

## Elizabeth A. Archie

Department of Biological Sciences  
University of Notre Dame  
Notre Dame, IN, 46556

Phone: (574) 631-0178; Email: [earchie@nd.edu](mailto:earchie@nd.edu)  
<http://blogs.nd.edu/archielab/>  
<http://amboselibaboons.nd.edu/>

### HIGHER EDUCATION

Ph.D. Biology, Duke University, Durham, NC (2005)  
B.A. Biology, Bowdoin College, Brunswick, ME (1997)

### APPOINTMENTS

2019-present Assistant Chair, Department of Biological Sciences, University of Notre Dame  
2015-present Associate Professor, University of Notre Dame  
2009-2015 Clare Boothe Luce Assistant Professor, University of Notre Dame  
2008-2009 Assistant Professor, Fordham University  
2007-2008 Postdoctoral Associate, University of Montana  
2005-2007 Postdoctoral Fellow, Smithsonian National Zoo

### AWARDS AND FELLOWSHIPS

2010 National Science Foundation, CAREER award  
2009 Clare Boothe Luce Assistant Professorship  
2006 Friends of the National Zoo Postdoctoral Fellowship Award  
2005 Smithsonian Postdoctoral Fellowship Award  
2005 SPIRE Postdoctoral Fellowship Award (declined)  
2004 Duke University Bass Advanced Instructorship  
2003 Preparing Future Faculty Fellow, Duke University  
2000 Duke University Biology Department Grant In Aid of Research  
2000 Sally Hughes-Schrader Travel Grant  
1997 Copeland-Gross Biology Prize, Bowdoin College

### GRANTS AND AWARDS

#### External funding

2018-2021 National Science Foundation. *Rules of Life: FELS: RAISE: Does everyone's microbiome follow the same rules?* Role: PI (Co-PIs: Jack Gilbert, Sayan Mukherjee; \$565,000)  
2017-2022 R01, National Institutes of Health, National Institute on Aging. *A life course perspective on the effects of cumulative adversity on health.* Role: PI (Co-PIs: Susan Alberts, Fan Li; \$2,352,291)  
2017-2019 R21, National Institutes of Health, National Institute on Aging. *A prospective, longitudinal perspective on gut microbiome aging and health in a non-human primate model.* Role: PI (Co-PI: Ran Blekhman; \$437,880)  
2014-2015 National Science Foundation, Division of Environmental Biology. *Symposium: Animal Behavior and Disease Ecology: Past, Present, and Future.* Role: Co-PI (PI: Vanessa Ezenwa; \$10,000)

- 2011-2017 National Science Foundation CAREER Award, Division of Integrated Organismal Systems. *Understanding socially-structured transmission of infectious agents in wild baboons*. Role: PI (\$756,630)

## Internal funding

- 2016-2018 Eck Institute for Global Health. *Building Multidisciplinary Teams: Ecological frameworks to understand the causes and consequences of longitudinal gut microbial dynamics*. Role: PI (Co-PIs: Stuart Jones and David Boone; \$60,000)
- 2016-2018 Notre Dame Environmental Change Initiative. *Ecological frameworks to understand the causes and consequences of longitudinal gut microbial dynamics*. Role: PI (\$30,000)
- 2013-2015 Princeton Global Health Grand Challenges Award. *“Wild baboons as a model to understand immune function and disease risk during pregnancy and lactation”*. Role: Co-PI (PI: Jeanne Altmann; \$82,000)
- 2009-2010 Notre Dame Genomics Core Pilot Grant. *Deep sequencing to identify microsatellites in three species of parasitic nematodes*. Role: PI (\$15,000)

## PUBLICATIONS

### Peer reviewed publications

1. Björk J.B., Díez-Vives C., Astudillo-García C. **Archie\* E.A.**, Montoya\* J.M. (2019). Vertical transmission of sponge microbiota is inconsistent and unfaithful. *Nature Ecology and Evolution*. 3: 1172-1183. \*equal contribution
2. Grieneisen, L.E., Charpentier, M.J.E., Alberts, S.C., Blekhman, R., Bradburd, G., Tung, J., **Archie, E.A.** (2019). Genes, geology and germs: gut microbiota across a primate hybrid zone are explained by site soil properties, not host species. *Proceedings of the Royal Society B*. 286: 20190431.
3. Akinyi M.Y., Jansen, D., Habig, B., Gesquiere L.R., Alberts, S.C. **Archie, E.A.** (2019). Costs and drivers of helminth parasite infection in wild female baboons. *Journal of Animal Ecology*. 88: 1029-1043.
4. Habig, B., Jansen, D., Akinyi, M., Gesquiere, L., Alberts, S.C., **Archie, E.A.** (2019). Multi-scale predictors of parasite risk in wild male savanna baboons (*Papio cynocephalus*). *Behavioral Ecology and Sociobiology*. 73: 134.
5. Bjork, J.R., Dasari, M., Grieneisen, L., **Archie, E.A.** (2019). Primate microbiomes over time: Longitudinal answers to standing questions in microbiome research. *American Journal of Primatology*. 2019: e22970
6. Obanda, V., Maingi, N., Muchemi, G., Ng'ang'a, C.J., Angelone, S., **Archie, E.A.** (2019). Infection dynamics of gastrointestinal helminths in sympatric non-human primates, livestock and wild ruminants in Kenya. *PLoS One*. 14: e0217929.
7. Devoto, A.E., Santini, J.M., Olm, M.R., Anantharaman, K., Munk, P., Tung, J., **Archie, E.A.**, Turnbaugh, P.J., Seed, K.D., Blekhman, R., Aarestrup, F.M., Thomas, B.C., Bandield, J.F. (2019). Megaphage infect *Prevotella* and variants are widespread in gut microbiomes. *Nature Microbiology*. 4: 693–700

