2022 Center for Anatomical Sciences, University of North Texas HSC
- Gross Anatomy Lectures:
- Deep Back (1 hour DSA: bones and joints) – MS Medical Science
 - Deep Back (1 hour DSA: nerves and muscles) – MS Medical Science
 - Neuroanatomy (1.5 hour lecture: brain) – JAMP
 - Upper Limb (2 hour lecture: Brachial Plexus) – Physical Therapy (pre-matriculation)
 - Cardiopulmonary (2 hour lecture: Heart) – Physician Assistant (pre-matriculation)
- Gross Anatomy Cadaver Labs:
- Reproductive system (3 Labs) – TCOM
 - Brachial plexus – Texas Christian University CRNA
 - Posterior mediastinum – Texas Christian University CRNA
 - Brain – Joint Admission Medical Program (JAMP)
 - Cardiopulmonary system (2 Labs) – TCOM
 - GI-Renal (3 Labs) – TCOM

ANTHROPOLOGY TEACHING EXPERIENCE

- 2018-2021 Graduate Instructor
Department of Anthropology, University of Missouri
- Forensic Anthropology (self-developed in person lecture and lab with online transition due to COVID-19) (SP2020)
 - Intro. to Biological Anthropology Laboratory (SP2018, F2020, SP2021)
- 2021 Graduate Teaching Assistant
Department of Anthropology, University of Missouri
- Human Origins (SP2021)
- 2010-2012 Graduate Teaching Assistant
Department of Anthropology, University of Central Florida
- General Anthropology
 - The Human Species

ANTHROPOLOGY/FORENSIC GUEST LECTURES AND PUBLIC SPEAKING

- 2021 Sausage of Science, Human Biology Association podcast – A holistic viewpoint on skeletal morphology with Elizabeth Cho
(<https://soundcloud.com/humanbiologyassociation/sos-127-a-holistic-viewpoint-on-skeletal-morphology-with-elizabeth-cho>)
- 2021 University of Missouri, Life Sciences Seminar Series – Lecture on sexual dimorphism, ecogeographic body proportions, and adaptation to graduate students from a variety of biological, chemistry, and genetic fields
- 2019 Jilin University, Changchun, China – Lecture on climate adaptation and ecogeographic body proportions to graduate students
- 2019 Kyoto University, Kyoto, Japan – Lecture on the influence of climate adaptation and population genetics on body form to undergraduate students, graduate students, and faculty
- 2019 Chiang Mai University, Chiang Mai, Thailand – Lecture on the utilization of geometric morphometrics and a Microscribe digitizer for osteological research
- 2019 University of the Philippines Diliman, Quezon City, Philippines – Lecture on climate adaptation and population structure to undergraduate students, graduate students, and faculty
- 2007 Ohio Northern University Crime Scene Investigation Camp, Ada, OH – Taught computerized facial compositing using self-developed training course

2006 Tipp City (OH) Police Department – Developed a PowerPoint facial compositing training course, designed a quick reference guide for use in the field, and taught computerized facial compositing skills to police officers

SCHOLARSHIPS AND HONORS

2012 Delta Epsilon Iota Academic Honor Society, University of Central Florida

2009 Mortar Board National College Senior Honor Society, Ohio Northern University

2009 Beta Beta Beta National Biological Honor Society, Ohio Northern University

2008 Appreciation Award for Dedicated Service to the Community, Fraternal Order of Police, Lodge No. 55 (Miami Co., OH)

2007-2010 Dean's List, Ohio Northern University

2007 Abbott Scottish Rite Scholarship

2007 Kappa Delta Foundation Girl Scout Gold Award Young Woman of Distinction Scholarship

2006-2010 Alumni Award Scholarship, Ohio Northern University

2006-2010 Dean's Scholarship, Ohio Northern University

OUTREACH AND SERVICE

2022 Texas Association of Biological Anthropologists (TABA) scientific program committee member

2018 Anthropology Day – Museum of Anthropology, University of Missouri – Event focused on teaching community about osteology, human evolution, and artifacts

2016-2018 Dinosaurs and Cavemen – Integrative Anatomy Department – Event teaching children about evolution, dentition, excavation techniques, and human osteology

2016 Archaeology Day – Minimum Number of Individuals (MNI) table – Event focused on teaching community about artifacts and remains found in excavations

2011 University of Central Florida Graduate Fair – Anthropology Department volunteer

2011 Archaeological Institute of America (AIA) Meeting – Graduate volunteer

CONSULTATIONS, FIELD SCHOOL, AND EXCAVATIONS

- 2021 Museum of Anthropology, University of Missouri - evaluation of disinterred remains of possible Civil War veteran and spouse to confirm identity prior to reburial
- 2017 Cole County Sheriff's Department, Missouri - one of several MU graduate students to assisted with the recovery of remains from a house fire (Feb. 24)
- 2015 Defense POW/MIA Accounting Agency (formerly JPAC-CIL) recovery mission, Trà Vinh, Vietnam (Mar. 12-Apr. 16)
- 2014 Honolulu Police Department, Hawaii - member of JPAC-CIL consult team of anthropologists and archaeologists (Apr. 7)
- 2011 ArchaeoTek Osteology Workshop/Bronze Age Excavation, Cluj-Napoca, Romania

WORKSHOPS, TRAINING COURSES, AND ADDITIONAL EDUCATION

- 2014, 2012 Basic and Advanced R Statistical Training Courses, Joint POW/MIA Accounting Command Central Identification Laboratory (JPAC-CIL)
- 2014 Forensic Radiology: Current and Future Forensic Use in Medicolegal Death Investigations, American Academy of Forensic Sciences
- 2013 Bones and Children: An Interdisciplinary Approach to Forensic Issues, American Academy of Forensic Sciences
- 2009 22nd Annual Forensic Anthropology Course, Armed Forces Institute of Pathology Department of Medical Education
- 2009 Basic and Advanced Forensic Facial Reconstruction Certificates, Case Western Reserve University School of Medicine
- 2008 Beginning Korean Language; Korean History and Culture Course; Lectures on the Chinese people, history, and culture, Hanyang University and Xi'an Jiaotong University, International Summer School and China Camp

PROFESSIONAL MEMBERSHIPS

- 2021-pres American Association of Anatomy (AAA)
- 2021-pres Society for Craniofacial Genetics and Developmental Biology (SCGDB)
- 2016-pres American Association of Physical Anthropologists (AAPA)
- 2014-pres American Academy of Forensic Sciences Affiliate Member (AAFS)
- 2018-2020 Association for Asian Studies (AAS)
- 2017-2021 American Anthropological Association (AAA)
- 2006-2010 Association of Future Forensic Professionals (AFFP)
- 2006-2010 Midwestern Association of Forensic Scientists (MAFS)
- 2006-2010 Professional Association of Women in Science (PAWS)