

KATHERINE WANDER

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RESEARCH AND TEACHING INTERESTS

Evolutionary medicine and global health, immune system development, infectious disease, micronutrient nutrition, inflammation, measurement and interpretation of biomarkers, female genital cutting

EDUCATION

2012 PhD, Biocultural Anthropology, University of Washington
2009 MPH, Epidemiology, University of Washington
2001 BA, Anthropology, The Ohio State University

APPOINTMENTS

2021-present Associate Professor, Department of Anthropology, Binghamton University
2015-2020 Assistant Professor, Department of Anthropology, Binghamton University
2012-2013 Lecturer, Department of Anthropology, University of Washington

RESEARCH PROJECTS

Current:

Evolutionary Nutritional Adaptations and COVID-19 Risk among Healthcare Workers: Investigates the impacts of iron deficiency, anemia, and obesity on risk for COVID-19, an emerging infectious disease, among healthcare workers at particularly high risk for infection as the pandemic spreads into Africa during late 2020.

Child Health and Development in Kilimanjaro:

Iron Nutrition and Infectious Disease: Evaluates the complex interactions between infectious disease processes, immune protection, and iron nutrition among children in Kilimanjaro, Tanzania.

Trade-offs in Milk Immunity: Describes human milk immune activity via *in vitro* stimulation; evaluates predictors of milk immune activity, as well as downstream health outcomes for infants, among mothers and infants in Kilimanjaro, Tanzania.

Immunocompetence in Ecological Perspective: Evaluates the impact of early infectious disease exposure and nutritional stress on immune phenotypes and infectious disease susceptibility among children in Kilimanjaro.

Effect of Rapid Market Integration on Health Disparities in Asia (Principal Investigators, Siobhán Mattison and Mary Shenk): Describes changes in health among communities in rural southwest China and Matlab, Bangladesh undergoing rapid market integration, and evaluates the impact of emerging wealth inequality on health disparities.

Vanuatu Health Transitions Project (Principal Investigator, Kathryn Olszowy): Describes changes in health across the islands of Vanuatu, which vary in extent of urbanization and economic development, and evaluates the impact of economic development on chronic disease risk.

An Evolutionary Perspective on Adoption and Fosterage in Vanuatu (Principal Investigator, Siobhán Mattison): Uses the framework of “cooperative breeding” to solve the apparent paradox of adoption by assessing the diverse ways in which adoption and fosterage may benefit children, natal parents, and alloparents.

Contingency and Change in the Practice of Female Genital Cutting: Dynamics of Decision-Making in Senegambia (Principal Investigator, Bettina Shell-Duncan): Assesses the decision-making process surrounding FGC and the applicability of a stage of change model to female genital cutting (FGC); describes trends in the practice of FGC; and, tests hypotheses explaining the perpetuation of FGC among men and women in Senegal and The Gambia.

Completed:

Immunocompetence and the Hygiene Hypothesis: Evaluated the role of early life infectious disease exposure in immune system development among children in Kilimanjaro, Tanzania.

C-Reactive Protein across the Menstrual Cycle: Evaluated the effect of changes in concentration of endogenous hormones, menses, and ovulation on circulating concentration of C-reactive protein, a biomarker of inflammation.

COURSES

Undergraduate:

Case Studies in Global Health: Uses case studies to contrast the approaches of medicine, public health, anthropology, and other social sciences; integrate diverse perspectives; and, apply critical thinking in approaches to complex health issues.

Introduction to Epidemiology: Introduces the study of patterns in disease and health outcomes, including basic concepts and utility of an epidemiologic framework, and critical evaluation of epidemiologic research.

Nutritional Anthropology: Introduces the study of human nutrition in ecological context, including concepts of malnutrition and micronutrient deficiency, nutritional epidemiology, and dietary adaptation.

Graduate:

Concepts and Methods in Epidemiology: Covers measures of disease frequency, epidemiologic study designs, methods of data analysis and their appropriate interpretation, and the process of causal inference.

Anthropology and Global Health: Examines trends in health that transcend geographic boundaries and differences in wealth and industrialization, including maternal and child health, infectious diseases, and nutrition.

Evolutionary Theory: Explores themes in evolutionary theory, including historic context and recent developments, and the development of evolutionary hypotheses outside of anthropology, and their application to primates and humans.

Evolutionary Medicine: Examines aspects of human evolutionary biology most relevant medicine and public health, focusing on the distinction between *fitness* and *health*, and conflicts inherent in human evolutionary dynamics.

Coevolution of Humans and Pathogens: Examines the impact of humans on the evolution of pathogens and commensal microbes, and the impact of microbes on human health and disease, from the earliest modern humans to today.

