

## CURRICULUM VITAE

Elizabeth Mallott, PhD

**DATE:** 01-08-2024

### ADDRESS AND TELEPHONE NUMBERS:

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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, 101 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  
Leena Kwak  
Shan Wang  
Kaylaa Betts  
Jennifer Ong

#### **BIOLOGY DEPARTMENT COMMITTEES**

2022-Present Curriculum Committee  
2023-Present 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**

NSF 2341538 04/01/2024-03/31/2027  
NSF SBE/BCS \$478,877; \$150,177  
TITLE: Environmental exposures, intestinal infections, and human immune function: Testing the Hygiene and Old Friends Hypotheses in low-resource U.S. communities  
Role: Co-PI

EPA 13966085 04/01/2024-03/31/2027  
EPA STAR \$1,997,992; \$346,163  
TITLE: Developing community-engaged methods to mitigate the health impacts of cumulative flooding-related pollutant and pathogen exposure in low-resource areas  
Role: Co-PI

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

#### **Primary Research Papers (Available on PubMed)**

1. **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.
2. 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.
3. 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.
4. O Chioma, **EK Mallott**, L Hesse, A Chapman, JC Van Amburg, H Wu, B Shah-Gandhi, N Dey, M Kirkland, M Byndloss, MB Piazuelo, 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.
5. 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.
6. **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.

7. 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.
8. **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.
9. 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.
10. 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 Razanaparany, 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.
11. 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.
12. **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.
13. **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.
14. 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.
15. 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.
16. 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.
17. 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.
18. **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.

19. **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.
20. **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.
21. 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.
22. 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.
23. 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.
24. **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.
25. **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. **EK Mallott**. Disentangling the mechanisms underlying phyllosymbiosis in mammals. 2024. Molecular Ecology 33: e17193. DOI: 10.1111/mec.17193. PMID: 37921987.
2. **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.
3. **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.
4. **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. P Pradhan, **EK Mallott**, W Shirola, A Lu, KR Amato. Host-gut microbiota interactions during pregnancy. In Press. Evolution, Medicine, and Public Health.
2. 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 common marmoset (*Callithrix jacchus*) gut microbiome composition and function in a Caatinga environment. Submitted.
3. **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.
4. 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. In Revision. *American Journal of Primatology*.
  5. 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.
  6. T Cepon-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? 2022. *American Journal of Biological Anthropology*. DOI: 10.1002/ajpa.24574.
  7. 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.
  8. 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.
  9. **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.
  10. **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.
  11. 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.