

Curriculum Vitae, Caroline Williams

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RESEARCH KEYWORDS: Insects, metabolism, seasonality, climate change, winter, stress responses, energetics, life history evolution, thermal biology

EDUCATION

| Year | Institution | Degree | Department |
|------|--|--------|------------|
| 2012 | University of Western Ontario, Canada Advisor: Brent Sinclair | Ph.D. | Biology |
| 2004 | University of Otago, New Zealand Advisor: Robert Poulin, Co-advisor: Brent Sinclair | M.Sc. | Zoology |
| 2002 | University of Otago, New Zealand | B.Sc. | Zoology |

EMPLOYMENT HISTORY

| Year | Details |
|-------------|--|
| 2012 - 2014 | Postdoctoral Fellow, Department of Entomology and Nematology, University of Florida, Gainesville (Advisor: Daniel Hahn). |
| 2014 - 2020 | Assistant Professor, Department of Integrative Biology, UCB |
| 2020 - | Associate Professor, Department of Integrative Biology, UCB |

PROFESSIONAL APPOINTMENTS

| Year | Details |
|----------------|---|
| 2014 - | Associate editor; Functional Ecology |
| 2014 - | Faculty curator, Essig Museum of Entomology |
| 2018 - 2020 | Associate editor; Proceedings of the Royal Society B: Biological Sciences |

HONORS AND AWARDS

| Year | Name of award | Organization |
|------|---|--|
| 2018 | George Bartholemew award | Society of Integrative and Comparative Biology |
| 2016 | Outstanding Faculty Advising | Berkeley Advising Council, UC Berkeley |
| 2011 | Ontario Graduate Scholarship | Ontario Provincial Government |
| 2011 | Ruth Horner Arnold Fellowship | Department of Biology, U Western Ontario |
| 2010 | Scholander Award and Best Oral Presentation Award | American Physiological Society |
| 2010 | Graduate Student Teaching | Faculty of Science, U Western Ontario |

2010 Ruth and Robert Lumsden U Western Ontario
Fellowship

RESEARCH FUNDING

CURRENT

| | |
|--|--------------|
| Grant # (Role): California Conservation Genomics Program (PI) | 05/30/2020 – |
| Co-PIs: Doris Bachtrog, Nathan Rank, Elizabeth Dahlhoff | 05/30/2022 |
| Funding Agency/Source : California Conservation Genomics Program | \$49,860 |
| Title of the grant: <i>Chrysomela aeneicollis</i> , Sierra willow leaf beetle | |
| Grant # (Role): Peder Sather Center Grant Program 2020 (PI) | 06/01/2020 – |
| Co-PIs: Irja Ratikainen, Øystein Varpe | 05/30/2023 |
| Funding Agency/Source : Peder Sather Center, UC Berkeley | \$15,000 |
| Title of the grant: Adaptations to variable seasons | |
| Grant # (Role): NSF DEB-1930670 (co-PI) | 04/01/2021 – |
| Co-PIs: Lauren Buckley, Sean Schoville | 03/31/2024 |
| Funding Agency/Source : National Science Foundation | \$304,437 |
| Title of the grant: Collaborative Research: ROL: Detecting and predicting energetic versus survival constraints on fitness in changing environments. | |
| REPS supplement 2022 | \$55,000 |

COMPLETED

| | |
|---|--------------|
| Grant # (Role): NSF IOS-1558159 (PI) | 04/01/2016 – |
| Co-PIs: Nathan Rank, Elizabeth Dahlhoff, Jonathon Stillman | 03/31/2022 |
| Funding Agency/Source : National Science Foundation | \$653,744 |
| Title of the grant: Collaborative Research: Physiological and genetic responses to winter in a Willow Leaf beetle | |
| Grant # (Role) Foundation Grant (co-PI) | |
| Co-PIs: George Brooks, José Pablo Vázquez-Medina | 05/05/2019 |
| Funding Agency/Source: Biology Faculty Research Fund | \$25,000 |

Title of the grant: Developing an Integrative Biology Metabolic Core

Grant # (Role): NSF IOS 1637201 (co-PI) 09/01/2016 – 8/31/2017

Funding Agency/Source: National Science Foundation \$14,050
 Title of grant: Meeting: Evolutionary Impacts of Seasonality; a Symposium for the Annual Meeting of SICB, New Orleans, LA, Jan 4-8 2017

Grant # (Role) Foundation Grant (PI) 05/01/2016 – 06/01/2017

Funding Agency/Source: Hellman Family Foundation \$60,015
 Title of the grant: Balancing supply and demand: I modulation of energy efficiency during life history evolution.

