

CURRICULUM VITAE

Elizabeth Mallott, PhD

DATE: 07-15-2024

ADDRESS AND TELEPHONE NUMBERS:

Office:

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PRESENT POSITION:

2022-Present Assistant Professor, Department of Biology, Washington University in St. Louis

EDUCATION:

2010-2016 PhD; Biological Anthropology; University of Illinois at Urbana-Champaign, Urbana, IL

2002-2006 BA; Biology (with honors) and Music (with honors); Grinnell College, Grinnell, IA

ACADEMIC POSITIONS / EMPLOYMENT:

2020-2022 Postdoctoral Fellow; Bordenstein Lab, Department of Biological Sciences and Vanderbilt Microbiome Innovation Center; Vanderbilt University, Nashville, TN

2019-2020 Visiting Lecturer; Department of Anthropology; Dartmouth College, Hanover, NH

2016-2019 Postdoctoral Fellow; Amato Lab, Department of Anthropology; Northwestern University, Evanston, IL

TEACHING TITLE & RESPONSIBILITIES:

2023-Present Professor in Microbiology, Department of Biology, Washington University, St. Louis, MO
 BIOL 349: Fundamentals of Microbiology, co-instructor, 100 students
 BIOL 3171: Biology for Climate Change Solutions, co-instructor, 12 students

2022-Present Qualifying Exam Committees (Student, Program):
 Dong-gyu Kim, PMB
 Kyra Raines, MMMP
 Brian Gallagher, PMB

2023-Present Thesis Committees (Student, Program):
 Brian Gallagher, PMB
 Philippa Tanford, EEB
 Israt Jahan, EEB
 Calum Stephenson, EEB
 Mahal Bugay, EEB

2022-Present Undergraduate Research Mentoring
Juliet Ainsley (Center for the Environment Summer Research Scholar)
Dev Mukundan
Simone Hotter
Leena Kwak
Shan Wang (Harrison D. Stalker Award winner)
Kaylaa Betts
Jennifer Ong

BIOLOGY DEPARTMENT COMMITTEES

2022-Present Curriculum Committee
2023-Present WashU Undergraduate ASM Chapter – Faculty Advisor
2023 Biology Faculty Excellence Task Force
2023 Spector and Quatrano Award Committee

DIVISION OF BIOLOGY & BIOMEDICAL SCIENCES COMMITTEES

2022-Present EEB Admissions Committee
2022-Present EEB Steering Committee

SCIENTIFIC REVIEW AND SERVICE

2020-Present *Ad-hoc reviewer*: National Science Foundation, The Leakey Foundation, FWF Austrian Science Fund, Israeli Science Foundation

EDITORIAL RESPONSIBILITIES:

2015-Present *Reviewer*: American Journal of Physical Anthropology, American Journal of Primatology, Animal Behaviour, Animal Microbiome, Current Zoology, eLife, Environmental Microbiology, International Journal of Primatology, Molecular Ecology, mSystems, Nature Communications, PeerJ, PLoS One, Proceedings of the Royal Society B, Wildlife Research

SCIENTIFIC OUTREACH

2018-2019 NU Morning Mentors Program, Evanston, IL.
2017-2018 Judge, Poster Presentation Competition, Computational Research Day, Northwestern University.
2017 STEM Professional, Project Exploration Sisters4Science program, Chicago, IL.
2017 Volunteer, Expanding Your Horizons Workshop, Chicago, IL.
2011-2016 Environmental education volunteer, Champaign County Forest Preserve District.
2014-2016 Volunteer, Fruit Forensics program, Champaign Public Library.

PROFESSIONAL SOCIETIES AND ORGANIZATIONS

2023-Present American Society for Microbiology
2019-Present International Society for Evolutionary Medicine and Public Health
2018-Present International Primatological Society
2013-Present American Association of Anthropological Genetics
2010-Present American Association of Biological Anthropologists
2007-Present American Society of Primatologists

HONORS AND AWARDS:

- 2016 American Association of Anthropological Genetics' Outstanding Trainee Presentations in Anthropological Genetics Poster Prize at the AAPA annual meeting
- 2016 Demetri B. Shimkin Award for a superior paper in anthropology, Department of Anthropology, University of Illinois at Urbana-Champaign
- 2012 George A. Beslow Award in Anthropology and Sociology, Department of Anthropology, University of Illinois at Urbana-Champaign

INVITED SEMINARS & LECTURESHIPS:

