

CURRICULUM VITAE

RESEARCH INTERESTS

I am a human biologist and evolutionary theorist with an interest in applying evolutionary and ecological theory to human health and disease. My work is multidisciplinary and uses a combination of genomics, comparative biology, and evolutionary theory to understand life history trade-offs between survival and reproduction across different levels of biological organization. Active research topics include (1) Comparative oncology and the evolution of cancer defenses across the tree of life; (2) Life history trade-offs in cancer, with a focus on early life adversity and cancer outcomes, and (3) Maternal-fetal conflict in maternal health, including studies on microchimerism and maternal tolerance during pregnancy, the immunology of breastfeeding, and maternal health and behavior postpartum.

PROFESSIONAL APPOINTMENTS

2021 -	Associate Professor, Department of Anthropology, University of California, Santa Barbara
2017 - 2021	Assistant Professor, Department of Anthropology, University of California, Santa Barbara
2016 - 2017	Assistant Research Professor, The Biodesign Institute, Arizona State University
2014 - 2016	Postdoctoral Fellow, Arizona State University
2013 - 2014	Postdoctoral Fellow, University of California, San Francisco

EDUCATION

Ph.D. 2006 - 13	Wayne State University - School of Medicine, Molecular Biology & Genetics
B.S. 2003 - 05	Wayne State University, Biology
A.A. 2000 - 03	Macomb Community College, Liberal Arts

AFFILIATED MEMBERSHIP

2018-	Arizona Cancer and Evolution (ACE) Center, Co-leader
2018-	BROOM Center for Demography, University of California, Santa Barbara
2015 - 2017	Center for Evolution and Medicine, Arizona State University
2013 - 2015	Center for Evolution and Cancer, University of California San Francisco

PEER-REVIEWED PUBLICATIONS

- In Prep Hové C, Trumble B, Stieglitz J, Kaplan H, Gurven M, **Boddy AM***, Blackwell A*. Female immune function across the reproductive continuum is responsive to environmental inputs. *Equal contributions
- Submitted Giraudea M, Aktipis A, Conde DA, Baines C, Boddy AM, Bramwell G, Colchero F, Degregori J, Dujon A, Gentes S, Hamede R, Harris V, Lair S, Le Loc'h G, Lemaitre JF, Lemberger K, Lerebours A, Maley CC, Malkocs T, Padilla Morales B, Panabieres C, Pavard S, Roche B, Sayag D, Sepp T, Thomas F, Ujvari B, Urrutia A, Vincze O, Chevallier D. Methods to study wildlife cancer. Submitted to Journal of Animal Ecology. 2022
30. Abdulljabbar K, Castillo SP, Hughes K, Davidson H, **Boddy AM**, Abegglen LM, Murchison EP, Graham TA, Spiro S, Palmieri C, Yuan Y. AI-powered pan-species computational pathology: bridging clinic and wildlife care. Accepted to Nature Communications. 2023

29. **Boddy AM**, Rupp S, Yu Z, Hanson H, Aktipis A, Smith K. Early life adversity, reproductive history, and breast cancer risk. *Evolution, Medicine and Public Health*. In press.
28. Abegglen LM, Harrison TM, Moresco A, Fowles JS, Troan BV, Kiso WK, Schmitt D, **Boddy AM**, Schiffman JD. Of elephants and other mammals: A comparative review of reproductive tumors and potential impact on conservation. *Animals*. (2022): 12(15), 2005.
27. Dujon AM, Boutry J, Tissot S, Lemaitre JF, **Boddy AM**, Gerard A, Alvergne A, Arnal A, Vincze O, Nicolas D, Giraudeau M, Telonis-Scott M, Schultz A, Pujol P, Biro P, Beckmann C, Hamede R, Roche B, Ujvari B, Thomas F. Cancer susceptibility as a cost of reproduction and contributor to life history evolution. *Frontiers in Ecology and Evolution*. 10 (2022): 861103.
26. Natterson-Horowitz B, **Boddy AM**, Zimmerman, D. Female Health Across the Tree of Life: Insights at the Intersection of Women's Health, One Health and Planetary Health." *PNAS nexus* 1.2 (2022): pgac044.
25. Vincze O, Colchero F, Lemaitre JF, Conde D, Pavard S, Bieuville M, Urrutia AO, Ujvari B, **Boddy AM**, Maley CC, Thomas F, Giraudeau M. Cancer risk across mammals. *Nature*. 601.7892 (2022): 263-267.
24. Tollis M, Ferris E, Campbell M, Harris V, Rupp S, Harrison T, Kiso WK, Schmitt D, Aktipis A, Maley C, **Boddy AM**, Yandell M, Schiffman JD, Abegglen LM. Elephant genome reveal accelerated evolution in mechanisms underlying disease defenses. *Molecular Biology and Evolution*. 38.9 (2021): 3606-3620.
23. Ujvari B, Dujon A, Aktipis A, Alix-Panabières C, Amend S, **Boddy AM**, Brown J, Capp JP, DeGregori J, Ewald P, Gatenby R, Gerlinger M, Giraudeau M, Hamede R, Hansen E, Kareva I, Maley CC, Marusyk A, McGranahan N, Metzger M, Nedelcu A, Noble R, Nunney L, Pienta K, Polyak K, Pujol P, Read A, Roche B, Sebens S, Solary E, Stanková K, Thomas F, Ewald HS. Identifying key questions in the ecology and evolution of cancer. *Evolutionary applications* 14.4 (2021): 877-892.
22. Gunst A, Sudén M, Korja R, **Boddy AM**, Kotler J, Paavonen EJ, Karlsson L, Karlsson H, Antfolk J. Postpartum depression and mother-offspring conflict over maternal investment. *Evolution, Medicine and Public Health*. 9.1 (2021): 11-23.
21. **Boddy AM**, Harrison T, Abegglen LM. Comparative Oncology: New Insights into an ancient disease. *Iscience*. (2020): 101373.
20. **Boddy AM**, Abegglen LM, Pessier AP, Schiffman JD, Maley CC, Witte C. Lifetime cancer prevalence and life history traits in mammals. *Evolution, Medicine and Public Health*. (2020): 187-195.
19. Campenni M, May AN, **Boddy AM**, Harris V, Nedelcu AM. Agent-based modelling reveals strategies to reduce the fitness and metastatic potential of circulating tumour cell clusters. *Evolutionary Applications*. March 2020. 13.7 (2020): 1635-1650.
18. Somarelli JA, **Boddy AM**, Gardner H, Bartholf DeWitt S, Tuyohy J, Megquier K, Sheth MU, Hsu D, Thorne JL, Eward WC. Improving cancer drug discovery by studying cancer across the tree of life. *Molecular Biology and Evolution* 37.1 (2020): 11-17.
17. Somarelli JA, Gardner H, Cannataro VL, Gunady EF, **Boddy AM**, Johnson NA, Fisk JN, Gaffney SG, Chuang JH, Li S, Ciccarelli FD. Molecular biology and evolution of cancer: from discovery to action. *Molecular Biology and Evolution*, 2020. 37(2), 320-326.
16. Aktipis A, Cronk L, Alcock J, Ayers JD, Baciu C, Balliet D, **Boddy AM**, Curry OS, Krems JA Muñoz A, Sullivan D. Understanding cooperation through fitness interdependence. *Nature Human Behaviour*. 2018 Jul;2(7):429.
15. Maley CC, Aktipis A, Graham TA, Sottoriva A, **Boddy AM**, Janiszewska M, Silva AS, Gerlinger M, Yuan Y, Pienta KJ, Anderson KS, Gatenby R, Swanton C, Posada D, Wu CI, Schiffman JD, Hwang ES, Polyak K, Anderson ARA, Brown JS, Greaves M, Shibata D. Classifying the evolutionary and ecological features of neoplasms. *Nature Reviews Cancer*. 2017. 17.10:605-619