GRANTS

External:

2022-2025	<i>Submitted</i>	<i>Layers of risk: using system dynamics modeling to integrate geospatial, ecological, and human behavioral factors affecting tick-borne disease transmission in built environments</i> Role: Co-Principal Investigator (Principal Investigator: Ralph Garruto) National Science Foundation Ecology and Evolution of Infectious Disease Program Senior Research Award
2021-2024	\$396,869	<i>“Transactions in Kinship”</i> : <i>The Demographic and Evolutionary Significance of Adoption and Fostering in Vanuatu</i> Role: Co-Principal Investigator (Principal Investigator: Siobhán Mattison) National Science Foundation Cultural Anthropology Program Senior Research Award Award is embargoed until PI Mattison’s rotation as NSF Cultural Anthropology Program Officer is complete
2020-2021	\$200,000	<i>RAPID: Evolutionary Nutritional Adaptations and COVID-19 Risk among Healthcare Workers</i> Role: Principal Investigator National Science Foundation Biological Anthropology Program Rapid Response to Research (RAPID) Award
2019-2022	\$427,000	<i>Human adaptation in high-pathogen environments: iron, infection, and child growth and development</i> Role: Principal Investigator National Science Foundation Biological Anthropology Program Senior Research Award
2019-2020	\$6,000	<i>Trade-offs in Milk Immunity</i> Role: Principal Investigator American Philosophical Society Franklin Research Grant
2018-2020	\$25,000	<i>Trade-offs in Milk Immunity</i> Role: Principal Investigator Leakey Foundation Research Grant
2017-2018	\$20,000	<i>The Immune System of Milk: In Vitro Immune Responses in Whole Milk</i> Role: Principal Investigator Wenner-Gren Foundation Post-PhD Research Grant
2010-2011	\$20,000	<i>Immunocompetence and the Hygiene Hypothesis</i> Role: Co-Principal Investigator (Principal Investigator: Bettina Shell-Duncan) National Science Foundation Biological Anthropology Program Doctoral Dissertation Improvement Grant
2009-2010	\$20,000	<i>Immunocompetence and the Hygiene Hypothesis</i> Role: Co-Principal Investigator (Principal Investigator: Bettina Shell-Duncan) Wenner-Gren Foundation Dissertation Fieldwork Grant
2007-2008	\$5,000	<i>Immunocompetence and the Hygiene Hypothesis</i> Role: Graduate student American Philosophical Society Lewis and Clark Fund for Exploration and Field Research

Internal:

2019-2020	\$9,000	<i>Trade-offs in Milk Immunity</i> Role: Principal Investigator Binghamton University Harpur College Faculty Research Grant
2017-2018	\$1,000	<i>Health Transitions in Asia</i> (Individual Development Award) New York State/United University Professions Joint Labor-Management Committee
2007-2008	\$2,000	<i>Immunocompetence and the Hygiene Hypothesis</i> University of Washington Department of Anthropology Pre-dissertation Research Fund

PUBLICATIONS

- In preparation* Brindle E, Lillis L, Barney R, Bansil P, Hess SY, Wessells KR, Arredondo F, Barker K, Craft M, Fischer C, Graham J, Karakochuk C, Mapango C, Mussai E-X, Pfeiffer C, Randolph JM, **Wander K**, Zhang M, Murphy E, Boyle DS. A multicenter analytical performance evaluation of a multiplexed immunoarray for the parallel measurement of biomarkers of micronutrient deficiency, inflammation and malarial antigenemia.
- In preparation* Sznajder KK, **Wander K**, Mattison S, Medina EA, Alam N, Raqib R, Kumar A, Haque F, Blumenfield T, and Shenk MK. Labor migration of husbands intensifies the nutrition transition among left-behind wives in rural Bangladesh.
- In preparation* Roome A[†], **Wander K**, Garruto RM. Lyme disease in the Northeastern United States: Quality of life and lifestyle changes.
- In preparation* Roome A[†], **Wander K**, Garruto RM. Lyme disease is more common among cat owners and rural residents in the Northeastern United States.
- In preparation* Anyim R[†], Li S[†], Armstrong D[†], Spathis R, James GD, **Wander K**. Predictors of milk cortisol in North American women.
- In revision* Mattison S, Sum C-Y, Reynolds AZ, Baca AD, Niedbalski S, Liu R, Zhang M, Liu L, Wei L, Su M[†], Li H, Blumenfield T, Shenk MK, **Wander K**. A transition from patriliney to matriliney and back again: flexibility in kinship among the ethnic Mosuo of Southwest China. *Matrix: A Journal for Matricultural Studies*.
- Submitted* **Wander K**, Fujita M, Mattison SM, Duris M[†], Gauck M[†], Hopt T[†], Lacy K[†], Foligno A[†], Ulloa R[†], Dodge C[†], Kiwelu I, Mmbaga B. Tradeoffs in milk immunity: Appropriate and misdirected milk immune activity and infant infectious disease risk. *Proc Nat Acad Sci*.
- Submitted* Shenk MK, Morse AR, Mattison SM, Sear R, Alam N, Raqib R, Kumar A, Mim F, Blumenfield T, Shaver J, Sosis R, **Wander K**. Social support, nutrition, and health among women in rural Bangladesh: complex tradeoffs in alloparenting, kin proximity, and social network size. (Accepted special issue of *Phil Trans B: "Multidisciplinary perspectives on social support and maternal-child health"*; Page AE, Emmott EH, Myers S, Eds).
- In revision* Hare D, Reynolds AZ, Sum C-Y, Shenk MK, Blumenfield T, Su M[†], Li H, **Wander K**, Mattison SM. Which measures matter? A behavioral ecology view of "market integration" among the matrilineal Mosuo of Southwest China. *Curr Anthropol*.
- In press* **Wander K**, Fujita M, Spathis R, Li S[†], Armstrong D[†], Pechera J[†], Anyim R[†], Manganello M[†], Torres C[†], Herbin C[†], Cradin B[†], Margolin F[†]. *In vitro* stimulation of whole milk specimens: a field-friendly method to assess milk immune activity. *J Hum Lact*.
- 2020 Reynolds AZ, **Wander K**, Sum C-Y, Su M[†], Thompson ME, Hooper PL, Li H, Shenk MK, Starkweather KE, Blumenfield T, Mattison SM. Matriliney reverses gender disparities in inflammation and hypertension among the Mosuo of China. *Proc Natl Acad Sci*. 2020(Nov).