- 2023 Department of Anthropology, University of Pennsylvania
- 2023 Center for Reproductive Health Sciences, Washington University in St. Louis
- 2022 Digestive Disease Research Core Center seminar, Washington University in St. Louis
- 2022 Wild Animal Microbiome Evolution Strategic Network seminar, European Society of Evolutionary Biology
- 2022 Living Earth Collaborative seminar, Washington University in St. Louis
- 2022 mDivE-STL: microbiomes of diverse ecosystems keynote speaker
- 2022 European Congress of Clinical Microbiology and Infectious Disease annual meeting, *Pathogen competition and co-evolution in the microbiome* symposium, Lisbon, Portugal
- 2022 Department of Anthropology, University of California Santa Barbara
- 2022 Microbiome Centers Consortium Seminar Series
- 2022 Department of Biology, Washington University in St. Louis
- 2022 Department of Anthropology, University of North Carolina Chapel Hill
- 2022 Department of Anthropology, Tulane University
- 2021 Department of Biology, American University
- 2021 Department of Biology, University of North Carolina Chapel Hill
- 2020 Department of Anthropology, University of Minnesota
- 2020 Department of Anthropology, Boston University
- 2019 Program in Bioinformatics, Loyola University Chicago
- 2019 International Society for Evolution, Medicine, and Public Health annual meeting, *Microbiome and neurologic disease risk* symposium, Zurich, Switzerland
- 2019 Department of Anthropology, Kent State University
- 2018 Department of Archaeology, University of Cambridge
- 2018 Evolutionary Medicine Society, Loyola Stritch Medical School
- 2018 Department of Biology, University of Nebraska Omaha
- 2017 Department of Anthropology, University of North Carolina at Charlotte
- 2015 American Association of Physical Anthropology annual meeting, *Thinking Anthropologically about Genetics* symposium, St. Louis, MO
- 2014 Applied Genomics in Anthropological Research Workshop, San Antonio, TX

RESEARCH SUPPORT (\$43,183):

Active

a. Governmental

NSF SMA-2313248 (PI: Carlye Chaney) 07/15/2023-06/30/2025
 NSF (SBE/SPRF) \$160,000; \$0
 TITLE: Postdoctoral fellowship: SPRF: Structural determinants of exposure and the gut microbiome
 Role: Co-PI

b. Non-Governmental

TRIADS Seed Grant 04/07/2023-04/06/2024

WUSTL \$90,827; \$38,598
TITLE: Legacy of Neglect: Linking flood hazards, pathogen exposure, and health inequities in Cahokia Heights, IL
Role: Lead Co-PI

ICTS JIT Funding 12/10/2023-5/10/2024
WUSTL \$4,585
TITLE: ELISA validation of T3, T4, and TSH from dried blood spots
Role: PI

Pending

a. Governmental

R35GM157055 04/01/2025-03/31/2030
NIGMS \$1,250,000
TITLE: Investigating the mechanisms driving host-associated microbial community dynamics
Role: PI

BIBLIOGRAPHY (* = equal contribution; ** = corresponding author; # = WUSTL undergraduate):

Primary Research Papers (Available on PubMed)

1. P Finnegan, PA Garber, AC McKenney, JC Bicca-Marques, M De La Fuente, F Abreu, A Souto, N Schiel, KR Amato, **EK Mallott****. Group membership, not diet, structures the composition and functional potential of the gut microbiome in a wild primate. 2024. mSphere X: e00233-24. DOI: 10.1128/msphere.00233-24.
2. T Whitney, **EK Mallott**, LO Diakiw, DM Christie, N Ting, KR Amato, SR Tecot, AL Baden. Ecological and genetic variables co-vary with social group identity to shape the gut microbiome of a pair-living primate. 2024. American Journal of Primatology X: e23657. DOI: 10.1002/ajp.23657.
3. **EK Mallott****, AR Sitarik, LD Leve, C Cioffi, CA Camargo Jr, K Hasegawa, SR Bordenstein. 2023. Human gut microbiome variation associated with race and ethnicity emerges as early as 3 months of age. PLoS Biology 21: e3002230. DOI: 10.1371/journal.pbio.3002230. PMID: 37590208.
4. O Chioma, **EK Mallott**, B Shah-Gandhi, Z Wiggins, M Langford, A Lancaster, A Gelbard, H Wu, JE Johnson, WR Mason, L Lancaster, EM Wilfong, LJ Crofford, CG Montgomery, L Van Kaer, SR Bordenstein, DC Newcomb, WP Drake. 2023. Low gut microbial diversity augments estrogen-mediated pulmonary fibrosis in female-predominant interstitial lung disease. Cells 12: 766. DOI: 10.3390/cells12050766. PMID: 36899902.
5. TJ Cepon-Robins, **EK Mallott**, IC Recca, TE Gildner. Evidence and effects of neglected parasitic infections among a small preliminary sample of children from rural Mississippi. 2023. American Journal of Human Biology. DOI: 10.1002/ajhb.23889. PMID: 36861998.
6. O Chioma, **EK Mallott**, L Hesse, A Chapman, JC Van Amburg, H Wu, B Shah-Gandhi, N Dey, M Kirkland, M Byndloss, MB Piazeulo, J Johnson, GR Bernard, SR Bodduluri, S Davison, H Bodduluri, SR Bordenstein, W Drake. 2022. Gut microbiota modulates lung fibrosis severity following acute lung injury in mice. Communications Biology 5: 1401. DOI: 10.1038/s42003-022-04357-x. PMID: 36543914.
7. J Li*, RHG Markowitz*, AW Brooks*, **EK Mallott***, BA Leigh, T Olszewski, H Zare, M Bagheri, HM Smith, KA Friese, I Habibi, WM Lawrence, CL Rost, A Lédeczi, AM Eeds, JF Ferguson, HJ Silver, SR Bordenstein. Individuality and ethnicity eclipse a short-term dietary intervention in shaping