14. **Boddy AM**, Montgomery SH, Harrison PW, Caravas JA, Raghanti MA, Phillips KA, Mundy NI, Wildman DE. Evidence of a conserved molecular response to selection for increase brain size in primates. *Genome biology and evolution* 9 (3). 2017.
13. Diaz-Munoz S, **Boddy AM**, Dantas G, Waters CM, and Bronstein JL. Contextual organismality: beyond pattern to process in the emergence of organisms. *Evolution*. 70.12 (2016): 2669-2677
12. Hidaka, Brandon H, and **Boddy AM**. Is estrogen receptor negative breast cancer risk associated with a fast life history strategy? *Evolution, medicine, and public health*. 2016. 17-20
11. **Boddy AM**, Fortunato A, Wilson Sayres M, Aktipis A. Fetal microchimerism and maternal health: A review and evolutionary analysis of cooperation and conflict beyond the womb. *Bioessays*. 2015. Oct 1;37(10):1106-18.
10. **Boddy AM**, Kokko H, Breden F, Wilkinson GS, Aktipis CA. Cancer susceptibility and reproductive trade-offs: a model of the evolution of cancer defences. *Phil. Trans. R. Soc. B*. 2015. 20140220.
9. Aktipis CA, **Boddy AM**, Jansen G, Hibner U, Hochberg ME, Maley CC, Wilkinson GS. Cancer across the tree of life: cooperation and cheating in multicellularity. *Phil. Trans. R. Soc. B*. 2015: 20140219.
8. Aktipis CA, **Boddy AM**, Gatenby RA, Brown JS, Maley CC. Life history tradeoffs in cancer evolution. *Nat Rev Cancer*. 2013. 13(12):883-92.
7. Sterner KN, McGowen M, Chugani H, Tarca A, Sherwood CC, Hof PR, Kuzawa, CW, **Boddy AM**, Raaum RL, Weckle A, Lipovich L, Grossman LI, Uddin M, Goodman M, Wildman DE. Characterization of human cortical gene expression in relation to glucose utilization. *Am J Hum Biol*. 2013. 25(3):418-30.
6. Sterner KN, Chugani HT, Tarca AL, Sherwood CC, Hof PR, Kuzawa CW, **Boddy AM**, Raaum RL, Weckle A, Gregoire L, Lipovich L, Grossman LI, Uddin M, Goodman M, Wildman DE. Dynamic gene expression in the human cerebral cortex distinguishes children from adults. *PLoS ONE*. 2012. 7(5):e37714.
5. **Boddy AM**, McGowen MR, Sherwood CC, Grossman LI, Goodman M, Wildman DE. Comparative analysis of encephalization in mammals reveals relaxed constraints on anthropoid primate and cetacean brain scaling. *J Evol Biol*, 2012. 21(10):981-94277.
4. Hinterseher I, Erdman R, Donoso LA, Vrabec TR, Schworer CM, Lillvis JH, **Boddy AM**, Derr K, Golden A, Bowen WD, Gatalica Z, Tapinos N, Elmore JR, Franklin DP, Gray JL, Garvin RP, Gerhard GS, Carey DJ, Tromp G, Kuivaniemi H. The role of complement cascade in abdominal aortic aneurysms. *Arterioscler Thromb Vasc Biol*. 2011. 31(7):1653-60.
3. Sherwood CC, Raghanti MA, Stimpson CD, Spocter MA, Uddin M, **Boddy AM**, Wildman DE, Bonar CJ, Lewandowski AH, Phillips KA, Erwin JM, Hof PR. Inhibitory interneurons of the human prefrontal cortex display conserved evolution of the phenotype and related genes. *Proc. R. Soc. B*, 2010. 277(1684):1011-20.
2. Elmore JR, Obmann MA, Kuivaniemi H, Tromp G, Gerhard GS, Franklin DP, **Boddy AM**, Carey DJ. Identification of a genetic variant associated with abdominal aortic aneurysms on chromosome 3p12.3 by genome wide association. *J Vasc Surg*. 2009. 49:1525-31.
1. **Boddy AM**, Lenk GM, Lillvis JH, Nischan J, Kyo Y, Kuivaniemi H. Basic research studies to understand aneurysm disease. *Drug News and Perspectives*. 2008. 21(3):142-8.