8. Lea, A.J., Akinyi, M.Y., Nyakundi, R. Mareri, P., Nyundo, F., Kariuki, T., Alberts, S.C., **Archie, E.A.**, and Tung, J. (2018). Dominance rank-associated gene expression is widespread, sex-specific, and a precursor to high social status in wild male baboons. *Proceedings of the National Academy of Sciences*. 115: E12163-E12171
9. Habig, B., Doellman, M.M., Woods, K., Olansen, J., **Archie, E.A.** (2018). Social status and parasitism in male and female vertebrates: a meta-analysis. *Scientific Reports*. 8: 3629
10. Gesquiere, L.R., Altmann, J. **Archie, E.A.**, Alberts, S.C. (2018). Interbirth intervals in wild baboons: Environmental predictors and hormonal correlates. *American Journal of Physical Anthropology*. 166: 107-126
11. Lea, A.J., Tung, J., **Archie, E.A.**, Alberts, S.C. (2018). Developmental plasticity: Bridging research in evolution and human health. *Evolution, Medicine, and Public Health* 2017: 162–175
12. Grieneisen, L.G., Livermore, J., Alberts, S.C., Tung, J. **Archie, E.A.** (2017). Group living and male dispersal predict the core gut microbiome in wild baboons. *Integrative and Comparative Biology*. **57**: 770-785
13. Miller, E.A., Livermore, J.A., Alberts, S.C., Tung, E.A., **Archie, E.A.** (2017). Ovarian cycling and reproductive state shape the vaginal microbiota in wild baboons. *Microbiome* **5**: 8  
\*\*recommended by Faculty of 1000
14. Zipple, M.N., Grady, J.H., Gordon, J.B., Chow, L.D., **Archie, E.A.** Altmann, J.A., Alberts, S.C. (2017) Conditional fetal killing by male baboons. *Proceedings of the Royal Society* **284**: 20162561
15. Miller, E.A., Beasley, D.E., Dunn, R., **Archie, E.A.** (2016) Lactobacilli dominance and vaginal pH: Why is the human vaginal microbiome Unique? *Frontiers in Microbiology* **7**: 1936
16. Tung\*, J., **Archie\***, **E.A.**, Altmann, J., Alberts, S.C. (2016). Cumulative early adversity predicts longevity in wild baboons. *Nature Communications*. **7**:11181 \*denotes equal contributions
17. Ezenwa, V.O., **Archie, E.A.**, Craft, M.E., Hawley, D.M., Martin, L.B., Moore, J., White, L. (2016). Host behaviour-parasite feedback: an essential link between animal behaviour and disease ecology. *Proceedings of the Royal Society* **283**: 20153078
18. Blekhman R., Tang K., **Archie E.A.**, Barreiro L.B., Johnson Z.P., Wilson M.E., Kohn J., Yuan M.L., Gesquiere L., Grieneisen L.E., Tung J. (2016). Common methods for fecal sample storage in field studies yield consistent signatures of individual identity in microbiome sequencing data. *Scientific Reports* **6**:31519
19. Ren, T., Grieneisen, L.E., Alberts, S.C., **Archie\***, **E.A.**, Wu\*, M. (2016). Development, diet and dynamism: longitudinal and cross-sectional predictors of gut microbial communities in wild baboons. *Environmental Microbiology* **18**: 1312-25 \*denotes equal contributions
20. **Archie E.A.**, Tung J. (2015). Social behavior and the microbiome. *Current Opinions in Behavioral Sciences* **6**: 28-34