microbiomes and viromes. 2022. PLoS Biology 20: e3001758. DOI: 10.1371/journal.pbio.3001758. PMID: 35998206.

8. **EK Mallott**, LH Skovmand, PA Garber, KR Amato. The faecal metabolome of black howler monkeys (*Alouatta pigra*) varies in response to seasonal dietary changes. 2022. Molecular Ecology 31: 4146-4161. DOI: 10.1111/mec.16559. PMID: 35665560.
9. AL Severson, BF Byrd, **EK Mallott**, AC Owings, M DeGiorgio, A de Flamingh, C Nijmeh, M Arellano, A Leventhal, N Rosenberg, RS Malhi. Ancient and modern genomics of the Ohlone Indigenous population of California. 2022. Proceedings of the National Academy of Sciences 119: e2111533119. DOI: 10.1073/pnas.2111533119. PMID: 35312358.
10. **EK Mallott**, KR Amato. Butyrate-producing pathways abundances are similar in human and nonhuman primate gut microbiomes. 2022. Molecular Biology and Evolution 39: msab279. DOI: 10.1093/molbev/msab279. PMID: 34542625.
11. R Martínez-Mota, N Righini, **EK Mallott**, T Gillespie, KR Amato. The relationship between pinworm (*Trypanoxyuris*) infection and gut bacteria in wild black howler monkeys (*Alouatta pigra*). 2021. American Journal of Primatology 83: e23330. DOI: 10.1002/ajp.23330. PMID: 34529285.
12. KR Amato, OM Chaves, **EK Mallott**, TM Eppley, F Abreu, AL Baden, AA Barnett, JC Bicca-Marques, SA Boyle, CA Chapman, K Galisteo Diemer Lopes, P Fan, P Fashing, A Felton, IP Fontes, B Fruth, MF Castellon de la Fuente, V Fortes, CC Grueter, G Hohmann, M Irwin, J Matthews, A Mekonnen, A Melin, J Ostner, N Nguyen, A Piel, B Pinacho-Guendulain, EP Quintino Aredes, PT Razanaparanay, JM Rothman, N Schiel, O Schuelke, S Shanee, A Souto, JP Souza-Alves, S Tecot, F Stewart, A Stone, B Sun, K Valenta, E Vogel, S Wich, Y Zeng. 2021. Fermented food consumption in wild non-human primates and its ecological drivers. American Journal of Physical Anthropology 175: 513-530. DOI: 10.1002/ajpa.24257. PMID: 33650680.
13. S Kuthyar, MM Kowalewski, DM Roellig, **EK Mallott**, Y Zeng, TR Gillespie, KR Amato. Effects of anthropogenic habitat disturbance and *Giardia duodenalis* infection on a sentinel species' gut bacteria. 2021. Ecology and Evolution 11: 45-57. DOI: 10.1002/ece3.6910. PMID: 33437414.
14. **EK Mallott**, C Borries, A Koenig, KR Amato, A Lu. Reproductive hormones mediate changes in the gut microbiome during pregnancy and lactation in Phayre's leaf monkeys. 2020. Scientific Reports 10: 9961. DOI: 10.1038/s41598-020-66865-2. PMID: 32561791.
15. **EK Mallott**, RS Malhi, KR Amato. Assessing the comparability of different DNA extraction and amplification methods in gut microbial community profiling. 2019. Access Microbiology 1. DOI: 10.1099/acmi.0.000060. PMID: 32974545.
16. JS Frankel, **EK Mallott**, LM Hopper, SR Ross, KR Amato. The effect of captivity on the primate gut microbiome varies with host dietary niche. 2019. American Journal of Primatology 81: e23061. DOI: 10.1002/ajp.23061. PMID: 31713260.
17. KR Amato, **EK Mallott**, JE Lambert, D McDonald, A Gomez, JL Metcalf, NJ Dominy, GAO Britton, RM Stumpf, T Goldberg, SR Leigh, R Knight. Convergence of human and Old World monkey gut microbiomes demonstrates the importance of human ecology over phylogeny. 2019. Genome Biology 20: 201. DOI: 10.1186/s13059-019-1807-z. PMID: 31590679.
18. A Gomez, A Sharma, **EK Mallott**, K Petrzelkova, CJ Robinson, C Yeoman, F Carbonero, B Pafco, J Rothman, A Ulanov, K Vlckova, KR Amato, S Schnorr, NJ Dominy, D Modry, A Todd, M Torralba, K Nelson, M Burns, R Blekhman, M Remis, RM Stumpf, B Wilson, H Gaskins, PA Garber, B White, SR Leigh. Plasticity in the human gut microbiome defies evolutionary constraints. 2019. mSphere 4: e00271-19. DOI: 10.1128/mSphere.00271-19. PMID: 31366708.
19. PA Garber, **EK Mallott**, LM Porter, A Gomez. The gut microbiome and metabolome of saddleback tamarins (*Leontocebus weddelli*): Insights into the foraging ecology of small-bodied