BOOK CHAPTERS AND OTHER CONTRIBUTIONS

11. **Boddy AM**. The need for evolutionary theory in cancer research. *European Journal of Epidemiology* (2022). 1-6.

10. Marques C, Compton Z, **Boddy AM**. Connecting paleopathology and evolutionary medicine to cancer research: past and present. *Evolving Health: Paleopathology and Evolutionary Medicine: An Integrated Approach*, Oxford University Press. 2022. 239.
9. **Boddy AM**, Abegglen LM, Aktipis A, Schiffman JD, Maley CC, Witte C. Does placental invasiveness lead to higher rates of malignant transformation in mammals? *Evolution, Medicine and Public Health*. (2020): 215-216.
8. **Boddy AM**, Huang W, Aktipis A. Life History Trade-offs in Tumors. *Current PathoBiology Reports*. 2018. 6:201-207.
7. Tollis M, **Boddy AM**, Maley CC. Peto's paradox: how evolution solved the problem of cancer prevention. *BMC Biology*. 2017;15 (1) 60.
6. Tollis M, Schiffman JD, **Boddy AM**. Evolution of cancer suppression as revealed by comparative genomics. *Current Opinion in Genetics & Development* 42 (2017): 40-47
5. Harris VK, Schiffman JD, **Boddy AM**. Evolution of cancer defense mechanisms across species. In: *The Ecology and Evolution of Cancer*. Eds: Ujvari, Roche, Thomas. Elsevier. 2017.
4. Fortunato A, **Boddy AM**, Mallo D, Aktipis A, Maley CC, Pepper JW. Natural Selection in Cancer Biology: From molecular snowflakes to trait hallmarks. *CSH Perspectives in Medicine*. 7 (2) 2017.
3. Chowell D, **Boddy AM**, Mallo D, Tollis M, Maley CC. When (distant) relatives stay too long: implications for cancer medicine. *Genome biology*. 2016. Feb 24;17(1):1.
2. Nischan J, Lenk GM, **Boddy AM**, Lillvis JH, Tromp G, Kuivaniemi H. Abdominal aortic aneurysms – a complex genetic disease. In: *Aneurysms: Types, Risks, Formation and Treatment*, Nova Science Publishers, Inc., Hauppauge, NY. E Morel E and Laurent A, eds. 2009.
1. Kuivaniemi H, **Boddy AM**, Lillvis JH, Nischan J, Lenk GM, Tromp G. Abdominal aortic aneurysms are deep, deadly and genetic. In: *Aortic Aneurysms, New insights into an old problem*. Liege University Press, Liege, Belgium. Sakalihan N, Kuivaniemi H, and Michel JB, eds. 2008; 299-323.

FELLOWSHIPS

- | | |
|------|---|
| 2012 | Wayne State University Provost Fellowship for Computational Biology |
| 2011 | Wayne State University Provost Fellowship for Computational Biology |

ACTIVE GRANTS/FUNDING

6. John Templeton Foundation: *We All Are Multitudes: the Microchimerism, Human Health and Evolution Project*. \$5,339,697 total. Boddy is Co-leader; \$1,099,188 total to UCSB. 2021-2024.
5. NIH U54: ACE Pilot Funding. *Of pan-species histology and macroecology: chasing a solution to Peto's paradox across mammals*. Boddy is Co-I. \$12,000 total direct. 2021-2022.
4. NIH U54: ACE Pilot Funding. *Oncogenic mutational signatures in cancer-like phenotypes in Acropora*. Boddy is Co-I. \$14,680 total direct. 2021-2022.
3. NIH U54: ACE Pilot Funding. *Molecular evolution of immunity, reproduction and cancer genes in crocodylians*. Boddy is Co-PI. \$13,500 total direct. 2021-2022.
2. NIH U54: ACE Pilot Funding. *Prevalence of reproductive cancers in nonhuman primates*. Boddy is Co-PI. \$7,350 total direct. 2021-2022.
1. NIH U54: Arizona Cancer Evolution Center. *Applying models of evolution to cancer across scales, from species down to cells*. \$7,500,000 total direct. Boddy is Co-Leader Project 1. \$263,024 total directs to UCSB. 2018-2023.