- 2020 **Wander K**, Shell-Duncan B. Female genital cutting is upheld as a social coordination norm in Senegambia. *SSM Popul Health* 11(2020): 100593.
- 2020 **Wander K**, Su M[†], Mattison PM, Shenk MK, Blumenfield T, Li H, Mattison SM. High altitude adaptations mitigate risk for hypertension and diabetes-associated anemia in China. *Am J Phys Anthropol* 172(2): 156-164. (Editor's Choice, June 2020)
- 2019 Fujita M, Paredes Ruvalcaba N, **Wander K**, Brindle E. Human milk secretory immunity in relation to maternal nutrition and infant vulnerability in northern Kenya. *Evol Med Public Health* 2019(1): 201-211.
- 2018 Mattison SM, Reynolds AZ, **Wander K**. Human life histories are flexible, not fixed. *Arch Sex Behav* 1-5.
- 2018 Fujita M, Paredes Ruvalcaba N, **Wander K**, Corbitt MA, Brindle E. Buffered or impaired: Maternal anemia, inflammation and breast milk macronutrients in northern Kenya. *Am J Phys Anthropol* 168(2): 329.
- 2018 Shell-Duncan B, Moreau A, **Wander K**, Smith S. The role of older women in contesting norms associated with female genital mutilation/cutting in Senegambia: A factorial focus group analysis. *PLoS ONE* 13(7): e0199217.
- 2017 Fujita M, **Wander K**. A test of the "Optimal Iron Hypothesis" among breastfeeding Ariaal mothers in northern Kenya. *Am J Phys Anthropol* 164(3): 586.
- 2017 **Wander K**, Shell-Duncan B, Brindle E. Lower incidence of respiratory infections among iron deficient children in Kilimanjaro, Tanzania. *Evol Med Public Health* 2017(1): 109.
- 2017 **Wander K**, Shell-Duncan B, Brindle E, O'Connor K. Hay fever, asthma, and eczema and early infectious diseases among children in Kilimanjaro, Tanzania. *Am J Hum Biol* 29(3): e22957.
- 2017 **Wander K**. Cultural evolution: Evolution of female genital cutting. *Nat Ecol Evol* 1: 0079.
- 2016 **Wander K**. "The Origin of Chronic Inflammatory Systemic Diseases and Their Sequelae. By: Rainer H. Straub. 371 p. New York: Academic Press" *Am J Hum Biol* 28(3): 445-446.
- 2015 Mattison SM, **Wander K**, Hinde K. Breastfeeding over two years is associated with longer birth intervals, but not measures of growth or health, among children in Kilimanjaro, TZ. *Am J Hum Biol* 27(6): 807-815.
- 2013 Shell-Duncan B, **Wander K**, Hernlund Y, Moreau A. Legislating Change? Exploring how social and legal norms influence the practice of female genital cutting. *Law and Society Review* 47(4): 803-835.
- 2013 **Wander K**, Mattison S. The evolutionary ecology of early weaning in Kilimanjaro, Tanzania. *Proc R Soc B* 280(1768): 20131359.
- 2013 **Wander K**, Shell-Duncan B, Brindle E, O'Connor K. Predictors of delayed-type hypersensitivity to *Candida albicans* and Epstein-Barr virus antibody among children in Kilimanjaro, Tanzania. *Am J Phys Anthropol* 151(2): 183-190.
- 2012 **Wander K**, Shell-Duncan B, O'Connor KA. Expanding the hygiene hypothesis: Early exposure to infectious agents predicts delayed-type hypersensitivity to *Candida* among children in Kilimanjaro. *PLoS ONE* 7(5): e37406.
- 2012 **Wander K**, Brindle E, O'Connor KA. Sensitivity and specificity of C-reactive protein and α_1 -acid glycoprotein for episodes of acute infection among children in Kilimanjaro, Tanzania. *Am J Hum Biol* 24(4): 565-568.