21. Tung, J., Barriero, L.B., Burns, M., Grenier, J.C., Lynch, J., Grieneisen, L., Altmann, J., Alberts, S.C., Blekhman, R., **Archie, E.A.** (2015). Social networks predict gut microbiome composition in wild baboons. *eLife*. 4: e05224 *\*\*recommended by Faculty of 1000*
22. Habig, R., **Archie, E.A.** (2015). The effect of social status on immune function in male vertebrates. *Philosophical Transactions of the Royal Society B*. 370: 20140109
23. **Archie, E.A., Tung, J., Clark, M., Altmann, J. & Alberts, S.C.** (2014). Social affiliation matters: both same-sex and opposite-sex relationships predict survival in wild female baboons. *Proceedings of the Royal Society B*. 281: 20141261
24. Chiyo, P.I., Wilson, J.W., **Archie, E.A., Lee, P.C., Moss, C.J., Alberts, S.C.** (2014). The influence of forage, protected areas, and mating prospects on grouping patterns in male elephants. *Behavioral Ecology*. 25: 1494-1504
25. **Archie, E.A., Altmann, J.A., Alberts, S.C.** (2014) Costs of reproduction in a long-lived primate: Injury risk and wound healing. *Behavioral Ecology and Sociobiology*. 68: 1183-1193
26. Chiyo, P.I., Grieneisen, L.E., Wittemyer, G., Moss, C.J., Lee, P.C., Douglas-Hamilton, I., **Archie, E.A.** (2014). The influence of social structure, habitat, and host traits on the transmission of *Escherichia coli* in wild elephants. *PLoS ONE*. 9: e93408
27. Runcie, D.E., Wiedmann, D.T., **Archie, E.A., Altmann, J., Wray, G.A., Alberts, S.C., Tung, J.** (2013) Social environment influences the relationship between genotype and gene expression in wild baboons. *Philosophical Transactions of the Royal Society B*. 368: 20120345
28. **Archie, E.A.** (2013) Wound healing in the wild: stress, sociality, and energetic costs affect wound healing in natural populations. *Parasite immunology*. 35: 374-385
29. **Archie, E.A., Altmann, J., Alberts, S.C.** (2012) Social status predicts wound healing in wild baboons. *Proceedings of the National Academy of Sciences*. 109: 9017-9022
30. McLean, E.R., Kinsella, J.M., Chiyo, P.I., Obanda, V., Moss, C.J., and **Archie, E.A.** (2012) Genetic identification of five Strongyle nematode parasites in wild African elephants (*Loxodonta africana*). *Journal of Wildlife Disease*. 48: 707-716
31. **Archie, E.A. & Chiyo, P.I.** (2012) Elephant behaviour and conservation: Social relationships, the effects of poaching, and genetic tools for management. *Molecular Ecology* 21: 765-778
32. **Archie, E.A., Ezenwa, V.O.** (2011). Population genetic structure and history of a generalist parasite infecting multiple sympatric host species. *International Journal for Parasitology*. 41:89-98
33. Chiyo, P.I., Lee, P.C., Moss, C.J., **Archie, E.A., Hollister-Smith, J.A., Alberts, S.C.** (2011). No risk, no gain: effects of crop-raiding and genetic diversity on body size in male elephants. *Behavioral Ecology*. 22: 552-558
34. Chiyo, P.I., Moss, C.J., **Archie, E.A., Hollister-Smith, J.A., Alberts, S.C.** (2011). Using molecular and observational techniques to estimate the number and raiding patterns of crop-raiding elephants. *Journal of Applied Ecology*. 48: 788-796

35. **Archie, E.A.**, Theis, K.R. (2011) Animal behavior meets microbial ecology. *Animal Behaviour* 82: 425-436
36. **Archie, E.A.**, Henry, T. Maldonado, J.E., Moss, C.J. Poole, J.H. Pearson, V.R. Murray, S. Alberts, S.C., Fleischer, R.C. (2010) Major histocompatibility complex variation and evolution at a single expressed DQA locus in two genera of elephants. *Immunogenetics*. 62: 85-100
37. **Archie, E.A.**, Luikart, G. & Ezenwa, V.O. (2009). Infecting epidemiology with genetics: a new frontier in disease ecology. *Trends in Ecology and Evolution*. 24: 21-30
38. Ezenwa, V.O., Hines, A.M., **Archie, E.A.**, Hoberg, E.P., Asmundsson, I.M., Hogg, J.T. (2010). *Muellerius capillaris* dominates the lungworm community of Bighorn Sheep at the National Bison Range, Montana. *Journal of Wildlife Diseases*. 46: 988-993
39. Vance, E.R., **Archie, E.A.**, & Moss, C.J. (2009). Social networks in African elephants. *Computational and Mathematical Organization Theory*. 15: 273-293
40. **Archie, E. A.**, Maldonado, J. E., Hollister-Smith, J. A., Poole, J. H., Moss, C. J., Fleischer, R. C. & Alberts, S. C. (2008). Fine-scale population genetic structure in a fission-fusion society. *Molecular Ecology*. 17: 2666-2679
41. **Archie, E.A.**, Hollister-Smith, J.A., Poole, J.H., Lee, P.C., Moss, C.J., Maldonado, J.E., Fleischer, R.C., & Alberts, S.C. (2007). Behavioral inbreeding avoidance in wild African elephants. *Molecular Ecology*. 16: 4138-4148
42. Hollister-Smith, J.A., Poole, J.H., **Archie, E.A.**, Vance, E.R., Georgiadis, N.J., Moss, C.J., & Alberts, S.C. (2007). Older is better: reproductive success increases with age in wild male African elephants. *Animal Behaviour*. 74: 287-296
43. **Archie, E.A.**, Moss, C.J., and Alberts, S.C. (2006). The ties that bind: genetic relatedness predicts the fission and fusion of social groups in wild African elephants. *Proceedings of the Royal Society B*. 273: 513-522
44. **Archie, E.A.**, Morrison, T.A., Foley, C.A.H., Moss, C.J. & Alberts, S.C. (2006). Dominance rank relationships among wild female African elephants (*Loxodonta africana*). *Animal Behaviour*. 71:117-127.
45. Buchan, J.C., **Archie, E.A.**, Van Horn, R.C., Moss, C.J., Alberts, S.C. (2005). Locus effects and sources of error in non-invasive genotyping. *Molecular Ecology Notes*. 5:680-683
46. **Archie, E.A.**, Moss, C.J. and Alberts, S.C. (2003) Characterization of tetranucleotide microsatellite loci in the African Savannah Elephant (*Loxodonta africana africana*). *Molecular Ecology Notes*. 3:244-246
47. **Archie, E.A.** and Digby, L.J. (1999). Juvenile dominance in *Eulemur macaco flavifrons*: The influence of sex and maternal rank. *Folia Primatologica*. 70:277-281

