

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

2017 - 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 Harris V, Noble K, Compton Z, Gamer, M, Rupp S, Furukawa G, Abegglen LM, Aktipis A, Maley C, **Boddy AM**. Cancer prevalence in non-human primates. In prep.
- In Prep **Boddy AM**, Rupp S, Hanson HA, Yu Z, Aktipis A, Smith KA. The role of early life adversity and breast cancer outcomes. In prep.
- Submitted 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.
- Submitted 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 reveals insights into differences in disease susceptibility between species.
- In Review **Boddy AM**, Harrison T, Abegglen LM. Comparative Oncology: New Insights into an ancient disease. iScience. In Review.
20. **Boddy AM**, Abegglen LM, Pessier AP, Schiffman JD, Maley C, Witte C. Lifetime cancer prevalence and life history traits in mammals. *Evolution, Medicine and Public Health*. May 2020. In press.

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. In press.
18. Somarelli JA, **Boddy AM**, Gardner H, Bartholf DeWitt S, Tuyohy J, Megquier K, Sheth MU, Hsu D, Thome 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, Philips 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

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. National Science Foundation. *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.
5. NIH U54: Administrative Supplement. *Characterization of Elephant Tumor Evolution.* \$38,180 total direct. Boddy is Co-PI. 2019-2020.

4. NIH U54: ACE Pilot Funding. *Phenotypic and Genomic Responses to DNA Damage in Crocodilians*. Boddy is Co-PI. \$8,000 total direct. 2019-2020.
3. NIH U54: ACE Pilot Funding. *Somatic Mutations in Tumors from Wild African Elephants*. Boddy is Co-PI. \$25,155 total direct. 2019-2020.
2. 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.
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 I. \$263,024 total directs to UCSB. 2018-2023.

PENDING GRANTS/FUNDING

4. Packard Fellowship. *Evolutionary Approaches to Cancer*. \$875,000 total direct. 2020-2025.
3. UCSB Hellman Fellowship. *Investigating effects of breastfeeding behavior on hormonal cycling and perceived somatic and mental health among postpartum mothers*. \$27,040 total direct. Boddy is PI.
2. UCSB Faculty Research Grant. *The functional role of fetal microchimerism in maternal health*. \$13,920 total direct. Boddy is PI.
1. Wenner-Gren Foundation. *Investigating time-dependent effects of breastfeeding behavior on maternal immune regulation and perceived somatic health*. \$19,275 total direct. Boddy is Co-PI with student Carmen Hové. 2020-2021.

COMPLETED GRANTS/FUNDING

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

- 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 150 Human Genetics, UCSB (Fall 2019)
- Anth 177 Reproductive Ecology and Endocrinology, UCSB (Fall 2018)
- Anth 171 Evolutionary Medicine, UCSB (Winter 2018, 2019, 2020)
- Anth 9 Human Behavioral Sciences and Methods, UCSB (Spring 2018)
- Anth 250A Graduate Seminar: Advanced Topics in Evolutionary Medicine, UCSB (Spring 2018)
- Anth 241A Findings in BioAnth, UCSB (Fall 2019, Winter 2020)
- 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

MENTORSHIPPostdoctoral Scholars

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

Primary Advisor - Graduate

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

Primary Advisor - Undergraduate

- 2019- Ammar Campwala, Anthropology, University of California Santa Barbara
Project: *Cancer risk in the vulnerable homeless population in Santa Barbara*
- 2018-2020 Kenna Sherman, College of Creative Studies, University of California Santa Barbara
Project: *Comparative oncology and comparative genomics in mammals*
- 2018-2019 Rojin Aghamohammadi, Honors Thesis, Anthropology, University of California Santa Barbara
Project: *A cross-cultural review of fetal alcohol syndrome*
- 2017- 2019 Sydney Collier, Anthropology, University of California Santa Barbara

- 2015-2016 Project: *Comparative oncology in the Santa Barbara Zoo*
William Walker, Barrett Honors College, Arizona State University, Honors Faculty
- 2008-2009 Project: *Epidemiology of cancer in primates*
Disha Bora, High-school research mentor, Detroit Country High School
Project: *SNPs associated with abdominal aortic aneurysms*

Committee Member – Graduate

- 2019- Jessica Ayers, Psychology, Arizona State University
Project: *Maternal-fetal conflict and behavior*
- 2019- Ronnie Steinitz, Anthropology, University of California Santa Barbara
Project: *Primate feeding ecology*
- 2017-2018 Amy Anderson, Department of Anthropology, University of California, Santa Barbara
Project: *Old Friends and Friendly Fire: Weighing the Costs of Hookworm Infection During Pregnancy in an Amazonian Population*
- 2017- Valerie Harris, Biodesign Institute, Arizona State University
Project: *Cancer prevalence across vertebrates*

Committee Member – Undergraduate

- 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

- 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

- 2020 **UCLA Department of Medicine Grand Rounds**, Los Angeles, CA USA
Talk: *Cancer across the tree of life: New insights into an ancient disease*
- 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
Talk: *Cancer across the tree of life: New insights into an ancient disease*
- 2018 **Center for Behavior, Evolution and Culture (BEC) Colloquium**, UCLA, USA
Talk: *Life history trade-offs in reproduction and cancer*
- 2018 **Anthropology Colloquium**, University of California Davis, Davis, California, USA
Talk: *Life history trade-offs in reproduction and cancer*
- 2018 **Understanding Cancer Through Evolutionary Game Theory**, Leiden, Netherlands
Talk: *Life history trade-offs and cancer*
- 2017 **BROOM Center Seminar**, UCSB, Santa Barbara, CA
Talk: *Life history trade-offs and cancer*

- 2017 **Cooperation & Conflict Symposium**, Tempe, AZ
Talk: Cooperation and Conflict in Maternal Health
- 2016 **University of New Mexico**, Albuquerque, NM
Talk: Cooperation and Conflict Beyond the Womb
- 2015 **Life History Theory & Telomere Dynamics**, Drymen, UK
Talk: Cancer and the evolution of multicellularity
- 2015 **American College of Veterinary Surgeons Summit**, Nashville, TN
Talk: Cancer across life: Cancer susceptibility and the evolution of multicellularity
- 2014 **School of Biological, Biomedical, and Environmental Sciences**, University of Hull, Hull, United Kingdom
Talk: Tradeoffs and Cancer

CONFERENCE PRESENTATIONS

- 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)

- 2017 **Keystone Symposia, Maternal-Fetal crosstalk: Harmony vs. Conflict**, Washington DC
Poster: Sharks do get cancer (Presented by Diego Mallo)
Poster: Cooperation & conflict beyond the womb
- 2017 **Fitness Interdependence Workshop**, Saguro 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.

- 2010 **Evolution**, Portland, OR.
Talk: Phylogenetic analysis reveals relaxed constraints in primate encephalization during mammalian descent
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

- 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	Proceedings of the Royal Society B
BioEssays	Evolutionary Applications
Journal of Molecular Biology	Nature Cancer Reviews
Molecular Biology and Evolution	Evolution
Functional Ecology	PLOS Computational Biology
BMC Biology	American Journal of Epidemiology
	Evolution, Medicine & Public Health
	Genome, Biology, Evolution
	American Journal of Human Biology
	Molecular Phylogenetics and Evolution

MEMBERSHIPS

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

SCIENCE IN THE MEDIA

- 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

- 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