PENDING GRANTS/FUNDING

1. NA

COMPLETED GRANTS/FUNDING

8. National Science Foundation. Graduate Research Fellowship Program. *Pregnancy-induced inflammation and obstacles to breastfeeding success in an industrialized environment*. \$30,934 total direct. Boddy is Co-PI with student Carmen Hové. 2019-2021.
7. University of California Santa Barbara, Academic Senate Grant. *The functional role of fetal microchimerism in maternal health*. \$11,513 total direct. Boddy is PI. 2020
6. NIH U54: Administrative Supplement. *Characterization of Elephant Tumor Evolution*. \$38,180 total direct. Boddy is Co-PI. 2019-2020.
5. NIH U54: ACE Pilot Funding. *Phenotypic and Genomic Responses to DNA Damage in Crocodylians*. Boddy is Co-PI. \$8,000 total direct. 2019-2020.
4. NIH U54: ACE Pilot Funding. *Somatic Mutations in Tumors from Wild African Elephants*. Boddy is Co-PI. \$25,155 total direct. 2019-2020.
3. University of California - Cancer Research Coordinating Committee. *Think Biology: Healthy teen lifestyles and cancer prevention*. Boddy is Co-I. \$66,941 total direct. 2019-2020.
2. NIH U54 ACE Pilot Funding. *WCON: Wildlife Cancer Observation Network*. Boddy is Co-PI. \$12,000 total direct. 2018-2019
1. NIH U54 ACE Pilot Funding. *Cancer Prevalence and Neoplastic Cell Evolution in Nonhuman animals*. Boddy is Co-PI. \$39,440 total direct. 2018-2019

ACADEMIC HONORS & AWARDS

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| 2020 | UCSB Faculty Career Development Award. <i>Maternal-Fetal Crosstalks: Investigating the Role of Maternal Immune Tolerance and Fetal Microchimerism in Maternal Health and Disease</i> . \$7,500 Summer Salary Support. Boddy is PI. 2020. |
| 2020 | Nominee – Packard Fellowship, University of California, Santa Barbara |
| 2018 | Nominee – Pew Biomedical Scholars, University of California, Santa Barbara |
| 2016 | Postdoctoral Award Finalist - Human Behavior and Evolution Society |
| 2015 | Postdoctoral Award Finalist - Human Behavior and Evolution Society |
| 2013 - 2014 | Guest in the Cancer Evolution Work Group at The Institute for Advanced Study in Berlin (Wissenschaftskolleg) |
| 2009 | Wayne State University School of Medicine Travel Award |
| 2008 | Summer Institute in Statistical Genetics - University of Washington Travel Award |
| 2007 | Cold Spring Harbor Travel Award: Clinical Cardiovascular Genomics Conference |
| 2005 | Graduated Cum Laude with B.S. from Wayne State University |

COMMITTEES/SERVICE

- | | |
|-------|---|
| 2022 | Program Committee, International Society for Evolution, Medicine and Public Health, July 5 – 8, 2022. Lisbon, Portugal |
| 2022 | Scientific Program Committee, Evolutionary Biology and Ecology of Cancer Summer School, Wellcome Connecting Science, June 13-17, 2022. Hinxton, United Kingdom |
| 2020* | Scientific Program Committee, Evolutionary Biology and Ecology of Cancer Summer School, Wellcome Genome Campus, June 29-July 3, 2020. *cancelled due to COVID19 |
| 2019 | Invited participant, Workshop on strategic planning “Comparative Genomics and Evolution” NHGRI/NSF, Bethesda, MD August 16-17. |

- 2018 - Board Member, International Society for Evolution, Ecology, and Cancer
 2018 - Board Member, Science Ambassador Scholarship, Cards Against Humanity
 2017 Co-Organizer, International Society for Evolution, Ecology, and Cancer, Arizona State University, Tempe, AZ
 2015 Co-Organizer, Third Biannual Evolution and Cancer Conference, University of California San Francisco
 2013 Co-Organizer, Second Biannual Evolution and Cancer Conference, University of California San Francisco
 2010 Chair, Graduate Student Research Day, Wayne State University School of Medicine
 2009 Sponsorship Committee, Graduate Student Research Day, Wayne State University School of Medicine
 2009 Summer Undergraduate Research Director, Wayne State University School of Medicine
 2008-09 Co-Chair, Summer Undergraduate Research Program, Wayne State University School of Medicine

TEACHING

- Anth 203 Race, Racism and Anti-Racism (Spring 2022)
 Anth 150 Human Genetics, UCSB (Fall 2019, Winter 2022)
 Anth 177AB Reproductive Ecology and Endocrinology, UCSB (Fall 2018, Winter 2021, Winter 2023)
 Anth 171 Evolutionary Medicine, UCSB (Winter 2018, 2019, 2020, Spring 2021, Spring 2022)
 Anth 9 Human Behavioral Sciences and Methods, UCSB (Spring 2018, Fall 2020, Fall 2021)
 Anth 250A Graduate Seminar: Advanced Topics in Evolutionary Medicine, UCSB (Spring 2018, Fall 2021)
 Anth 241A Findings in BioAnth, UCSB (Fall 2019, Winter 2020, Fall 2021, Winter 2021, Spring 2021)
 Lecturer Comparative Methods: Evolutionary Biology and Ecology of Cancer, Wellcome Genome Campus (Summer 2016, 2018, 2020*) *cancelled due to COVID19
 Bio 494/591 The Evolution and Ecology of Cancer, Arizona State University
 Winter 2016, Teaching Assistant

MENTORSHIP

Postdoctoral Scholars

- 2019 - 2022 Tiffany Pan, Anthropology, University of California Santa Barbara

Primary Advisor - Graduate

- 2021- Cristiano Parmeggiani, Anthropology, University of California Santa Barbara
MA Project: TBD
 2019- 2022 Maya Szafraniec, Anthropology, University of California Santa Barbara
MA Project: *Maternal-fetal conflict and placentation*
 2018- 2022 Carmen Hové, Anthropology, University of California Santa Barbara
PhD Project: *Pregnancy-induced inflammation and obstacles to breastfeeding success in an industrialized environment*

Research Technician

- 2022-present Nikki Tomo, University of California Santa Barbara
Project: *Lab technician for the microchimerism study*