- 2011 Shell-Duncan B, **Wander K**, Hernlund Y, Moreau A. Dynamics of change in the practice of female genital cutting in Senegambia: Testing predictions of social convention theory. *Soc Sci Med* 73: 1275-1283.
- 2010 Shell-Duncan B, Hernlund Y, **Wander K**, Moreau A. Contingency and Change in the Practice of Female Genital Cutting: Dynamics of Decision Making in Senegambia. Summary Report to the World Health Organization. <http://csde.washington.edu/~bsd/FGC/>
- 2009 **Wander K**, Shell-Duncan B, McDade TW. Evaluation of iron deficiency as a nutritional adaptation to infectious disease: An evolutionary medicine perspective. *Am J Hum Biol* 21(2): 172-179.
- 2008 **Wander K**, Brindle E, O'Connor KA. C-reactive protein across the menstrual cycle. *Am J Phys Anthropol* 136(2): 138-146.

† Student or mentee co-author

PRESENTATIONS

Academic Conferences:

- Accepted* **Wander K**, Shenk MK, Mattison SM, Blumenfield T, Alam N. Famine, food insecurity, and infectious disease: DOHaD and women's long-term health in rural Bangladesh. Invited Session (*Evolutionary Perspectives on Health and Reproduction*) for the Annual Meeting of the American Anthropological Association, Evolutionary Anthropology Society. (Conference canceled due to COVID-19; presentation delayed until the 2021 Annual Meeting)
- 2020 Sznajder KK, **Wander K**, Shenk MK. Labor migration and biometric health outcomes among spouses left behind in Bangladesh. Poster presentation for the Annual Meeting of the Population Association of America. (Conference canceled due to COVID-19; presented online)
- 2020 Bell A[†], Lacy K[†], Gauck M[†], Duris M[†], Hopt T[†], Kiwelu I, Mowo F, Mmbaga B, **Wander K**. Maternal investment and interbirth interval in Kilimanjaro, Tanzania. Poster presentation for the Annual Meeting of the Human Biology Association. (Conference canceled due to COVID-19)
- 2020 Duris M[†], Gauck M[†], Hopt T[†], Kiwelu I, Mowo F, Mmbaga B, **Wander K**. Predictors of ponderal index among infants in Kilimanjaro, Tanzania. Poster presentation for the Annual Meeting of the Human Biology Association. (Conference canceled due to COVID-19)
- 2020 Gauck M[†], Duris M[†], Hopt T[†], Kiwelu I, Mowo F, Mmbaga B, **Wander K**. Maternal anemia is more strongly associated with intestinal parasites than household wealth or recovery from birth in Kilimanjaro, Tanzania. Poster presentation for the Annual Meeting of the Human Biology Association. (Conference canceled due to COVID-19)
- 2020 Culver E[†], Chowdhury RN[†], Shteynman L[†], Kurien C[†], Garruto RM, **Wander K**, Lum JK. Qualitative and quantitative analysis of C-reactive protein stability in human sera over simulated long-term freezer storage. Poster presentation for the Annual Meeting of the Human Biology Association. (Conference canceled due to COVID-19)
- 2020 Chowdhury RN[†], Wattoo U[†], Culver E[†], Margolin F[†], Nguyen T[†], Garruto RM, **Wander K**. Serum inflammation and neurodegeneration in post-WWII Guamanians: a nested case-control pilot study. Poster presentation for the Annual Meeting of the American Association of Physical Anthropology. (Conference canceled due to COVID-19)
- 2020 **Wander K**, Gauck M[†], Duris M[†], Hopt T[†], Kiwelu I, Mowo F, Mmbaga B. Pro-inflammatory milk immune responses protect against infectious agents and reflect maternal investment in infants. Podium

presentation for the Annual Meeting of the Human Biology Association. (Conference canceled due to COVID-19)