### Invited commentaries and book chapters

1. Archie, E.A. (2019). Bat microbiomes are socially synchronized. *Nature Ecology & Evolution*. 3: 18-19.

2. Alberts, S.C., **Archie, E.A.**, Gesquire, L.R., Altmann, J.A., Vaupel, J.W., Christiansen, K. (2014) The male-female health-survival paradox: A comparative perspective on sex differences in aging and mortality. In: *Advances in Biodemography: Cross-Species Comparisons of Social Environments and Social Behaviors, and their Effects on Health and Longevity*. (Eds. Weinstein, M., Lane, M.) Washington, DC: National Research Council and National Academies Press.
3. **Archie, E.A.** Alberts, S.C., Fitzpatrick, C.L. & Moss, C.J. (2011). The population genetics of the Amboseli elephants. In: *Amboseli Elephants: A long-term perspective on a long-lived mammal*. Eds. C.J. Moss, H. Croze. Chicago: University of Chicago Press.
4. **Archie, E.A.**, Moss, C.J., and Alberts, S.C. (2011). Friends and relations: kinship and the nature of female elephant social relationships. In: *Amboseli Elephants: A long-term perspective on a long-lived mammal*. Eds. C.J. Moss, H. Croze. Chicago: University of Chicago Press.

## INVITED LECTURES

- 2019 Discussant, Symposium on Primate Microbiomes, American Association of Physical Anthropology, Cleveland, OH
- 2017 EEEB Distinguished Speaker, Michigan State University, East Lansing, MI
- 2017 Invited Symposium Speaker, Jaffe Symposium on Security and Scarcity, University of Michigan, Ann Arbor, MI
- 2017 Invited Symposium Speaker, Ecological Society of America, Portland, OR
- 2017 Virginia Tech, Biological Sciences, Blacksburg, VA
- 2017 University of Illinois at Urbana Champaign, Champaign, IL
- 2017 Invited symposium speaker, Society for Integrative and Comparative Biology, New Orleans, LA
- 2016 Invited plenary address in honor of Jeanne Altmann, International Primatological Society, Chicago, IL
- 2016 Invited symposium speaker, International Primatological Society, Chicago, IL
- 2016 Invited symposium speaker, Ecological Society of America, Fort Lauderdale, FL
- 2016 Lake Forest College, Lake Forest, IL
- 2016 Western Michigan University, Kalamazoo, MI
- 2015 Department of Ecology, Evolution, and Behavior, University of Minnesota, MN
- 2015 Biology Department, Goshen College, Goshen, IN
- 2015 Adventures of the Mind, Rosemont College, Philadelphia, PA
- 2014 School of Biology, Georgia Tech, Atlanta, GA
- 2014 New York Regional Species Distribution Modeling Discussion group, American Museum of Natural History, New York, NY
- 2014 Western Kentucky University, Bowling Green, KY
- 2014 The School of Biology & the Aquatic Chemical Ecology Center, Georgia Tech, Atlanta, GA
- 2014 Annual Retreat, Eck Institute for Global Health, University of Notre Dame, IN
- 2013 Gottinger Freilandtage conference on The Sociality-Health-Fitness Link. German Primate Center (DPZ), Gottingen, Germany
- 2013 Max Planck Institute for Demographic Research, Rostock, Germany
- 2013 Department of Biology, Valparaiso University, Valparaiso, IN
- 2013 Keynote Address for Midwest Ecology and Evolution Conference, University of Notre Dame, Notre Dame, IN
- 2013 Department of Biology, Indiana University, Bloomington, IN
- 2013 Ethoinformatics Working Group, Washington University, St. Louis
- 2013 Department of Biological Sciences, Purdue University Calumet, Hammond, IN

- 2012 Evolutionary Demography Workshop, Max Planck Institute for Demographic Research, Rostock, Germany
- 2012 Smithsonian Conservation Biology Institute, Front Royal, VA
- 2012 Biology Department, Indiana State University, Terre Haute, IN
- 2011 Symposium on Sociability, Health and Life Histories, Department of Ecology and Evolutionary Biology, Princeton University, Princeton, NJ
- 2010 Center for Evolutionary and Conservation Genetics, Smithsonian Institution, Washington, DC
- 2010 Department of Biological Sciences, Virginia Tech, Blacksburg, VA
- 2010 Division of Biological Sciences, University of Missouri, Columbia, MO
- 2009 Institute for Primate Research, Nairobi, Kenya
- 2009 Biology Department, City University of New York, New York, NY
- 2009 Zoology Department, Michigan State University, East Lansing, MI
- 2009 Biology Department, College of Mount Saint Vincent, Bronx, NY
- 2009 Ecology, Evolution & Environmental Biology, Columbia University, New York, NY
- 2007 Smithsonian National Zoological Park, Washington, DC
- 2007 Division of Biological Sciences, University of Montana, Missoula, MT
- 2007 Biological Sciences, Fordham University, Bronx, NY
- 2007 Department of Biological Sciences, Lehigh University, Bethlehem, PA
- 2006 Biology Department, University of Arkansas at Little Rock, Little Rock, AR
- 2006 Biology Department, Dickinson College, Carlisle, PA
- 2006 Biology Department, Bowdoin College, Brunswick, ME
- 2006 Smithsonian National Museum of Natural History, Washington, DC
- 2005 Smithsonian National Zoological Park, Washington, DC
- 2005 Smithsonian Conservation Research Center, Front Royal, VA

## TEACHING AND OUTREACH

### Courses taught at the University of Notre Dame

*Animal Behavior* (BIOS 30407)

Spring 2010-2019

80-110 students per semester, 3 credits

Lecture course for undergraduates with three in-class exams and literature-based discussions

*Community Ecology* (BIOS 60525)

Fall 2018

7 students, 3 credits, co-instructor: Dr. Jason McLachlan

Lecture and research discussion course for graduate students on major concepts in community ecology

*Population Biology of Infectious Disease* (BIOS 60569-02)