Primary Advisor – Undergraduate Interns*

*Research assistants supported by external funds

- 2022-present Emilie Risha, University of California Santa Barbara
Project: *Characterization of fetal microchimerism in maternal blood*
 2020-present Mary Boyd, University of California Santa Barbara
Project: *Cancer Across Animals in the London Zoo*

- 2020-2022 Olivia Mendoza, University of California Santa Barbara
Project: *Cancer Across Animals in the London Zoo*
- 2018-2020 Kenna Sherman, College of Creative Studies, University of California Santa Barbara
Project: *Comparative oncology and comparative genomics in mammals*
- 2017- 2019 Sydney Collier, Anthropology, University of California Santa Barbara
Project: *Comparative oncology in the Santa Barbara Zoo*

Primary Advisor – Undergraduate Research Projects

- 2022- Cassidy Devers, University of California Santa Barbara
Project: *Medicine or poison in Ancient Rome*
- 2022- Advika Verma, University of California Santa Barbara
Project: *Cross cultural comparisons of BMI*
- 2022 Mekila Nevens, University of California Santa Barbara,
Project: *Effects of early life stress in females and males*
- 2022 Amy Lam, University of California Santa Barbara,
Project: *Characterization of fetal microchimerism throughout pregnancy*
- 2022 Ashley Willis, University of California Santa Barbara, **URCA** Student
Project: *Placentation and Neoplasia: A life history exploration of evolved disease defenses*
- 2020-2021 Caitlin Fitzpatrick, Anthropology, University of California Santa Barbara
Project: *Culture practices that reduce viral transmission*
- 2019-2020 Ammar Campwala, Anthropology, University of California Santa Barbara
Project: *Cancer risk in the vulnerable homeless population in Santa Barbara*
- 2018-2019 Rojin Aghamohammadi, Honors Thesis, Anthropology, University of California Santa Barbara
Project: *A cross-cultural review of fetal alcohol syndrome*
- 2015-2016 William Walker, Barrett Honors College, Arizona State University, Honors Faculty
Project: *Epidemiology of cancer in primates*
- 2008-2009 Disha Bora, High-school research mentor, Detroit Country High School
Project: *SNPs associated with abdominal aortic aneurysms*

Committee Member – Graduate

- 2021- Zhian Chen, Department of Anthropology, University of California Santa Barbara
MA Project: *TBA*
- 2021- Hannah Frogge, Department of Anthropology, University of California Santa Barbara
MA Project: *TBA*
- 2020-2021 Joseph Kilgallen, Department of Anthropology, University of California Santa Barbara
MA Project: *Positive correlation between women's status and intimate partner violence suggest violence backlash in Mwanza, Tanzania*
- 2020-2022 Ashley Peraza, Arizona State University
MA Project: *Trends in tissue specific cancer*
- 2020-2021 Brittney Holguin, Department of Anthropology, University of California Santa Barbara
MA Project: *External auditory exostoses and their relationship to aquatic activities on California's Northern Channel Islands; Completed 2021*
- 2019-2022 Jessica Ayers, Psychology, Arizona State University
PhD Project: *Maternal-fetal conflict and behavior*
- 2019-2021 Ronnie Steinitz, Anthropology, University of California Santa Barbara
MA Project: *Primate feeding ecology, Completed 2021*
- 2017-2022 Amy Anderson, Department of Anthropology, University of California, Santa Barbara
PhD Project: *Skeletal indicators of early stress; MA Completed 2018*
- 2017-2022 Valerie Harris, Biodesign Institute, Arizona State University
PhD Project: *Cancer prevalence across vertebrates*

Committee Member – Undergraduate

- 2021-2022 Selin Aksoy, Barrett Honors College, Arizona State University
Project: *Scaling of tissue size and cancer risk across species*
- 2021-2022 Harshini Darapu, Barrett Honors College, Arizona State University
Project: *Reproductive cancer prevalence across mammalian species*
- 2020-2021 Shannon Austin, Barrett Honors College, Arizona State University
Project: *Potential cancer suppression mechanisms in Ruminants*
- 2020-2021 Morgan Fox, Barrett Honors College, Arizona State University
Project: *Multivariate analysis of life history traits across species and cancer prevalence*
- 2019-2020 Komal Majhail, Barrett Honors College, Arizona State University
Project: *Mammary cancer across mammals*
- 2018-2019 Jordyn Dolan, Barrett Honors College, Arizona State University
Project: *A survey of cancer prevalence within birds (the clade Aves)*

PLENARY/KEYNOTE LECTURES

- 2022 **Paradox of the Organism Revisited**, Georgetown University, Washington DC
Plenary: We are multitudes: microchimerism, evolution and human health
- 2022 **Systems Approaches to Cancer Biology**, Marine Biological Laboratory, Woods Hole, MA
Plenary: Cancer defense across the tree of life
- 2020* **Cells to Self**, Exploratorium, San Francisco, CA
Plenary: Cells from Another Self *cancelled due to COVID19
- 2018 **Zombie Apocalypse Medicine Meeting**, Arizona State University, Tempe, AZ
Plenary: Is your mom a zombie? The evolutionary implications of fetal microchimerism