- 2020 **Wander K**, Gauck M[†], Duris M[†], Hopt T[†], Kiwelu I, Mowo F, Mmbaga B. Reactive vs. proactive strategies for milk immunity. Podium presentation for the Annual Meeting of the American Association of Physical Anthropology. (Conference canceled due to COVID-19; presented online)
- 2019 **Wander K**, Shell-Duncan B. Revisiting game theory and the persistence of female genital cutting. Podium presentation for the Annual Meeting of the American Anthropological Association, Biological Anthropology Section.
- 2019 Anyim R[†], Li S[†], Armstrong D[†], Spathis R, **Wander K**. Reinterpreting human milk cortisol in North American women. Podium presentation for the Annual Meeting of the American Anthropological Association, Biological Anthropology Section and Society for Anthropological Sciences.
- 2019 **Wander K**, Moreau A, Shell-Duncan B. Evidence that female genital cutting is a social coordination norm: predictions and empirical results. Podium presentation for the Third International Expert Meeting on Management and Prevention of Female Genital Mutilation/Cutting.
- 2019 Duris ML[†], Gauck ME[†], Manganello M[†], Torres C[†], Li S[†], Armstrong D[†], Spathis R, **Wander K**. Interpreting biomarkers of milk immunity. Poster presentation for NERCCS 2019: Second Northeast Regional Conference on Complex Systems.
- 2019 Fujita M, Paredes Ruvalcaba N, **Wander K**, Jess N, Brindle E. Breastmilk sIgA antibody levels in relation to maternal protein-energy nutrition, micronutrient deficiencies, and infant sex in northern Kenya. Flash talk presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 31(2): e23214.
- 2019 Anyim RN[†], Li S[†], Armstrong D[†], Spathis R, **Wander K**. Predictors of milk cortisol in North American women. Podium presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 31(2): e23214.
- 2019 Olszowy KM, Standard E[†], Roome A[†], Tarivonda L, Taleo G, Dancause KN, **Wander K**. Sex-based variation in the relationship between body composition and C-reactive protein in Vanuatu. Podium presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 31(2): e23214.
- 2019 Roome A[†], **Wander K**, Standard E[†], Taleo G, Tarivonda L, Dancause KN, Olszowy KM. Determinants of physiological stress in a low-income country: Differences between men and women in Vanuatu. Poster presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 31(2): e23214.
- 2019 Gauck ME[†], **Wander K**, Roome A[†], Standard E[†], Duris ML[†], Dancause KN, Taleo G, Tarivonda L, Olszowy KM. Diagnosed diabetes and elevated blood glucose are more strongly associated with muscle mass than BMI in Vanuatu (South Pacific). Poster presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 31(2): e23214.
- 2019 Duris ML[†], **Wander K**, Roome A[†], Standard E[†], Gauck ME[†], Dancause KN, Taleo G, Tarivonda L, Olszowy KM. Psychological stress, but not physiological stress, is associated with inflammation among residents of a peri-urban community in Vanuatu. Poster presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 31(2): e23214.
- 2019 Chowdhury RN[†], **Wander K**, Culver E[†], Gallo A[†], Cardona C[†], Garruto RM, Lum JK. Qualitative and quantitative analysis of biomarker stability via chemiluminescent enzyme immunoassay in human sera. Poster presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 31(2): e23214.
- 2019 Mattison SM, Reynolds AZ, **Wander K**. Does Community Health Predict Migration Behavior? Podium presentation for the Global Asias 5 Conference, Pennsylvania State University.

- 2018 Fujita M, **Wander K**, Paredes Ruvalcaba N, Corbitt M, Brindle E. An exploratory study of the adaptive anemia hypothesis. Podium presentation for the Annual Meeting of the International Society for Evolution, Medicine and Public Health.
- 2018 Reynolds AZ, Mattison SM, Thompson ME, Su M[†], Shenk M, **Wander K**. Kinship ecology and sex differences in C-reactive protein among the matrilineal and patrilineal Mosuo of Southwest China. Podium presentation for the Annual Meeting of the International Society for Evolution, Medicine and Public Health.
- 2018 **Wander K**, Armstrong D[†], Li S[†], Pechera J[†], Spathis R. Human milk cytokine responses to gastrointestinal bacterial measured via *in vitro* stimulation. Poster presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 30(2):46.
- 2018 Armstrong D[†], Li S[†], Pechera J[†], Spathis R, **Wander K**. Quantifying immunological response of breast milk to pathogenic agents. Poster presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 30(2):1.
- 2018 Li S[†], Armstrong D[†], Pechera J[†], Spathis R, **Wander K**. Predictors of milk cytokine responses to gastrointestinal bacteria. Poster presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 30(2):25.
- 2018 Tennyson RL, **Wander K**, McDade TW, Shell-Duncan B, Eisenberg DTA. An ADHD-associated polymorphism in the DRD4 gene and nutritional status among Rendille children in northern Kenya. Poster presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 30(2):44.
- 2017 **Wander K**, Spathis R. Describing immune responses in human milk via *in vitro* stimulation. Poster presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 29(2):47.
- 2017 Fujita M, **Wander K**. Moderate iron deficiency is associated with lower prevalence of inflammation/infection among breastfeeding mothers in northern Kenya. Podium presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 30(2):14.
- 2017 Mattison S, **Wander K**. What does a matricentric view of breastfeeding imply for public health? A view from behavioral ecology. Podium presentation for the Annual Meeting of the Society for Applied Anthropology.
- 2016 **Wander K**, Sherwood M[†], Shell-Duncan B, Brindle E. Is drinking tea a dietary adaptation? Tea, iron, and infection among children in Kilimanjaro, Tanzania. Podium presentation for the Annual Meeting of the American Anthropological Association, Evolutionary Anthropology Society. (Best Paper by a New Investigator, Evolutionary Anthropology Society, for Katherine Wander)
- 2016 **Wander K**, Shell-Duncan B, Brindle E. Associations between iron status and prevalent and incident infectious disease among children in Kilimanjaro, Tanzania. Poster presentation for the Micronutrient Forum Global Conference.
- 2016 **Wander K**, Shell-Duncan B, Brindle E. Complex interactions between iron nutrition and infectious disease among children in Kilimanjaro, Tanzania. Podium presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 28(2): 301.
- 2015 Shell-Duncan B, Moreau A, **Wander K**, Hernlund Y. Women's business? Reassessing the role of men in the perpetuation and abandonment of female genital mutilation/cutting. Podium presentation for the Annual Meeting of the Population Association of America.
- 2013 Mattison S, **Wander K**. The evolutionary ecology of weaning among the Chagga of Kilimanjaro. Podium presentation for the Annual Meeting of the American Anthropological Association. (Best Paper by a New Investigator, Evolutionary Anthropology Society, for Siobhán Mattison)

