

Curriculum Vitae
KATHERINE L. NEMETH

Department of Anthropology, Washington University in St. Louis
One Brookings Drive, Campus Box 1114
St. Louis, MO, 63130
K.L.Nemeth@wustl.edu

EDUCATION

- Current** **Ph.D. candidate, Biological Anthropology, Washington University in St. Louis**
Dissertation title: *Longitudinal investigation of childhood bone growth in relation to physical activity, food security, and immune function in low-resource US regions*
Advisor: Dr. Theresa Gildner
- 2024** **M.S., Biological Anthropology, Washington University in St. Louis**
Advisor: Dr. Theresa Gildner
- 2019** **B.S., Biology, George Washington University**
Summa cum laude, GPA: 3.80
Honors thesis title: *Testing three sample-specific metric methods for sex determination of subadults using maximum mesio-distal crown width of permanent dentition.*
Advisor: Dr. David Hunt

PEER-REVIEWED PUBLICATIONS

2025

Damjanovic A, Keyel A, Rock JM, Ehrbar D, Bievenue R, Nemeth, KL, Yauney E, Kay DM, Caggana M, Parker MM, Styer LM. "Longitudinal Analysis of Passively and Actively Acquired SARS-CoV-2 Antibodies in Infants with Repeat Newborn Screening Samples in New York State." *Scientific Reports*. 15, 2388 (13 pages) DOI: 10.1038/s41598-025-09140-6

2024

Gildner TE, Urlacher SS, **Nemeth KL**, Beauregard JA, Pfaff-Nash M, Zhang A, Waimon S, Cepon-Robins TJ. Dual burden of infectious and chronic disease in low-resource U.S. communities: Examining relationships between infection, adiposity, and inflammation (commissioned article). *Annals of Human Biology*, 51 (1):2368851 (12 pages) DOI: 10.1080/03014460.2024.2368851

Thayer Z, **Nemeth K**, Beauregard JA, Gildner T. “Toddler hair cortisol levels are associated with maternal prenatal depression”. *American Journal of Human Biology*, 36(10), e24127. (5 pages) DOI: 0.1002/ajhb.24127

Featured in: WUSTL The Source Newsroom, WUSTL Ampersand.

2023

Nemeth KL, Yauney E, Rock J, Bievenue R, Parker MM, & Styer LM. “Use of self-collected dried blood spots and a multiplex microsphere immunoassay to measure antibody response to COVID-19 vaccines”. *Microbiology Spectrum*, 11: e01336-22 (14 pages) DOI: 10.1128/spectrum.01336-22

2022

Damjanovic A, Styer LM, **Nemeth K**, Yauney E, Rock J, Bievenue R, Hoen R, Ehrbar D, Kay DM, Caggana M, & Parker MM. “Utility of Newborn Dried Blood Spots to Ascertain Seroprevalence of SARS-CoV-2 Antibodies Among Individuals Giving Birth in New York State, November 2019 to November 2021”. *JAMA Network Open*, 5(8):e2227995. (12 pages) DOI: 10.1001/jamanetworkopen.2022.27995

Featured on <https://www.cdcfoundation.org/stories-list>

2021

Styer LM, Hoen R, Rock J, Yauney E, **Nemeth K**, Bievenue R, & Parker MM. “High throughput multiplex SARS-CoV-2 IgG microsphere immunoassay for dried blood spots: A public health strategy for enhanced serosurvey capacity”. *Microbiology Spectrum*, 9:10.1128. (11 pages) DOI: 10.1128/spectrum.00134-21

Manuscripts in preparation

Daniels, L., **Nemeth, K.**, Beauregard, J., Pan, Y., Wadhwa, S., Quinn, E. “Book review: Thicker than water: A social and evolutionary study of iron deficiency in women.” *Submitted to American Journal of Human Biology*.

CONFERENCE ABSTRACTS

2025

Nemeth KL, Cepon-Robins TJ, Beauregard JA, Chaney C, Mallott EK, Samsonov A, Gildner TE. Rural Embodiment and Community Health (REACH) study: Measuring childhood physical activity using accelerometry in low-resource United States communities. *American Journal of Human Biology*, 37 (S1).