RESEARCH OUTPUT

45 peer-reviewed publications, **2** plenary lectures, **11** invited symposium presentations, **1** symposium organized, and **18** invited seminar visits.

Citation profile: <http://scholar.google.de/citations?user=svAox44AAAAJ&hl=en>
 2156 citations, h-index = 23.

PUBLICATIONS

PEER-REVIEWED PUBLICATIONS

Undergraduate (U), graduate (G), and postdoctoral trainees (P) denoted with superscripts

- 45) King EE^G, **Williams CM**, Stillman JH (2022) Hypoxia decreases thermal sensitivity and increases thermal breadth of locomotion in the invasive freshwater snail *Potomopyrgus antipodarum*. ***Physiological and Biochemical Zoology*** 95(3): 251-264.
- 44) Treidel LA^G, Chung D^P, Quintanilla Ramirez GS^U, Menze M, Vazquez Medina JP, **Williams CM** (2022) Selection on dispersal drives evolution of metabolic capacities for energy production in female wing polymorphic sand crickets, *Gryllus firmus*. ***Journal of Evolutionary Biology*** 35(4):599-609.
- 43) Roberts KT^G, **Williams CM** (2022) The impact of metabolic plasticity on winter energy use models. *Journal of Experimental Biology* 225(4): jeb243422
- 42) Sun B-J, **Williams CM**, Li T, Speakman J, Jin Z-G, Lu H-L, Luo L, Du W-G (in press) Higher metabolic plasticity in temperate compared to tropical lizards suggests increased resilience to climate change. ***Ecological Monographs*** <https://doi.org/10.1002/ecm.1512>

- 41) Szejner-Sigal A^G, **Williams CM** (2022) Aggregations reduce winter metabolic rates in the diapausing lady beetle *Hippodamia convergens*. *Journal of Insect Physiology* 137: 104357.
- 40) Roberts KE^G, Rank NE, Dahlhoff E, Stillman J, **Williams CM** (2021) Snow modulates winter energy use and cold exposure across an elevation gradient in a montane ectotherm. *Global Change Biology* 27(23):6103-6116.
- 39) Treidel LA^G, Clark RM^P, Lopez MT^U, **Williams CM** (2021) Physiological demands and nutrient intake modulate a trade-off between dispersal and reproduction based on age and sex of field crickets. *Journal of Experimental Biology*. 224(7):jeb237834.
- 38) Osland MJ, Stevens PW, Lamont MM, Brusca RC, Hart KM, Waddle JH, Langtimm CA, **Williams CM**, Keim BD, Terando AJ, Reyier EA, Marshall KE, Loik ME, Boucek RE, Lewis AB, Seminoff JA (2021) Tropicalization of temperate ecosystems in North America: the northward range expansion of tropical organisms in response to warming winter temperatures. *Global Change Biology*. 27(13):3009-3034. [https:// doi.org/10.1111/gcb.15563](https://doi.org/10.1111/gcb.15563)
- Alt Metric score 145, picked up by 15 news outlets.**
Commentary by Linda Walters and Giovanna McClenachan: <https://doi.org/10.1111/gcb.15631>
- 37) Buckley LB, Schoville SD, **Williams CM** (2021) Shifts in the relative fitness contributions of fecundity and survival in variable and changing environments. *Journal of Experimental Biology*. 224: 1:9.
- 36) Wilsterman KA^G, Ballinger M^G, **Williams CM** (2020). A unifying ecophysiological framework for animal dormancy. *Functional Ecology*. 35(1):11-31
- 35) Marshall KE, Gotthard K, **Williams CM** (2020) Evolutionary impacts of winter climate change on insects. *Current Opinion in Insect Science*. 41:54-62
- 34) Sun B-J, Huebner C^U, Treidel LA^G, Clark R^P, Kenagy GJ, Williams CM (2020) Nocturnal dispersal flight of crickets: behavioural and physiological responses to cool environmental temperatures. *Functional Ecology*. 34:1907-1920
- 33) Brandt EE^G, Roberts KT^G, **Williams CM**, Elias DO. (2020) Low temperatures impact distributions of spiders along an elevational cline. *Journal of Insect Physiology*. 102:104037.
- 32) Sun B-J, Ma L, Li S-R, **Williams CM**, Wan g Y, Hao X, Du W-G (2018) Phenology and the physiological niche are co-adapted in a desert-dwelling lizard. *Functional Ecology* 32: 2520-2530. DOI: 10.1111/1365-2435.13201.