- primates. 2019. American Journal of Primatology 81: e23003. DOI: 10.1002/ajp.23003. PMID: 31190348.
20. **EK Mallott**, KR Amato. The microbial reproductive ecology of white-faced capuchins (*Cebus capucinus*). 2018. American Journal of Primatology 80: e22896. DOI: 10.1002/ajp.22896. PMID: 29984842.
 21. **EK Mallott**, PA Garber, RS Malhi. trnL outperforms rbcL as a DNA metabarcoding marker when compared with the observed plant component of the diet of white-faced capuchins (*Cebus capucinus*). 2018. PLoS One 13: e0199556. DOI: 10.1371/journal.pone.0199556. PMID: 29944686.
 22. **EK Mallott**, KR Amato, PA Garber, RS Malhi. Influence of fruit and invertebrate consumption on the gut microbiota of wild white-faced capuchins (*Cebus capucinus*). 2018. American Journal of Physical Anthropology 165: 576-588. DOI: 10.1002/ajpa.23395. PMID: 29313897.
 23. J Lindo, M Rogers, **EK Mallott**, B Petzelt, J Mitchell, D Archer, RS Malhi, M DeGiorgio. Patterns of genetic coding variation in a Native American population before and after European contact. 2018. American Journal of Human Genetics 102: 806-815. DOI: 10.1016/j.ajhg.2018.03.008. PMID: 29706345.
 24. A de Flamingh, **EK Mallott**, AL Roca, A Boraas, RS Malhi. Species identification and mitochondrial genomes of ancient fish bones from the Riverine Kachemak tradition of the Kenai Peninsula, Alaska. 2018. Mitochondrial DNA Part B 3: 409-411. DOI: 10.1080/23802359.2018.1456371. PMID: 33474186.
 25. JE Molto, O Loreille, **EK Mallott**, RS Malhi, S Fast, J Daniels-Higginbotham, C Marshall, R Parr. Complete mitochondrial genome sequencing of a burial from a Romano-Christian cemetery in the Dakhleh Oasis, Egypt. 2017. Genes 8: 262. DOI: 10.3390/genes8100262. PMID: 28984839.
 26. **EK Mallott**, PA Garber, RS Malhi. Integrating feeding behavior, ecological data, and DNA barcoding to identify developmental differences in invertebrate foraging strategies in white-faced capuchins (*Cebus capucinus*). 2017. American Journal of Physical Anthropology 162: 241-254. DOI: 10.1002/ajpa.23113. PMID: 27704526.
 27. **EK Mallott**, PA Garber, RS Malhi. High-throughput sequencing of fecal DNA to identify insects consumed by wild Weddell's saddleback tamarins (*Saguinus weddelli*, Cebidae, Primates) in Bolivia. 2015. American Journal of Physical Anthropology 156: 474-481. DOI: 10.1002/ajpa.22654. PMID: 25369770.