Samsonov A, Beauregard JA, **Nemeth KL**, Chaney C, Ainsley J, Mukundan D, Hotter S, Mallott, EK, Cepon-Robins TJ, Gildner TE, Urlacher SS. Ecological and social determinants of early life oxidative stress: Preliminary findings from a low-resource U.S. community. *American Journal of Human Biology*, 37 (S1).

Chaney CB, Gildner TE, Cepon-Robins TJ, Grathwohl K, Wang S, Ong J, Kwak L, Betts K, Beauregard J, **Nemeth KL**, Waimon S, Zhang A, Shing AB, Kim L, Pfaff-Nash M, Samsonov A, Urlacher SS, Mallott, E. Elucidating the causal pathway linking social determinants of health to changes in the gut microbiome through inflammatory pathways in two low-resource U.S. communities. *American Journal of Human Biology*, 37 (S1).

Gildner TE, Mallott EK, Chaney C, **Nemeth KL**, Beauregard JA, Samsonov A, Masteller C, Cepon-Robins TJ, Nelson ND, Jackson K, Hill M, Moehrs Gardner K, Lyles Y. Joint perspectives from community residents and research team members: The need for community-engaged work to address flooding-related environmental inequities in Cahokia Heights, IL. *American Journal of Human Biology*, 37 (S1).

Manthey C, Gildner T, Urlacher S, Mallott E, Chaney C, Zhang A, Waimon S, **Nemeth K**, Thomas J, Shing A, Pfaff-Nash M, Robins T. The Rural Embodiment and Community Health Project: Link Between Lifelong Immune Dysregulation and Pregnancy Loss. *American Journal of Biological Anthropology*, 186.

2024

Nemeth KL, Cepon-Robins TJ, Urlacher SS, Mallott EK, Thomas JB, Waimon S, Recca I, Zhang A, Pfaff-Nash M, Kim EY, Gildner TE. Rural Embodiment and Community Health Study (REACH): Trade-offs between Immunoglobulin E levels and growth in a preliminary sample of children in a low-resource rural Mississippi community. *American Journal of Human Biology*, 36 (S1).

Cepon-Robins TJ, Mallott EK, Manthey-Pierce CJ, **Nemeth KL**, Recca IC, Samsonov A, Shing AB, Super M, Thomas JB, Waimon S, Zhang A, Gildner TE. Rural Embodiment and Community Health (REACH) study: Disparities in gastrointestinal health and inflammation in older adults from three U.S. samples. *American Journal of Human Biology*, 36 (S1).

Chaney CB, Gildner TE, Cepon-Robins TJ, Grathwohl K, Wang S, Ong J, Kwak L, Betts K, Thomas JB, **Nemeth KL**, Waimon S, Zhang A, Samsonov A, Mallott EK. Embodiment of water infrastructure: Gut microbiome characteristics and flooding in two U.S. communities. *American Journal of Human Biology*, 36 (S1).