- 2013 **Wander K**, Mattison S. The evolutionary ecology of weaning among the Chagga of Kilimanjaro. Podium presentation for the Annual Scientific Conference of the Australasian Society for Human Biology. *HOMO* 64(2): 160.
- 2012 Shell-Duncan B, **Wander K**, Hernlund Y, Moreau A. Legislating Change? Responses to criminalizing female genital cutting in Senegal. Podium presentation for the Conference of the Nordic Network for Research on Female Genital Cutting (Forskning om Kvindeligt Omskaering, FOKO).
- 2011 **Wander K**. Immunocompetence and the hygiene hypothesis. Podium presentation for the Annual Meeting of the American Association of Physical Anthropologists. *Am J Phys Anthropol* 144(S52): 304.
- 2011 **Wander K**, Shell-Duncan B, Hernlund Y. Legislating change? Community responses to the law banning female genital cutting in Senegal. Podium presentation for the Annual Meeting of the Society for Applied Anthropology.
- 2011 Shell-Duncan B, Hernlund Y, **Wander K**. Women's business? Reassessing the role of men in the perpetuation and abandonment of female genital cutting. Podium presentation for the Annual Meeting of the Society for Applied Anthropology.
- 2009 **Wander K**. Family size and immunocompetence: Insight from evolutionary medicine. Podium presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 21(2): 273.
- 2006 **Wander K**, Brindle E, O'Connor KA. C-reactive protein across the menstrual cycle. Podium presentation for the Annual Meeting of the Human Biology Association. *Am J Hum Biol* 18(2): 279-280.
- 2006 Hernlund Y, Shell-Duncan B, **Wander K**. "One blade per girl": AIDS education and the inadvertent medicalization of female genital cutting in The Gambia. Podium presentation for the Annual Meeting of the Society for Applied Anthropology.

Invited talks:

- 2018 **Wander K**. The Evolutionary Epidemiology of Iron Deficiency. Pennsylvania State University, Anthropology Department Seminar.
- 2016 **Wander K**. The Evolutionary Epidemiology of Iron Deficiency. Cornell University, International Nutrition Seminar.

Internal presentations:

- 2019 **Wander K**. The Evolutionary Epidemiology of Iron Deficiency. Seminars in Biological Sciences.
- 2017 Sherwood M[†], **Wander K**. Effects of dietary intake on iron deficiency in children in rural Kilimanjaro, Tanzania. Poster presentation for Binghamton Research Days, Binghamton University.
- 2017 **Wander K**. Rough-tech: Laboratory strategies for supporting research in remote settings. Podium presentation for the Universities Allied for Essential Medicine at Binghamton University Global Health Conference, Binghamton University.
- 2015 **Wander K**. The lasting impact of early infections in Kilimanjaro, Tanzania. Podium presentation for the Human Rights and Global Health Conference, Binghamton University.
- 2012 **Wander K**. Risk of early weaning among children in Kilimanjaro, Tanzania. Biocultural Anthropology Seminar Series, University of Washington.

- 2011 Shell-Duncan B, **Wander K**. Theoretical and empirical dimensions of behavior change with respect to female genital cutting: The Senegambia Study. Biocultural Anthropology Seminar Series, University of Washington.
- 2010 **Wander K**. Immunocompetence and the hygiene hypothesis. Biocultural Anthropology Seminar Series, University of Washington.