INVITED LECTURES

- 2022 **CSUN Biology Colloquium**, California State University, Northridge, Virtual
Talk: Life history trade-offs in cancer
- 2022 **UNLV Anthropology Proseminar**, University of Nevada, Las Vegas, Virtual
Talk: Life history trade-offs in cancer
- 2021 **CEMinar**, Center for Evolution and Medicine, Arizona State University, Virtual
Talk: An evolutionary perspective on maternal health and disease
- 2021 **OCEAN Speaker Series**, Oklahoma State University, Virtual
Talk: Life history trade-offs in reproduction and cancer
- 2020 **Club EvMed**, International Society for Evolution, Medicine and Public Health, Virtual
Talk: Cancer prevalence and life history traits in mammals
- 2020 **UCLA Department of Medicine Grand Rounds**, Darwin Day Lecture, Los Angeles, CA USA
Talk: Cancer across the tree of life: New insights into an ancient disease
- 2020 **Cancer and Embryo Development**, Arizona State University, Tempe AZ
Talk: Life history and cancer
- 2019 **Anthropology Colloquium**, University of Oregon, Eugene OR
Talk: Life history trade-offs in reproduction and cancer
- 2019 **The Molecular Biology and Evolution of Cancer**, SMBE Satellite, Yale School of Public Health, New Haven, CT
Talk: Evolution of cancer defenses
- 2018 **Perspectives on Human Brain Evolution**, Harvard Medical School, Boston, MA
Talk: Insight into human brain evolution through phylogenetic analysis and comparative genomics
- 2018 **GRITtalk**, UCSB

- 2018 Talk: Cancer across the tree of life: New insights into an ancient disease
Center for Behavior, Evolution and Culture (BEC) Colloquium, UCLA, USA
- 2018 Talk: Life history trade-offs in reproduction and cancer
Anthropology Colloquium, University of California Davis, Davis, California, USA
- 2018 Talk: Life history trade-offs in reproduction and cancer
Understanding Cancer Through Evolutionary Game Theory, Leiden, Netherlands
- 2017 Talk: Life history trade-offs and cancer
BROOM Center Seminar, UCSB, Santa Barbara, CA
- 2017 Talk: Life history trade-offs and cancer
Cooperation & Conflict Symposium, Tempe, AZ
- 2016 Talk: Cooperation and Conflict in Maternal Health
University of New Mexico, Albuquerque, NM
- 2015 Talk: Cooperation and Conflict Beyond the Womb
Life History Theory & Telomere Dynamics, Drymen, UK
- 2015 Talk: Cancer and the evolution of multicellularity
American College of Veterinary Surgeons Summit, Nashville, TN
- 2014 Talk: Cancer across life: Cancer susceptibility and the evolution of multicellularity
School of Biological, Biomedical, and Environmental Sciences, University of Hull, Hull, United Kingdom
- Talk: Tradeoffs and Cancer

CONFERENCE PRESENTATIONS

- 2022 **Evolution, Ecology and Evolutionary Biology Symposium**, Ankara Turkey
Talk: Body size relates to the level of cancer suppression across non-human primates
(Presented by: E. Yagmur Erten)
- 2022 **American Society of Primatologist**, Denver, CO
Poster: Reproductive neoplasia in female western lowland gorillas (*Gorilla gorilla gorilla*) under managed care (Presented by Anneke Moresco)
- 2022 **International Society for Evolution, Medicine, & Public Health**, Lisbon, Portugal
Talk: An evolutionary perspective on microchimerism and human health
- 2022 **California Workshop on Evolutionary Social Sciences**, Fullerton, CA
Poster: Characterizing the variation in fetal microchimerism throughout pregnancy
(Presented by undergraduates: Amy Lam and Emilie Risha)
- 2022 **American Association of Biological Anthropologist**, Denver, CO and Virtual
Poster: Does parent-offspring conflict across mammals result in differing offspring growth by placenta morphology? (Presented by Maya Szafraniec)
Poster: Characterizing the variation in fetal microchimerism throughout pregnancy
(Presented by undergraduates: Amy Lam and Emilie Risha)
- 2021 **Cancer Systems Biology Consortium Annual Investigators Meeting**, Virtual
Poster: The ecology of cancer prevalence across species (Presented by Stephanie Kapsetaki)
- 2021 **Young Systematics Forum**, Virtual.
Talk: The ecology of cancer prevalence across species (Presented by Stephanie Kapsetaki)
- 2021 **International Society for Evolution, Medicine, & Public Health**, Virtual
Poster: The evolution of placenta diversification and mammalian reproductive strategies (Presented by Maya Szafraniec)
Talk: Bridging paleopathology and evolutionary medicine in cancer research (Presented by Carina Marques)
Talk: Female immune function across the reproductive continuum is responsive to environmental inputs (Presented by Carmen Hové)