- 31) Halbritter DA^G, Teets NM, **Williams CM**, Daniels JC (2018). Differences in winter cold hardiness support the geographic range disjunction of *Neophasia menapia* and *Neophasia terlooii* (Lepidoptera: Pieridae) ***Journal of Insect Physiology*** 107:204-211.
- 30) **Williams CM**, Rocca JR, Edison AS, Allison DB, Morgan TJ, Hahn DA (2018) Cold adaptation does not alter ATP homeostasis during cold exposure in *Drosophila melanogaster*. ***Integrative Zoology*** 13:471-81.
- 29) Visser B, **Williams CM**, Hahn DA, Lopez-Martinez GC (2018). Hormetic benefits of prior anoxia exposure in buffering anoxia stress in a soil-pupating insect. ***Journal of Experimental Biology*** 221, doi:10.1242/jeb.167825.
- 28) Hatle JD, Awan A^U, Nicholas J, Koch R, Vokri JR, McCue MD, **Williams CM**, Davidowitz G, Hahn DA (2017). Life-extending dietary restriction and ovariectomy each have distinct effects on nutrient oxidation and allocation in grasshoppers, especially for leucine. ***Experimental Gerontology*** 96:155-161.
- 27) **Williams CM**, Ragland GJ, Betini G, Buckley LB, Cheviron Z, Donohue K, Hereford J, Humphries MM, Lisovski S, Marshall KE, Schmidt PS, Sheldon K, Varpe O, Visser ME (2017). Understanding evolutionary impacts of seasonality: an introduction to the symposium. ***Integrative and Comparative Biology*** 57: 921-933.
- 26) **Williams CM**, McCue MD, Sunny NE, Szejner-Sigal A^U, Morgan TJ, Edison AS, Allison DB, Hahn DA (2016) Cold adaptation increases rates of nutrient flow and metabolic plasticity during cold exposure in *Drosophila melanogaster*. ***Proceedings of the Royal Society B: Biological Sciences***. 283:20161317.
- 25) **Williams CM**, Szejner-Sigal A^U, Morgan TJ, Edison AS, Allison DB, Hahn DA (2016) Adaptation to low temperature exposure increases metabolic rates independently of growth rates. ***Integrative and Comparative Biology*** 56: 62-72.
- 24) **Williams CM**, Buckley LB, Sheldon KS, Vickers M, Pörtner H-O, Dowd WW, Gunderson AR, Marshall KE, Stillman JH (2016) Biological impacts of thermal extremes: mechanisms and costs of functional responses matter. ***Integrative and Comparative Biology*** 56: 73-84.
- 23) Patterson RE, Kalavalapalli S, **Williams CM**, Nautiyal M, Mathew J., Martinez J, Reinhard MK, McDougall D, Rocca JR, Yost RA, Cusi K, Garrett TJ, Sunny NE (2016) Lipotoxicity in steatohepatitis occurs despite an increase in TCA cycle activity. ***American Journal of Physiology: Endocrinology and Metabolism*** 310:E484-494.
- 22) Sunny NE, Kalavalapalli S, Bril F, Garrett TJ, Nautiyal M, Mathew JT, **Williams CM**, Cusi K (2015) Crosstalk between branched chain amino acids and hepatic mitochondria is compromised in nonalcoholic fatty liver disease. ***American Journal of Physiology: Endocrinology and Metabolism*** 309:E311-319.
- 21) **Williams CM**, Chick WD^U, Sinclair BJ (2015) A cross-seasonal perspective on local adaptation: Metabolic plasticity mediates responses to winter in a thermal-generalist moth species. ***Functional Ecology***, 29: 549-561. COVER PHOTO.