Invited Reviews and Commentary (Available on PubMed)

1. KR Amato, P Pradhan, **EK Mallott**, W Shirola, A Lu. Host-gut microbiota interactions during pregnancy. 2024. Evolution, Medicine, and Public Health 12:7-23. DOI: 10.1093/emph/eoae001. PMID: 38288320.
2. **EK Mallott****. Disentangling the mechanisms underlying phyllosymbiosis in mammals. 2024. Molecular Ecology 33: e17193. DOI: 10.1111/mec.17193. PMID: 37921987.
3. **EK Mallott****. Individualized composition or community dynamics? A new statistical approach to assess the individuality of host-associated microbiomes. 2022. Proceedings of the Royal Society B 289: 20221794. DOI: 10.1098/rspb.2022.1794. PMID: 36350214.
4. **EK Mallott**, KR Amato. Host specificity of the gut microbiome. 2022. Nature Reviews Microbiology 19: 639-653. DOI: 10.1038/s41579-021-00562-3. PMID: 34045709.
5. **EK Mallott**, KR Amato. Phyllosymbiosis, diet, and gut microbiome associated metabolic disease. 2020. Evolution, Medicine, and Public Health 2020: 100-101. DOI: 10.1093/emph/eoaa019. PMID: 32983535.

Other Contributions (Not Available on PubMed)

1. R Salmi, A Lu, A Hofner, C Madushan, D Thisaru, EK Mallott, R Vandercone. Male infanticide in the northern purple-faced langur (*Semnopithecus vetulus philbricki*) in the Kaludiyapukuna Forest Reserve, Sri Lanka. Submitted.
2. **EK Mallott**, S Kuthyar, W Lee, D Reiman, H Jiang, S Chitta, EA Waters, B Layden, R Sumagin, LD Manzanares, G-Y Yang, ML Savo Sardaro, S Gray, LE Williams, Y Dai, JP Curley, CR Haney, ER Liechty, CW Kuzawa, KR Amato. The primate gut microbiota contributes to interspecific differences in host metabolism. Submitted.
3. T Cepen-Robins, **EK Mallott**, I Recca, T Gildner. Exploring biocultural determinants of intestinal health: Do resource access and parasite exposure contribute to intestinal inflammation among a preliminary sample of children in rural Mississippi? 2023. American Journal of Biological Anthropology 182: 606-619. DOI: 10.1002/ajpa.24574.
4. R Martínez-Mota, N Righini, **EK Mallott**, R Palme, KR Amato. Environmental stress and the primate microbiome: Glucocorticoids contribute to structure gut bacterial communities of black howler monkeys in anthropogenically disturbed forest fragments. 2022. Frontiers in Ecology and Evolution 10: 863242. DOI: 10.3389/fevo.2022.863242.
5. KR Amato, **EK Mallott**, P Maia, ML Savo Sardaro. Predigestion as an evolutionary impetus for human use of fermented food. 2021. Current Anthropology 62: S207-S219. DOI: 10.1086/715238.
6. G Figueiro, L Cabrera Pérez, J Lindo, **EK Mallott**, A Owings, RS Malhi, M Sans. Análisis del genoma mitocondrial de dos individuos inhumados en el sitio arqueológico CG14E01 "Isla Larga" (Rocha, Uruguay). 2017. Revista Argentina de Antropología Biológica 19: 1-17. DOI: 10.17139/raab.2017.0019.01.06.
7. **EK Mallott**. Locus. 2017. In J. Vonk & T. Shackelford (Eds.), Encyclopedia of Animal Cognition and Behavior. New York: Springer International Publishing. DOI: 10.1007/978-3-319-47829-6_182-1.
8. **EK Mallott**. Somatic Cell. 2017. In J. Vonk & T. Shackelford (Eds.), Encyclopedia of Animal Cognition and Behavior. New York: Springer International Publishing. DOI: 10.1007/978-3-319-47829-6_173-1.
9. PA Garber, A McKenney, **EK Mallott**. The ecology of trunk-to-trunk leaping in *Saguinus fuscicollis*: implications for understanding locomotor diversity in callitrichines. Neotropical Primates 12: 1-7. 2012. DOI: 10.1896/044.019.0101.