- Samsonov A, Gildner TE, **Nemeth KL**, Thomas JB, Waimon S, Shing AB, Chaney C, Mallott EK, Urlacher SS, Cepon-Robins TJ. Rural Embodiment and Community Health (REACH) Study: Social determinants of intestinal health among low-resource communities in the United States. *American Journal of Human Biology*, 36 (S1).
- Shing AB, Cepon-Robins TJ, Mallott EK, Urlacher SS, Thomas JB, **Nemeth KL**, Waimon S, Zhang A, Wang S, Chaney C, Grathwohl K, Ong J, Betts K, Kwak L, Pfaff-Nash M, Samsonov A, Kim EY, Gildner TE. Rural embodiment and community health (REACH) study: Associations between behavioral and demographic factors, fecal calprotectin, and IgE in under-resourced U.S. communities. *American Journal of Human Biology*, 36 (S1).
- Thomas JB, Cepon-Robins TJ, Urlacher SS, Waimon S, Zhang A, Mallott EK, **Nemeth KL**, Shing AB, Chaney C, Samsonov A, Grathwohl K, Kim EY, Pfaff-Nash M, Ong J, Wang S, Gildner T. Rural Embodiment and Community Health (REACH) study: Associations between sex and Immunoglobulin E levels among two low-resource communities within the United States. *American Journal of Human Biology*, 36 (S1).
- Waimon SL, Cepon-Robins TJ, Mallott EK, **Nemeth KL**, Thomas JB, Zhang A, Shing AB, Chaney C, Samsonov A, Urlacher SS, Gildner TE. Rural Embodiment and Community Health Study (REACH): Body composition association with pro-inflammatory markers in low-resource US communities. *American Journal of Human Biology*, 36 (S1).
- Wang SA, Gildner TE, Cepon-Robins TJ, Chaney C, Grathwohl K, Ong J, Kwak L, Betts K, Thomas JB, **Nemeth KL**, Waimon S, Zhang A, Samsonov A, Shing AB, Mallott EK. Rural Embodiment and Community Health Study (REACH): Associations between Water Source and Gut Microbiome Diversity in a Rural U.S. Community. *American Journal of Human Biology*, 36 (S1).
- Chaney C, Gildner TE, Cepon-Robins TJ, Grathwohl K, Samsonov A, Wang S, Shing A, Waimon S, Ong J, Kwak L, Betts K, Thomas JB, **Nemeth KL**, Zhang A, Mallott EK. Population and *H. pylori* status demonstrate similar effects on gut microbiome diversity. American Society for Microbiology Microbe. Atlanta, GA.

2023

- Nemeth KL**, Yauney E, Rock JM, Bievenue R, Parker MM, Styer LM. Use of self-collected dried blood spots and a multiplex microsphere immunoassay to measure IgG antibody levels in response to COVID-19 vaccines. *American Journal of Human Biology*, 35 (S1)
- Cepon-Robins TJ, Urlacher SS, Zhang A, Waimon S, Pfaff-Nash M, **Nemeth KL**, Thomas JB, Shing A, Gildner TE. Rural Embodiment and Community Health (REACH) study: Helicobacter pylori infection prevalence and associated immune responses in adult participants from Mississippi and Southwestern Illinois. *American Journal of Human Biology*, 35 (S1)

Gildner TE, Mallott EK, Urlacher SS, Zhang A, Waimon S, Pfaff-Nash M, **Nemeth KL**, Thomas JB, Shing A, Cepon-Robins TJ. Rural Embodiment and Community Health (REACH) study: Associations between sociodemographic factors, health conditions, and Immunoglobulin E levels among low-resource communities within the United States. *American Journal of Human Biology*, 35 (S1)

Waimon S, Cepon-Robins T, Ulacher S, Zhang A, Pfaff-Nash M, **Nemeth K**, Thomas J, Shing A, Gildner T. Rural Embodiment and Community Health (REACH) Study: Testing differences in allergies and asthma between low-resource rural and urban communities in the United States. *American Journal of Human Biology*, 35 (S1)

Zhang A, Cepon-Robins T, Mallott L, Waimon S, **Nemeth K**, Thomas J, Shing A, Gildner T. Rural Embodiment and Community Health (REACH) study: Comparison study of results from Point of Care testing devices and Enzyme-Linked Immunosorbent Assays detecting intestinal infections and inflammation among low-resource communities in the United States. *American Journal of Human Biology*, 35 (S1)

Styer L, Rock J, Yauney E, **Nemeth K**, Damjanovic A, Bievenue R, Rosenberg ES, Flanigan C, Caggana M, Parker M. Dried blood spots: a convenient and easy-to-collect sample for large-scale immunological surveillance. *Association of Public Health Laboratories Infectious Disease Lab conference*. March 2023. Atlanta, GA.

2022

Damjanovic A, Styer LM, **Nemeth K**, Yauney E, Rock JM, Bievenue R, Hoen R, Ehrbar D, Kay DM, Parker MM, Caggana M. Seroprevalence of SARS-CoV-2 antibodies among individuals giving birth in New York State from November 2019 to March 2021: a large-scale study using newborn dried blood spots. Poster presented at SeroNet Investigators Meeting; March 2022; virtual.