20) **Williams CM**, Henry HAL, Sinclair BJ (2015) Cold truths: how winter drives responses of terrestrial organisms to climate change. ***Biological Reviews of the Cambridge Philosophical Society*** 90: 214-235.

Recommended, Faculty of 1000, > 350 citations

19) **Williams CM**, Watanabe M, Guarracino M, Ferraro MB, Edison AE, Morgan TJ, Boroujerdi AFB, Hahn DA (2014) Cold adaptation shapes the robustness of metabolic networks in *Drosophila melanogaster*. ***Evolution***, 68:3505-3523

18) Clendinen CS, Lee-McMullen B, **Williams CM**, Stupp G, Vandenborne K, Hahn DA, Walter GA, Edison AS (2014) ¹³C NMR Metabolomics: Applications at Natural Abundance. ***Analytical Chemistry***, 86:9242-9250.

17) **Williams CM**, Nicolai A, Ferguson, LV, Bernards MA, Hellmann JJ, Sinclair BJ (2014) Cold hardiness and deacclimation of overwintering *Papilio zelicaon* pupae. ***Comparative Biochemistry and Physiology A: Molecular and Integrative Physiology***, 178:51-58.

16) O'Neil ST, Dzurisin JDK, **Williams CM**, Lobo NF, Higgins JK, Deines JM, Carmichael RD, Zeng E, Tan JC, Wu GC, Emrich SJ, Hellmann JJ (2014) Gene expression in closely-related species mirrors local adaptation: consequences for responses to a warming world. ***Molecular Ecology*** 23:2686-2698.

15) Lake SL^U, MacMillan HA, **Williams CM**, Sinclair BJ (2013) Static and dynamic approaches yield similar estimates of thermal sensitivity of insect metabolism. ***Journal of Insect Physiology*** 59:761-766.

14) Jensen K, Sanchez-Garcia J, **Williams CM**, Khare S, Mathur K, Graze RM, Hahn DA, McIntyre LM, Rincon-Limas D, Fernandez-Funez P (2013) Purification of transcripts and metabolites from *Drosophila* heads. ***Journal of Visualised Experiments*** 73: e50245.

13) Sinclair BJ, Stinziano JR^U, **Williams CM**, MacMillan HA, Marshall KE, Storey KB (2013) Real-time measurements of metabolic rate during freezing and thawing of the wood frog, *Rana sylvatica*: implications for overwinter energy use. ***Journal of Experimental Biology*** 216:292-302.

12) MacMillan HA, **Williams CM**, Staples JF, Sinclair BJ (2012) Reestablishment of ion homeostasis during insect chill coma recovery. ***Proceedings of the National Academy of Sciences U.S.A.*** 109:20750-20755.

11) Sinclair BJ, **Williams CM**; Terblanche JS (2012) Variation in thermal performance among insect populations. ***Physiological and Biochemical Zoology*** 85:594-606.

10) **Williams CM**, Hellmann JJ, Sinclair BJ (2012a). Lepidopteran species differ in susceptibility to winter warming. ***Climate Research*** 53:119-130.

9) **Williams CM**, Marshall KE, MacMillan HA, Dzurisin JDK, Hellmann JJ, Sinclair BJ (2012b) Thermal variability increases the impact of autumnal warming and drives metabolic depression in an overwintering butterfly. ***PLoS ONE*** 7:e34470.