- 2021 **Evolution**, Virtual
Talk: A life history model of mammary neoplasia across mammals (Presented by Zachary Compton)
Talk: Chimerism and cancer across the tree of life (Presented by Stefania Kapsetaki)
- 2021 **American Association of Physical Anthropologist**, Virtual
Talk: An evolutionary perspective on cancer prevalence in non-human primates (Presented by Zachary Compton)
- 2020 **Cancer Systems Biology Consortium Annual Investigators Meeting**, Virtual
Poster: The evolution of placenta diversification and mammalian reproductive strategies (Presented by Maya Szafraniec)
Poster: A Multi-scale approach to the evolution of Cancer Suppression (Presented by Zach Compton)
Poster: A life history model of mammary neoplasia across mammals (Presented by Morgan Fox)
- 2020 **Zombie Apocalypse Medicine Meeting**, Virtual
Talk: Of Mammals and Mombies
- 2020* **Human Biology Association**, Los Angeles, CA
Talk: The role of early life adversity and breast cancer outcomes
Talk: Socioecological conditions shape postpartum immune trajectories (Presented by Carmen Hové)
 *cancelled due to COVID19
- 2019 **Cancer Systems Biology Consortium Annual Investigators Meeting**, Irvine, CA
Poster: Comparative Oncology: The evolution of cancer defenses across the tree of life
- 2019 **International Society for Evolution, Ecology and Cancer**, Cambridge, UK
Poster: The role of early life adversity and breast cancer outcomes
Poster: Life History, Cancer Incidence, and Cancer Mortality in Non-Human Primates (Presented by Valerie Harris)
Poster: A survey of cancer prevalence across the clade (Presented by Jordyn Dolan)
Talk: Cancer across species: Identifying mechanisms of cancer resistance (Presented by Lisa Abegglen)
Poster: Investigations into decreasing the fitness of multicellular circulating tumor cell clusters using agent-based modeling approaches (Presented by Alex May)
- 2019 **Human Behavior & Evolution Society**, Boston, MA
Poster: Are cravings, aversions, and nausea/vomiting associated with pregnancy complications? Investigating the role of maternal-fetal conflict in maternal eating behavior and pregnancy complications (Presented by Jessica Ayers)
- 2019 **Collaborative Research Symposium**, Ritz-Carlton Bacara, Santa Barbara
Talk: Fetal microchimerism and maternal health
- 2018 **International Society for Evolution, Medicine, & Public Health**, Park City, UT
Talk: Comparative Oncology: New insights into an ancient disease
Talk: Life History, Cancer Incidence, and Cancer Mortality in Non-Human Primates (Presented by Valerie Harris)
- 2018 **California Workshop on Evolutionary Social Sciences (CWESS)**, UC Santa Barbara
Talk: Consequences of being (micro)chimeric
- 2018 **Collaborative Research Symposium**, Ritz-Carlton Bacara, Santa Barbara
Talk: Life history trade-offs in reproduction and cancer
- 2018 **Post-Simian Workshop**, Nassau
Talk: Trade-offs and cancer
- 2017 **International Society for Evolution, Ecology and Cancer**, Tempe, AZ

- Talk: A large-scale evaluation of neoplasia occurrence and life history traits in vertebrates
Poster: Life History, Cancer Incidence, and Cancer Mortality in Non-Human Primates (Presented by Valerie Harris)
Poster: Sharks do get cancer (Presented by Diego Mallo)
- 2017 **Keystone Symposia, Maternal-Fetal crosstalk: Harmony vs. Conflict**, Washington DC
Poster: Cooperation & conflict beyond the womb
- 2017 **Fitness Interdependence Workshop**, Saguaro Lake, AZ
Talk: Cooperation & conflict beyond the womb
- 2016 **International Primatological Society/American Society of Primatologist**, Chicago, IL
Talk: Cancer Incidence and Mortality in Strepsirrhini at the Duke Lemur Center
- 2016 **Human Behavior & Evolution Society**, Vancouver, Canada
Talk: Cooperation & conflict beyond the womb: Fetal microchimerism & maternal health
- 2016 **International Society for Evolution, Medicine, & Public Health**, Durham, NC
Talk: Cooperation & conflict beyond the womb: Fetal microchimerism & maternal health
- 2015 **International Biannual Evolution and Cancer Conference**, San Francisco, CA
Talk: Using agent-based modeling to understand the emergence of resistant cancer phenotypes
- 2015 **Conference on Complex Systems**, Tempe, AZ
Talk: Using agent-based modeling to understand the emergence of resistant cancer phenotypes
- 2015 **Personalized Medicine Conference**, Tucson, AZ
Poster: Fetal microchimerism and maternal health: A review and evolutionary analysis of cooperation and conflict beyond the womb
- 2015 **Society for Molecular Biology & Evolution**, Vienna, Austria
Talk: Cancer across the tree of life: Cooperation and cheating in multicellularity
- 2015 **Organismality**, St. Louis MO
Talk: The phylogenetic origins of need-based transfers
- 2015 **Human Behavior & Evolution Society**, Columbia, MO
Talk: Cancer susceptibility and reproductive trade-offs: A model of the evolution of cancer defenses
- 2015 **International Society for Evolution, Medicine, & Public Health**, Tempe AZ
Talk: Are there trade-offs between reproductive competitiveness and cancer susceptibility?
- 2013 **Ecological and Evolutionary Perspectives in Cancer**, Jacques Monod Roscoff, France
Poster: The quiescent tortoise and the proliferative hare: Life history selection in cancer's evolutionary race
- 2013 **Human Behavior and Evolution Society**, Miami Beach, FL
Talk: Do metabolic tradeoffs explain why humans have exceptionally large brains? Testing the expensive tissue hypothesis using phylogenetic analysis
- 2013 **International Biannual Evolution and Cancer Conference**, San Francisco, CA
Poster: Does early adversity shape disease risk through adaptive calibration of hormonal profiles? Evolutionary life history theory in breast cancer and cardiovascular disease
- 2013 **Biological Mechanisms in Evolution**, Gordon Research Conferences, Easton, MA.
Poster: Does early adversity shape disease risk through adaptive calibration of hormonal profiles? Evolutionary life history theory in breast cancer and cardiovascular disease
- 2012 **Society for Molecular Biology and Evolution**, Dublin, IE.