Fall 2015

8 students per semester, 3 credits, co-instructor: Dr. Alex Perkins

Lecture and research discussion course for graduate students and advanced undergraduates on the ecology and evolution of infectious disease

*Behavioral Ecology* (BIOS 60552)

Fall 2012, 2014, 2016, and 2018

6 to 10 students, 3 credits

Lecture and research discussion course for advanced undergraduates and graduate students

*Ecology and Evolution of Infectious Disease* (BIOS 60569)

Fall 2011

8 students, 3 credits, co-instructor: Dr. Ben Ridenhour (Biology)

Lecture and research discussion course for advanced undergraduates and graduate students

*Behavior and Disease* (BIOS 60574)

Fall 2010

9 students, 3 credits

Lecture and research discussion course for advanced undergraduates and graduate students

**Courses taught at other institutions***Ecology* (Fordham University)

Spring 2009

40 students, 3 credits

Lecture course for undergraduates with three in-class exams and literature-based discussions

*Altruism: The Biology of Morality* (Duke University)

Fall 2004

18 students, 3 credits

Lecture and research discussion course for junior and senior undergraduates

**Educational outreach and other educational activities***Quant Camp* (Notre Dame)

August 2017- present

I collaborate with three other Notre Dame faculty to teach a computational skills “boot camp”, which provides early-stage Biology graduate students with an introduction to computational tools. We bring 15 students to Notre Dame’s environmental research station at UNDERC for 5 intensive days of data collection, analysis skills, modeling, and reading peer-reviewed papers. I lead the module that introduces students to R statistical software.

*Baboon Films: A project in scientific communication* (Notre Dame and Penn High School, Mishawaka, IN)

Spring 2011-present

I direct an educational outreach project with two teachers at Penn High School in Mishawaka, IN, Kevin McNulty and Shellie Harshberger. High school freshman gain hands-on experience with real, international research by making films about the Amboseli Baboon Project, the baboons, and the Amboseli ecosystem. In addition, each year the class visits my lab at Notre Dame for a day-long series of outreach activities, including “Savannah CSI” (a genetics game set in Amboseli) and a lab activity to learn about parasites. My undergraduate and PhD students conduct a panel discussion about career opportunities in science. This project began with my CAREER award in 2011 and has continued beyond the life of the award.

*Visiting Instructor, Non-invasive Genetic Techniques in Wildlife Conservation* (Smithsonian Conservation Biology Institute in Front Royal, Virginia)

May 2011, 2012

I served as a visiting instructor for this summer course, which involved designing and teaching modules to 30 graduate students from my own research.



Public science outreach (Smithsonian National Zoological Park, Washington, DC)  
2005 - 2007

I designed and taught several outreach activities at the National Zoo, aimed at educating children and adults about conservation, genetics, and animal behavior.

Invited educational outreach seminars

- 2015-2018 *Life as a field biologist*. Spoke to high school freshman in honors biology students at Penn High School, Mishawaka, IN.
- 2014 *The role of women in field biology in East Africa*. Spoke to undergraduates in a course on Women's Voices in Biology at St. Mary's College, South Bend, IN.
- 2013 *Life as a field biologist*. Spoke to high school freshman in honors biology students at Penn High School, Mishawaka, IN.
- 2013 *Social behavior and survival in wild baboons*. Spoke to the general public at the Potawatomie Conservatories, Mishawaka, IN.
- 2012 *The role of women in field biology in East Africa*. Spoke to undergraduates in a course on Women's Voices in Biology at St. Mary's College, South Bend, IN.
- 2012 *Life as a field biologist*. Spoke to high school freshman in honors biology at Penn High School, Mishawaka, IN.

## RESEARCH PERSONNEL SUPERVISED

### Postdoctoral researchers

- 2019-present Dr. Stacy Rosenbaum, Ph.D. in Biological Anthropology, University of California Los Angeles (2014); M.A. in Biological Anthropology University of California Los Angeles (2010)
- 2016-present Dr. Johannes Bjork, Ph.D., Institute of Marine Sciences, Barcelona, Spain (2016); M.S. University of Gothenburg, Gothenburg, Sweden (2011)
- 2010-2013 Dr. Patrick Chiyo, Ph.D., Duke University, Durham NC (2010); M.S. Makerere University, Kampala, Uganda (2000)

### Doctoral theses directed at Notre Dame

- 2018-present Emily Nonnamaker, M.S. in Ecology and Evolution, Tulane University (2017); B.S. in Environmental Biology, Tulane University (2016).
- 2017-present Chelsea Weibel, B.S. in Biochemistry and Mathematics, SUNY College at Geneseo (2014)
- 2015-present Mauna Dasari, B.S. in Microbial Biology; B.A. Anthropology. University of California, Berkeley (2012)
- 2012-2017 Robert Habig, *currently an NSF Postdoctoral Fellow at CUNY and the American Museum of Natural History*. B.A., Biology, Queens College, City University of New York, Flushing, NY (2011); M.S. Science Education, Bank Street College of Education, New York, NY (2002); B.A. Drama and Theater, Queens College, City University of New York, Flushing, NY (1992)
- 2011-2017 Laura Grieneisen, *currently a Postdoctoral Fellow in the Department of Genetics and Genomics at the University of Minnesota*. M.S. Biology, Bucknell University, Lewisburg, PA (2011); B.S. Biology, College of William and Mary, Williamsburg, VA (2009)

2010-2016 Elizabeth Miller, *currently a Postdoctoral Researcher at the University of Minnesota*. B.S. Biology, Oberlin College, Oberlin, OH (2007)

### International post-graduate student sponsorship and training

As part of my research in Kenya, I serve as the primary supervisor for Kenyan M.S. and Ph.D. students. This supervision is required for my research permission from the Kenyan Government and is important for building research capacity in Kenya.