- 8) MacMillan HA; **Williams CM**; Staples JF; Sinclair BJ (2012) Metabolism and energy supply below the critical thermal minimum of a chill-susceptible insect. *Journal of Experimental Biology* 215: 1366-1372.
- 7) **Williams CM**, Thomas RH; MacMillan HA; Marshall KE; Sinclair BJ (2011) Triacylglyceride measurement in small quantities of homogenised insect tissue: comparisons and caveats. *Journal of Insect Physiology* 57:1602-1613.
- 6) Lalouette L; **Williams CM**; Cottin M; Sinclair BJ; Renault D (2011a) Thermal biology of the alien ground beetle *Merizodus soledadinus* introduced to the Kerguelen Islands. *Polar Biology* 35: 509-517.
- 5) Lalouette L, **Williams CM**, Hervant F, Sinclair BJ, Renault D (2011b) Metabolic rate and oxidative stress in insects exposed to low temperature thermal fluctuations. *Comparative Biochemistry and Physiology A* 158:229-34.
- 4) Bazinet AL^U; Marshall KE; MacMillan HA; **Williams CM**; Sinclair BJ (2010) Rapid changes in desiccation resistance in *Drosophila melanogaster* are facilitated by changes in cuticular permeability. *Journal of Insect Physiology* 56:2006-12.
- 3) **Williams CM**, Pelini SL, Hellmann JJ, Sinclair BJ (2010) Intra-individual variation allows an explicit test of the hygric hypothesis for discontinuous gas exchange in insects. *Biology Letters*, 6: 274-277.
- 2) Pelini SL, Dzurisin JDK, Prior KM, **Williams CM**, Marsico TD, Sinclair BJ, Hellmann JJ (2009) Translocation experiments with butterflies reveal limits to enhancement of poleward populations under climate change. *Proceedings of the National Academy of Sciences U.S.A.* 106:11160-5.
- 1) **Williams CM**, Poulin R, Sinclair BJ (2003) Increased haemolymph osmolality suggests a new route for behavioral manipulation of *Talorchestia quoyana* (Amphipoda: Talitridae) by its mermithid parasite. *Functional Ecology* 18:685-91.

OTHER PUBLICATIONS

- Treidel LA^G, **Williams CM** (2018) Costs of being hungry in a fast-paced world. *Functional Ecology* (Commentary). <https://doi.org/10.1111/1365-2435.13187>.
- Williams CM** (2016) Ecology: Insect Thermal Baggage. *Nature Climate Change* (News and Views) 6: 543-544.
- Early career researchers: a conversation with Caroline Williams. *Journal of Experimental Biology* 220: 2133-2135. Interviewer Kathryn Knight.

SYMPOSIUM ORGANIZED

Williams CM, Ragland GJ. Evolutionary Impacts of Seasonality. Society of Integrative and Comparative Biology annual meeting, New Orleans Jan 2017. Edited a themed journal issue with participant manuscripts for Integrative and Comparative Biology (volume 57, issue 5).

INVITED PRESENTATIONS

Plenary lectures

2019

- 2018 International Symposium of Environmental Physiology of Ectotherms and Plants (ISEPEP), Buenos Aires
George A. Bartholemew lecture, Society of Integrative and Comparative Biology annual meeting San Francisco

Department seminars

- 2021 University of Waikato, New Zealand, Dept. Ecol, Biodiversity, and Animal Behaviour
2021 University of Otago, New Zealand, Dept. Zoology
2018 University of Montana, USA, Dept. Biology
2018 Brown & Williamson speaker series, U Louisville, KY, USA, Dept. Biol
2018 Pennsylvania State University, USA, Dept. Entomol
2017 University of California, Riverside, USA, Dept. Biol., Dept. Entomol
2016 University of California, Irvine, USA, Ecology and Evolutionary Biology
2016 University of California, Davis, USA, Genetic and Genomic graduate group
2016 University of California, Santa Barbara, USA, Dept. Ecol Evol Marine Biol
2015 Santa Clara University, USA, Department of Biology
2014 University of Nebraska, Lincoln, USA, Dept. Biological Sciences
2014 Sonoma State University, USA, Dept. Biology
2013 University of Florida, USA, Gainesville, Dept. Entomology and Nematology
2013 University of North Florida, USA, Dept. Biological Sciences
2012 University of Florida, USA, McGuire Centre for Lepidoptera and Biodiversity
2012 Florida State University, USA, Dept. Biological Sciences
2012 US Fish and Wildlife Service Conservation Science Webinar Series
2011 University of Florida, Gainesville, USA, Dept. Entomology and Nematology