† Student or mentee co-author

SUPERVISED STUDENT RESEARCH

Undergraduate laboratory trainees/independent study:

- 2019-present Mus'ab Azam, Erin Culver
Guam ALS Biomarker Project
- 2019-2020 Erin Culver
Guam ALS Biomarker Project
- 2019 Emma May
The Immune System of Milk
- 2018-2019 Lana Shteynman, Christine Kurien
Guam ALS Biomarker Project
- 2018-2019 Brooke Cradin, Farrah Margolin, Thu Nguyen
Guam ALS Biomarker Project
- 2018-2019 Alexis Knisel, Gissel Tejada
- 2018-2019 Morgan Manganello, Cruz Torres
The Immune System of Milk
- 2018 Camilla Herbin
The Immune System of Milk
- 2015 Danielle Rainis
Host-Pathogen Co-Evolution

Undergraduate student independent research:

- 2020 Honors Thesis Reader: Liam Lane
Thesis: *Acculturative Stress and Aspects of Well-Being: A Look at this Relationship among Chinese International Students in US Higher Education*
- 2018-2019 Independent Major Advisor: Michaela Dickson
Integrative Project: *Public Health: Cultural Influences on Healthcare*
- 2016-2017 Independent Major Advisor: Hannah Rose
Integrative Project: *Systematic Review of Shift Work and Breast Cancer Risk*
- 2015-2017 Advisor: Molly Sherwood, Binghamton University Scholar (Anthropology)
Capstone Project: *Iron Deficiency, Diet, and Infectious Diseases among Children in Kilimanjaro*

Graduate student interns:

2020	Connor Dodge, Intern <i>The Immune System of Milk</i>
2020	Angela Foligno, Intern <i>The Immune System of Milk</i>
2020	Rebecca Ulloa, Intern <i>The Immune System of Milk</i>
2020	Amelia Bell, Intern <i>Vanuatu Health Transitions Project</i>
2019	Tessa Hopt, Intern <i>The Immune System of Milk</i>
2018	Joel Mora, Intern <i>Vanuatu Health Transitions Project</i>
2018	Erika Albright, Intern <i>Vanuatu Health Transitions Project</i>
2017-2018	Su Mingjie, Research Assistant <i>Effect of Rapid Market Integration on Health Disparities in Asia</i>
2017-2018	Elisabeth Standard, Intern <i>Vanuatu Health Transitions Project</i>
2017-2018	Daniel Armstrong, Intern <i>The Immune System of Milk</i>
2017-2018	Shanita Li, Intern <i>The Immune System of Milk</i>

Graduate student independent research:

2019-present	PhD Advisor: Jennifer Sare (2 nd year)
2018-present	PhD Advisor: Margaret Duris, MS, Biomedical Anthropology (3 rd year)
2018-present	PhD Advisor: Megan Gauck (3 rd year)
2017-present	PhD Advisor: Rachael Anyim, MA, Biology, Clifford D. Clark Fellow (4 th year) Thesis: <i>Predictors of milk cortisol in North American women; The effects of milk cortisol on immune responses to in vitro bacterial stimulation</i>
2017-present	Master's Committee (2017-2019); PhD Advisor (2019-present): Risana Chowdhury, MS, Biomedical Anthropology Thesis: <i>Protein stability in 45-year-old archived sera; Inherited and somatic mitochondrial DNA mutation in Guam amyotrophic lateral sclerosis and parkinsonism-dementia</i> Dissertation: <i>Evolutionary implications of neurodegenerative disease: inflammation and longevity in post-WWII Guamanian amyotrophic lateral sclerosis</i>
2017-2018	Master's Committee (Fudan University, Anthropology): Su Mingjie Thesis: <i>High altitude adaptation mitigates anemia risk associated with diabetes among the Mosuo of Southwest China</i>
2016-present	PhD Advisor: Ashley Peterson, MA, Anthropology