2018-present Peter Oduor, M.S. in Reproductive Sciences, Department of Veterinary Anatomy and Physiology, University of Nairobi

2017-present Rispah Ng'Ang'A Nyambura, M.S. in Genetics, College of Biological and Physical Sciences, University of Nairobi.

2011-2015 Vincent Obanda, PhD at the Department of Parasitology and Pathobiology, University of Nairobi, Kenya (2015); M.S. Zoology Department, University of Nairobi, Nairobi, Kenya (2004); B.S. Zoology and Botany, Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya (1999)

### Other lab personnel

2014-present Dr. David Jansen is my lab manager. He received his Ph.D. from the University of Zurich, Switzerland, in 2013 and his BS from the University of Wageningen, the Netherlands in 2003.

2010 – 2011 Emily McLean, was a research technician in my lab. She received her M.S. from the University of North Carolina at Greensboro, Greensboro, NC and her B.S. from Bryan College, Dayton, TN. Emily is currently a doctoral student in the Department of Biology at Duke University.

### Undergraduate researchers at Notre Dame

underline = submitted research abstract

\* = honors project

2018 – present Katherine Sestrick, Biology, 2020

2018 – present Davin Lee, Biology 2020

2018 – present Marlena Muszynska, Biology 2020

2018 – present Laura Faubion, Neuroscience and Behavior, 2021

2017 – present Elise Paietta, Biology, 2020

2016 – 2018 Idaleen Ching, Neuroscience, 2018

2016 – 2018 Joohye Kim, Biology, 2019

2016 – 2018 Abigail Herman, SCPP and Anthropology, 2018

2016 – 2018 Christina Wells, SCPP, 2019

2018 – 2018 Emily Mears, Biology, 2020

2018 – 2018 Andrew Belilos, Science Business

2016 – 2017 Claire Goodfellow, Biology, 2017

2015 – 2016 Tammi Del Ponte, Neuroscience and Behavior, 2017

2015 – 2016 Anne Lentino, Biology, 2018

2015 – 2016 Kaya Moore, Biology and Philosophy, 2016

2015 – 2016 Jennifer Shin, SCPP, 2016

2015 – 2016 Erik Mendoza, Psychology, 2016

2014 – 2016 Kourtney Woods, Biology, 2017

2014 – 2016 Jean Carlo Yunen, Biology, 2017

2014 – 2016	<u>Nicole Thieken</u> , Biology and Anthropology, 2016
2013 – 2016	<u>Caitlin Smith</u> , Psychology, 2015
2014 – 2015	<u>Jon Olansen</u> , Biology, 2017
2013 – 2015	<u>Melanie Mironovich</u> , Biology, 2015
2012 – 2015	<u>Jeff Hansen</u> , Biology, 2015
2013 – 2014	Amy Johnson, SCPP and Psychology, 2015
2013 – 2013	<u>Julia Kruep</u> , Biology, 2015
2012 – 2013	<u>Kelly Deweese</u> , Biology, 2013
2011 – 2013	<u>Whitney Preisser</u> , Biology, 2013
2011 – 2013	<u>Suzanne Spitzer</u> , Biology and Anthropology, 2013
2011 – 2013	<u>Emily Spulak*</u> , Biology, 2013
2011 – 2013	<u>Tylor Gauger</u> , SCPP, 2013
2010 – 2013	<u>Danielle Guilfoyle</u> , SCPP, 2013
2010 – 2011	Edward Kangsup Kim, SCPP, 2011
2009 – 2011	<u>David Cray</u> , Biology, 2011
2009 – 2011	<u>Anjelica Nguyen</u> , SCPP, 2011

### High School researchers at Notre Dame

2015 – 2016 Molly Pendergast, Marian High School, Mishawaka, IN

### Student grants and awards

#### External

2017 Summer Institutes Scholarship, Department of Biostatistics, University of Washington to Mauna Dasari  
 2017 National Science Foundation Postdoctoral Fellowship to Bobby Habig  
 2017 Grand Challenges Research Award from the University of Minnesota to Laura Grieneisen  
 2017 National Science Foundation Predoctoral Fellowship Honorable Mention to Mauna Dasari  
 2011 National Science Foundation Predoctoral Fellowship to Elizabeth Miller

#### Internal

2019 Best Oral Presentation, Notre Dame REU program, to Tamara Lee  
 2019 Best Poster, Notre Dame REU program, to Elise Paietta  
 2018 Leadership Engaging Socially Engaged Research to Mauna Dasari  
 2017 GLOBES minigrant to Mauna Dasari  
 2017 REACT Fellowship for Quantitative Training to Chelsea Weibel  
 2017 REACT Fellowship for Quantitative Training to Mauna Dasari  
 2016 Social Responsibilities of Research Fellowship, to Mauna Dasari  
 2016 Graduate Student Life Award, to Mauna Dasari  
 2016 Outstanding Talk at Notre Dame Biology Departmental Retreat to Elizabeth Miller  
 2016 Outstanding Poster at Notre Dame Biology Departmental Retreat to Robert Habig  
 2015 Dean's Fellowship awarded to Mauna Dasari  
 2015 Notebaert Professional Development Award to Elizabeth Miller  
 2015 Notebaert Professional Development Award to Laura Grieneisen  
 2015 Notebaert Professional Development Award to Robert Habig  
 2013 Honors in Biology awarded to Emily Spulak  
 2012 Schmitt Fellowship awarded to Robert Habig  
 2012 Notebaert Professional Development Award to Elizabeth Miller