Rock JM, Kaur J, Styer LM, Bievenue R, Freitas B, **Nemeth K**, Yauney E, Parker MM. Validation of an 8-plex microsphere immunofluorescence assay to detect SARS-CoV-2 nucleocapsid and spike IgG antibodies in dried blood spots, Mitra microsampling device, and plasma/serum. Poster presented at SeroNet Investigators Meeting; March 2022; virtual.

2017

Nemeth KL, Gray T. The function of newly identified small proteins in the mycobacterial ribosome. Poster presented at: Research Experiences for Undergraduates Symposium; October 2017; Alexandria, VA.

RESEARCH AND LAB EXPERIENCE

2022 - present Graduate Research Assistant

Washington University in Saint Louis

Project: Rural Embodiment and Community Health study (REACH)

Skills: ELISA, anthropometric measurements, participant interviews, dried blood spot collection, science education and community outreach

Outreach activities featured on: <https://gephardtinstitute.wustl.edu/washu-students-making-big-waves-with-small-grants/>

Advisors: Dr. Theresa Gildner, Dr. Tara Cepon-Robins

2020 - 2022 Assistant Research Scientist

Wadsworth Center, Bloodborne Viruses Lab

Projects: High-throughput COVID serosurveys using dried blood spots, COVID vaccine response study, dried blood spot assay development

Skills: RStudio, GraphPad Prism, microsphere immunoassays

Advisors: Dr. Linda Styer, Jean Rock, MPH

2019 - 2020 Wadsworth Center Fellow

Wadsworth Center, Inorganic Chemistry

Project: Lead detection in deciduous teeth using Laser Ablation Inductively Coupled Plasma Mass Spectrometry.

Skills: Laser ablation inductively coupled plasma mass spectrometry

Advisors: Charelle Trim, M.S.

2019 Chemist Aide

Wadsworth Center, Environmental Biology Lab

Projects: Luminex and ddPCR assay development for microcystin detection, multiplex qPCR assay validation for *Legionella* detection

Skills: qPCR, ddPCR

Supervisor: Dr. Theresa Hattenrath

2017 National Science Foundation, Research Experience for Undergraduates

Wadsworth Center, Division of Genetics

Project: The function of newly identified proteins in the mycobacterial ribosome.

Skills: Bacterial culture, PCR, gel electrophoresis, creating bacterial knockouts

Advisor: Dr. Todd Gray

PROFESSIONAL MEMBERSHIPS

Human Biology Association

EXTERNAL AWARDS

2025 Doctoral Dissertation Improvement Grant (\$27,059), NSF

AWARDS AND HONORS

2025 St. Louis Impact Fund mini grant (\$200), Gephardt Institute, WUSTL
 2025 Anthropology summer travel grant (\$950), WUSTL
 2024 Graduate Research Fellowship Honorable Mention, National Science Foundation
 2024 Anthropology summer travel grant (\$1,000), WUSTL
 2024 Rich Smith Travel Grant (\$2,500), WUSTL
 2023 Rich Smith Travel Grant (\$3,000), WUSTL
 2015-19 Presidential Scholarship (\$25,000/ year), George Washington University
 2015-19 Dean's List (6 semesters), George Washington University
 2016-19 University Honors Program, George Washington University
 2017 Conference Travel Funding (\$1,200) Rocky Mountain Biological Laboratory
 2015-16 Women's Leadership Program, George Washington University

TEACHING EXPERIENCE

Spring 2025 Graduate Assistant in Instruction, Environmental Interactions and Human Health, WUSTL
 Fall 2024 Graduate Assistant in Instruction, Darwin and Doctors: Evolutionary Medicine and Health, WUSTL
 Spring 2024 Graduate Assistant in Instruction, Health, Healing, and Ethics: Introduction to Medical Anthropology, WUSTL
 Fall 2023 Graduate Assistant in Instruction, Human Growth and Development, WUSTL
 Spring 2019 Undergraduate lab teaching assistant, The Biology of Nutrition and Health, George Washington University
 Fall 2020 Undergraduate lab teaching assistant, The Ecology and Evolution of Organisms, George Washington University

DEPARTMENTAL SERVICE

2024-present Subfield representative to faculty committee
 2024-25 Graduate curriculum review committee
 2023-24 Graduate student peer mentor