MEDIA COVERAGE

- 19 Dec 2020 社会のジェンダー規範が男女の健康や給与の違いに影響することを示す2つの研究結果が発表される *Gigazine*.
- 23 Nov 2020 Devine, Lucy. Being boss of the family is good for women's health, study finds. *Tyla*.
- 21 Nov 2020 McCarthy, Clare. Women in matriarchal Chinese tribe have lower blood pressure. *The Daily Mail*.
- 21 Nov 2020 Blakely, Rhys. Ruling the roost is good for women's health. *The Times of London*.
- 19 Nov 2020 Atitudes internalizadas com em gênero afetam a saúde e as perspectivas de carreira. *RPL Replicário*.
- 19 Nov 2020 Timmer, John. Internalized gender-focused attitudes affect health, career prospects. *Ars Technica*.
- 19 Nov 2020 Hendricks, Scotty. Study finds matriarchal societies are good for women's health. *Big Think*.
- 17 Nov 2020 Betuel, Emma. "Kingdom of women" study reveals the real cost of traditional gender roles. *Inverse*.
- 17 Nov 2020 UNM researchers show gender norms that favor women reverse gender disparities in health. *Mirage News*.
- 16 Nov 2020 Gender norms and health disparities. *AAAS EurekAlert*.
- 1 May 2020 Turrisi, Federico. Vivere in alta quota riduce il rischio di soffrire di ipertensione. *Ohga*.
- 23 Apr 2020 Patillo, Ali. How healthy you are may depend on where your ancient ancestors lived—study. *Inverse*.
- 23 Apr 2020 Rogers, Kristen. Growing up in a high altitude area may lower chronic disease risk, study finds. *CNN*.
- 23 Apr 2020 Sexton, Chrissy. High-altitude populations have a lower risk of chronic disease. *Earth.com News*.
- 23 Apr 2020 High-altitude adaptations connected with lower risk for chronic diseases. *Medical Xpress*.
- 23 Apr 2020 High-altitude adaptations connected with lower risk for chronic diseases. *AAAS EurekaAlert*.
- 23 Apr 2020 High-altitude adaptations may mitigate risk of chronic diseases. *Mirage News*.
- 23 Apr 2020 High-altitude adaptations connected with lower risk for chronic diseases. *Global Health News Wire*.
- 1 Apr 2020 Sparaco, Anne. "Our decisions matter": Binghamton University professor says there is still hope in this pandemic. *WBNG*.
- 3 Sept 2019 Preston, Elizabeth. What's a "normal" amount of time to breastfeed? *The New York Times*.
- 1 May 2017 Roth, Cheyna. A new bill would outlaw female genital mutilation in Michigan. But would that stop the practice? *Michigan Radio*.
- 11 Feb 2017 Cultural evolution and the mutilation of women. *The Economist*.
- 6 Feb 2017 Brink, Susan. Study: A new strategy to stop female genital mutilation. *NPR: Goats and Soda*.
- 29 Aug 2013 Brooks, Rob. Comment: Breastfeeding in Kilimanjaro conforms to evolutionary theory. *SBS News*.

PHOTOGRAPHY

AWARDS AND HONORS

- 2016 Best Paper by a New Investigator, Evolutionary Anthropology Society, American Anthropological Association
- 2004 Top Scholar Award, Graduate School Fund for Excellence & Innovation and the Graduate Opportunities & Minority Achievement Program, University of Washington

FELLOWSHIPS

- 2009-2010 Daris R. Swindler Memorial Fellowship
- 2005-2008 National Science Foundation Graduate Research Fellowship

CONSULTANCIES

- Spring, 2010: UNICEF, *Analytical Report on Female Genital Mutilation/Cutting*: Regarding analysis of Demographic and Health Surveys data for *Female Genital Mutilation/Cutting: A statistical overview and exploration of the dynamics of change*.
- Fall, 2009: World Health Organization, *Contingency and Change in the Practice of Female Genital Cutting: Dynamics of Decision-Making in Senegambia*: Regarding the relevance of research findings for interventions aimed at eliminating female genital cutting in Senegal and The Gambia.

SERVICE

University Committees:

- | | | |
|--------------|------------------------------------|---|
| 2020-present | Diversity Committee | Binghamton University Faculty Senate |
| 2020-present | Equity Committee | Binghamton University Department of Anthropology |
| 2015-present | Graduate Committee | Binghamton University Department of Anthropology |
| 2009-2012 | Resources Committee | University of Washington Department of Anthropology |
| 2005-2008 | Graduate Activities Fund Committee | University of Washington Department of Anthropology |
| 2005-2008 | Development Committee | University of Washington Department of Anthropology |

Professional Organization Committees:

- | | | |
|-----------|---|--|
| 2017-2018 | Data Management and Archiving Committee | Human Biology Association |
| 2016-2017 | Program Committee | 42 nd Annual Meeting of the Human Biology Association |

Internal Grant/Award Reviewer:

Provost's Award for Excellence in Undergraduate Research

Fulbright Scholarship Evaluation

External Grant Reviewer:

National Science Foundation Biological Anthropology Program (panelist)

National Science Foundation Cultural Anthropology Program

American Philosophical Society

Population Council (grant report reviewer)

Journal Article Reviewer:

American Journal of Human Biology

Journal of Nutrition

American Journal of Physical Anthropology

Nature Ecology and Evolution

Archives of Gynecology and Obstetrics

Pediatrics

BMC Pregnancy and Childbirth

PLoS ONE

Current Anthropology

Proceedings of the National Academy of Sciences

Evolution and Human Behavior

Social Science and Medicine

Evolution, Medicine, and Public Health

Women's Studies International Forum

Human Nature

Worldwide Waste: Journal of Interdisciplinary Studies

Journal of Asthma

PROFESSIONAL AFFILIATIONS

Human Biology Association (Fellow)

American Association of Physical Anthropologists

American Anthropological Association, Evolutionary Anthropology Society

Society for Applied Anthropology

International Society for Evolution, Medicine & Public Health

OTHER AFFILIATIONS

Center for Studies in Demography and Ecology, University of Washington

American Association of University Women

LANGUAGES

Swahili: excellent speaking and moderate writing skills