- 2012 Notebaert Professional Development Award to Laura Grieneisen  
 2010 Moreau Postdoctoral Fellowship to Patrick Chiyo

## PROFESSIONAL MEMBERSHIPS AND SERVICE

### Professional activities

- 2019 Symposium organizer, organized and leading a symposium on, "Cross-taxa perspectives on behavior and developmental origins" at the Animal Behavior Society meeting in Chicago, IL. I am organizing this symposium together with my postdoc, Stacy Rosenbaum. ABS awarded us \$5,000 to spend on travel funds for participants.
- 2018 - present Editorial Board, American Journal of Primatology
- 2017 - present Editorial Board, PeerJ
- 2016 - 2017 Chair, American Society of Naturalists Workshop Committee. I worked with two other faculty to review applications for workshop funding, supported by the American Society of Naturalists.
- 2015 - 2016 Chair, American Society of Naturalists Student Research Awards Committee. I work with two other faculty and three graduate students to review Student Research Award applications for the American Society of Naturalists.
- 2014 Invited participant, NESCent catalysis meeting on the evolution and community ecology of host-associated microbiota. The aim of this meeting was to bring together evolutionary biologists, community ecologists, microbial ecologists and medical microbiologists to develop conceptual frameworks to advance scientific understanding of the biotic interactions among the gut microbes and the host.
- 2014 Invited participant, New Frontiers for the Integrative Study of Animal Behavior. Invited by the NSF to help develop a whitepaper that defined the future of integrative research in animal behavior. This workshop was initiated and supported by the Behavioral Systems Cluster at NSF and included 25 experts in the field of animal behavior. New York Genome Center, New York, NY.
- 2014 Symposium organizer, Organized and led an NSF-funded symposium titled, "Animal Behavior and Disease Ecology: Past, Present, and Future" at the national meeting of the Annual Behavior Society. Our symposium included an evening outreach activity to help students at the conference meet the symposium speakers. My co-organizer was Vanessa Ezenwa (University of Georgia). Animal Behavior Society Annual Meeting, Princeton, NJ.
- 2014 Member, American Society of Naturalists Student Research Awards committee. I work with two other faculty and three graduate students to review Student Research Award applications for the American Society of Naturalists.
- 2013 Invited participant, Ethoinformatics Working Group. Invited member of a workshop that aimed to develop new digital tools for data collection in the field of animal behavior. Washington University, St. Louis, MO
- 2012 Judge, Warder Clyde Allee Award for Best Student Paper. This award is the top award granted to PhD students in my field. Animal Behavior Society Annual Meeting, Albuquerque, NM
- 2009 – 2013 Member, Evolution Working Group, Notre Dame.
- 2009 – 2011 Member, Conversations in Mind, Brain and Behavior, Notre Dame.
- 2006 – 2007 Member, Committee on Elephant Science and Conservation, Smithsonian National Zoo.

Professional society memberships: Animal Behavior Society, Ecological Society of East Africa, International Primatological Society, and the Society for the Study of Evolution

## Proposal and manuscript reviews

(since 2005)

Granting agencies: National Science Foundation (grant reviews and panel service), Leaky Foundation, German Research Foundation, US-Israel Bi-National Science Foundation, The Natural Environment Research Council, UK

Journals: American Midland Naturalist, American Journal of Physical Anthropology, American Journal of Primatology, Animal Behaviour, Behavioral Ecology, Behavioral Ecology and Sociobiology, Behaviour, Biology Letters, BMC Ecology, Conservation Biology, Conservation Genetics, Current Anthropology, Current Biology, Estuaries and Coasts, Ethology, Ecology and Evolution, Evolution, Environmental Microbiology, Functional Ecology, Heredity, Hormones and Behavior, International Journal of Primatology, ISME Journal, Journal of Animal Ecology, Journal of Arid Environments, Journal of Mammalogy, Journal of Zoology, Microbial Ecology, Molecular Biology and Evolution, Molecular Ecology, Molecular Ecology Notes, PLoS One, Philosophical Transactions of the Royal Society, Proceedings of the National Academy of Sciences, Proceedings of the Royal Society of London, Psychosomatic Medicine, Royal Society Open Science, Science, Trends in Ecology and Evolution, Yearbook of Physical Anthropology

## College and University service

- 2016-present Founder, REACT program (Rapid Exposure to Advanced Computational Training). This program provides funds for graduate students across the College of Science to attend national and international workshops in computational techniques. I wrote proposals to secure funding for the program, designed the funding procedures, and work with other faculty to evaluate student applications. REACT is collaboration between the Environmental Change Initiative (ECI), The Eck Institute for Global Health (EIGH), the Genomics and Bioinformatics Core Facility (GBCF), and the Harper Cancer Research Institute (HCRI). We disperse ~\$10,000 annually for student training.
- 2017-present Building Bridges Faculty Mentor. Serves as a faculty mentor for two undergraduate students from underrepresented groups at Notre Dame
- 2018 Interviewer, Trustey Merit Scholars selection visit, University of Notre Dame
- 2016 Judge, 3-Minute Thesis contest, University of Notre Dame
- 2013-2014 Member, search committee in Epidemiology. Helped to screen and interview candidates for two tenure-track positions in epidemiology. Eck Institute for Global Health and the University of Notre Dame, IN.
- 2013 Host, Scholarly Engagement Program. Hosted 15 freshman and sophomores at my home for dinner to discuss research opportunities and careers in biology, University of Notre Dame, Notre Dame, IN.
- 2010-2011 Member, search committee in Neurobiology (IUSB). Helped to screen and interview job candidates for a tenure-track position in neuroscience. Indiana University South Bend, IN.
- 2011-present Faculty advisor. Notre Dame for Animals
- 2011 Panelist. Office of Research panel for new faculty on applying for an NSF CAREER award.
- 2010 Panelist. Kaneb Center panel for graduate students on the academic job search.