- Poster: Capuchin monkey transcriptome provides insight into primate brain evolution
- 2011 **American Association of Physical Anthropologist**, Minneapolis, MN.
Talk: Phylogenetic analysis reveals relaxed constraints in primate encephalization during mammalian descent
- 2010 **Evolution**, Portland, OR.
Poster: Phylogenetic analysis explains deviations from Brain: Body Allometric Scaling Laws in Primates and Cetacea
- 2009 **American Society of Primatologist**, San Diego, CA.
Poster: Platyrrhine genomic resources: Shotgun libraries from Pitheciidae, Cebidae, and Atelidae
- 2007 **Clinical Cardiovascular Genomics Conference**, Cold Springs Harbor, NY.
Poster: Genetic studies for abdominal aortic aneurysms: DNA linkage, Microarrays, and Genetics Association

OUTREACH

- 2022 Cancer and the Nature of Life Series
[Transmissible Cancer in Mammals](#)
- 2022 That Anthro Podcast
[Evolutionary Approaches to Human Health](#)
- 2019 Zombified Podcast
[Microchimeric Mombies](#)
- 2019 Isla Vista 2nd grade Science Outreach
Activity and discussion on human-wildlife conflict and elephants
- 2019 Underestimated Podcast
[Consequence of being a multicellular organism](#)
- 2017 Arizona State University Night of the Open Door
Teaching life history theory to middle school children
- 2016 Science communication: Guest blog post at Tenure, She Wrote
Thoughts on “How to Get a Postdoc Position”
- 2016 Arizona State University EMERGE
Teaching evolution & cancer through strategy games
- 2016 Arizona State University Night of the Open Door
Teaching evolution & cancer to middle school children
- 2016 Northern Arizona University (NAU) Road Scholars Tour
Teaching evolution & cancer to retirees

PEER REVIEWER

Nature Communications	Proceed. of the Royal Soc. B	American Naturalist
BioEssays	Evolutionary Applications	Evolution, Medicine & Public Health
Journal of Molecular Biology	Nature Cancer Reviews	Genome, Biology, Evolution
Molecular Biology and Evolution	Evolution	American Journal of Human Biology
Functional Ecology	PLOS Computational Biology	Molecular Phylogenetics and Evolution
BMC Biology	Am. Journ. of Epidemiology	IScience
Frontiers Ecology/Evolution	eLife	

MEMBERSHIPS

- American Association for the Advancement of Science
International Society for Evolution, Ecology and Cancer (founding member)
International Society for Evolution, Medicine & Public Health (founding member)
Human Biology Association

Sigma Xi

SCIENCE IN THE MEDIA

- 2022 Interviewed by the UCSB Current, [A Planetary Sisterhood](#)
- 2022 Interviewed by Carrie Arnold, Scientific American, [Insights from Pregnancy Could Help Fight Cancer](#)
- 2022 Interviewed by the UCSB Current, [The Multitudes Within Us](#)
- 2022 Interviewed by the UCSB Current, [Animals and the Big C](#)
- 2021 Interviewed by Stephanie DeMarco, Drug Discovery News, [You have your mother's eyes – and cells](#)
- 2021 Interviewed by Sean Crommelin, The Daily Nexus, [Cancer and Chemo from a Wider Lens](#)
- 2020 Interviewed by Jacqueline Wen, The Daily Nexus, [UCSB Researcher Investigates Strategies for Reducing Metastatic Potential of Cancer Cell Clusters](#)
- 2018 Interviewed by Jacqueline Wen, The Daily Nexus, [UCSB joins large-scale cancer research consortium](#)
- 2017 Featured Scientist, The Chimera Experiments Project, Feature “[Realm of an Inner Child](#)” by Jeannette Louie
- Interviewed by Katherine Rowland, Aeon, [We are multitudes](#)
- Interviewed by Heather Marcoux, Motherly, [It's science: Your baby will always be a part of you](#)
- 2015 Regarding, “Fetal microchimerism and maternal health: A review and evolutionary analysis of cooperation and conflict beyond the womb
- Interviewed by:
- Carl Zimmer, New York Times; [A pregnancy souvenir: cells that are not your own](#)
- Viviane Callier, The Smithsonian; [Baby's cells can manipulate mom's body for decades](#)
- Ed Yong, National Geographic; [Fetal cells hide out in mum's body, but what do they do?](#)
- Krisitin Magaldi, Medical Daily; [Fetal cells can be found in a new mother's body and will effect her health even after pregnancy](#)
- Jimmy Jenkins, KJZZ radio, local Phoenix radio station
- Michaeleen Doucleff, NPR radio –morning edition, Washington D.C., [Fetal cells may protect mom from disease long after the baby's born](#)
- 2015 Regarding “Cancer across the tree of life: cooperation and cheating in multicellularity”, Interviewed by George Johnson, New York Times, [Cellular 'cheaters' give rise to cancer](#)

PROFESSIONAL DEVELOPMENT

- 2020 Treating cancer in zoo and aquaria species: Strategies to grow the ESCRA tumor database, NC State University, Virtual
- 2018 Promotion to Tenure Workshop, UC Santa Barbara
- 2017 Research Funding 101, UC Santa Barbara
- 2016 CoGe: Comparative Genomics Workshop, Arizona State University
- 2015 Complex Systems: Networks, Agent-based Models, Information Theory and Maximum Entropy Methods, Arizona State University
- 2015 Netlogo Workshop: Complex Systems, Arizona State University
- 2014 Complex Adaptive Systems, Arizona State University
- 2014 Workshop on Cancer Evolution and Evolutionary Medicine: Foundations and Future Directions, Wissenschaftskolleg zu Berlin
- 2011 National Postdoctoral Association Michigan Regional Symposium, Pathways to Careers, Wayne State University
- 2010 Analyzing Next Generation Sequencing Data - Michigan State University

- 2010 Applying Next Generation Sequencing Technologies to Research - Molecular Medicine Tri-Conference Short Course, San Francisco, CA
- 2010 Career opportunities after doctoral education and postdoctoral training - Wayne State University
- 2008 Summer Institute in Statistical Genetics - University of Washington: Human population genetic data analysis, Human association mapping
- 2007 NCBI Traveling Workshop: GenBank, Molecular Biology Resources, Entrez Gene QuickStart, Correlating Disease Genes and Phenotypes, BLAST QuickStart