## Departmental service

Committees

- 2017-present Member, Committee on Inclusive Excellence. This committee works to improve diversity in the Biology Department at Notre Dame.
- 2013-present Member, Graduate Studies Advisory Committee (GSAC). As a member of this committee, I represent 9 faculty in the graduate admissions and recruitment process. This committee also works to improve graduate education in Biology.
- 2017-2018 Member, External Review Task Force. I helped plan and prepare documents for the Departmental external review in 2018.
- 2016-2017 Member, Undergraduate Curriculum Committee. This committee met weekly through 2016 and 2017 to re-design the introductory biology course offerings at Notre Dame.
- 2015-2016 Elected Member, Committee on Appointments and Promotions (CAP). Facilitated departmental decisions on hiring and promotions.
- 2015-2016 Member, job search committee in Ecology, Evolution, and Environmental Change. Helped to screen 450+ applicants for an open rank search. Participated in interviews.
- 2014-2016 Member & Chair (2015), Biology Department Seminar Committee. Organized Biology Department seminar series and nominations for sponsored lectures.
- 2009-2016 Member & Chair (2011 & 2012), Biology Department events committee. Planned and helped direct departmental retreats in 2010, 2012 and 2014. Each December we plan and host the departmental Christmas party.
- 2010-2011 Member, Biology Department ad hoc graduate curriculum committee. We prepared materials for the Biology Department external review. I wrote a document which is currently used to evaluate the annual progress of graduate students.

Graduate student committees at Notre Dame:

Brittini Bertolet (Jones)  
 Hildamarie Caceres-Velazquez (Jones)  
 Katelyn Carothers (McDowell)  
 Mary Chang (Boyd)  
 Kerri Citterbart (Belovsky)  
 Colin Dassow (Jones)  
 Rose Donohue (Michael)  
 David Flagel (Belovsky)  
 Cate Flanley (IBMS)  
 Mary Glover (Feder)  
 Benjamin Gombash (Hollocher)  
 Maria Hinson (Michael)  
 Erica Kistner (Belovsky)  
 Amy Klegarth (Hollocher)  
 Jessica Kowalik (Ridenhour)  
 Glen Hood (Feder)  
 Diana LaTore (Michael)  
 Dave Molik (Pfrender)  
 Rachel Oidtman (Perkins)  
 Chissa Rivaldi (Hollocher)  
 Lindsey Sargent (Lodge)  
 Kimbra Turner (Ridenhour)  
 Justin Wilcox (Hollocher)

External graduate student committees:

Jordan Anderson (Duke University)  
 Mercy Akinyi (Duke University)  
 Shifra Goldenberg (Colorado State University)  
 Emily Levy (Duke University)  
 Emily McLean (Duke University)

## Recent media coverage

- 2019    Scientia (August 2019). [Does Your Microbiome Shape Your Friendships?](#)  
 Science Magazine (April 2019). [Baboons' gut makeup is determined mostly by soil, not genetics](#)  
 Scientific American (January 2019). [What Can Baboon Relationships Tell Us about Human Health?](#)
- 2018    Coverage for NSF Rules of Life Award. [NSF announces new awards for Understanding the Rules of Life](#)  
 Participated in a documentary film series called, [Aging in the Wild](#). The series the series was adapted into a one-off for the [CBC](#) 'The Nature of Things' and broadcast in the fall of 2018. It also aired as a 5-part series on Love Nature in Canada.  
 Coverage for Habig et al. 2018: [Social Dominance Comes at a Cost](#)  
 Coverage for Lea et al. [Baboon sexes differ in how social status gets 'under the skin'](#).
- 2017    Participated in a documentary film series called, [Sisters of the Savannah](#).
- 2016    National Institute of Aging (Apr 19 2016) [Early life adversity predicts longevity in baboons, serving as a human model for aging](#)  
 National Science Foundation (Apr 19 2016) [Rough childhoods can have ripple effects for wild baboons](#)  
 Duke Today [Rough Childhoods Have Ripple Effects for Baboons](#)  
 Smithsonian magazine (Apr 19 2016) [For Baboons, a Tough Childhood Can Lead to a Short Life](#)  
 Pacific Standard (Apr 21 2016) [Childhood Adversity Shortens Lives \(in Baboons\)](#)  
 Quirks and Quarks CBCradio (Apr 23 2016) [Difficult childhood makes baboon lives briefer Including interview with Susan Alberts](#)  
 The Washington Post (Apr 25 2016) [Like humans, baboons with tough childhoods die earlier](#)  
 The Sydney Morning Herald (Apr 26 2016) [Like humans, baboons with tough childhoods die earlier](#)
- 2015    Big Picture Science (March 2015; <http://radio.seti.org/blog/2015/03/big-picture-science-microbes-resistance-is-futile-beth-archie-shared-microbiome/>), The Atlantic, The Scientist, Phys.Org, Science Blog, Eureka Alert, Blogs: Microbiome Digest and The Molecular Ecologist