Symposia

- 2021 “Dormancy and Changing Environments: Characterizing Responses to Temperature and Other Stressors”, Entomology, virtual conference
2021 “The Good, the Bad, and the Stressful”, Experimental Biology; virtual conference
2018 North American Association of Biology Teachers conference, San Diego, USA
2018 “Evolution of Phenotypic Plasticity”, American Physiological Society: Comparative and Evolutionary Physiology; New Orleans LA USA
2018 “The Role of the Mitochondria in Environmental Adaptation and Disease”, Society of Experimental Biology, Florence Italy
2017 “Biological buffers and the impacts of climate change”, 9th International Symposium of Integrative Zoology, International Society of Zoological Sciences, Xining, China
2016 “Climate change and insect population dynamics”, International Congress on Entomology, Orlando FL
2016 “Beyond the Mean”, SICB annual meeting, Portland OR

- 2015 “Hot and Cool Bugs”, AAAS Pacific Division meeting, San Francisco
 2014 “Macro and micro of nutrient effects in animal ecology and physiology”,
 SICB annual meeting, Austin TX, USA
 2016 University of California Museum of Paleontology’s “Think Evolution”
 workshop, for teachers and educators

CONTRIBUTED CONFERENCE PRESENTATIONS

| Year | Event |
|------|---|
| 2021 | SICB, virtual: co-author on 4 oral presentations, with presenting authors Lisa Treidel, Kevin Roberts, Ana Lyons, and Emily King (UCB PhD candidates) |
| 2020 | SICB, Austin Texas: presenting author on one oral presentation, co-author on 2 poster presentations and 4 oral presentations, with presenting authors Gessen Sigrid Quintanilla Ramirez, Christopher Huebner (UCB undergraduates), Lisa Treidel, Emily King, Kevin Roberts (UCB PhD candidates), and Nikki Chambers (West High School, science educator). |
| 2019 | International Symposium on the Environmental Physiology of Ectotherms and Plants (ISEPEP7), Buenos Aires Argentina: coauthor on 3 oral presentations, with presenting authors Andre Szejner Sigal, Kevin Roberts, and Ana Lyons (UCB PhD candidates) |
| 2019 | International Conference on Comparative Physiology and Biochemistry, Ottawa: coauthor on one oral presentation, with presenting author Lisa Treidel, PhD candidate) |
| 2018 | SICB, San Francisco CA: co-author on 2 poster presentations and 4 oral presentations, with presenting authors Priyanka Goswami (high school student), Christopher Huebner (UCB undergraduate), Lisa Treidel, Emily King, Kevin Roberts, Kate Wilsterman (UCB PhD candidates), and Rebecca Clark (postdoctoral associate) |
| 2017 | SICB, New Orleans LA: coauthor on 3 oral and 1 poster presentation, with presenting authors Katelyn Adam (UCB undergraduate), Lisa Treidel, Kevin Roberts (UCB PhD candidates), and Rebecca Clark (postdoctoral associate) |
| 2016 | SICB, Portland OR: coauthor on one oral presentation, with presenting author Kevin Roberts (UCB PhD candidate) |
| 2015 | SICB, West Palm Beach FL: coauthor on one poster presentation with presenting author Andre Szejner Sigal (U Florida undergraduate) |
| 2014 | SICB, Austin TX: coauthor on one poster presentation with presenting author Ayesha Awan (UNF undergraduate) |
| 2014 | American Society of Physiology Intersociety meeting, San Diego CA. Presenter of one oral presentation. |
| 2014 | Society for Molecular Biology and Evolution, San Juan Puerto Rico. Coauthor of one oral presentation, with presenting author Tonia Schwartz (collaborator) |
| 2013 | International Symposium on the Environmental Physiology of Ectotherms and Plants 5 (ISEPEP5), London ON Canada: Presenter of one oral presentation. |
| 2013 | Computational Biomedicine, Gainesville FL: Presenter of one oral presentation. |

- 2013 SICB, San Francisco CA: Presenter of one oral presentation; coauthor on one poster presentation, with presenting authors Laura Castellanos and Rachel Silverberg (U Florida, undergraduates)
- 2012 Florida Genetics Conference, Gainesville FL: Presenter of one oral presentation
- 2012 SICB, Charleston NC: Presenter of one oral presentation
- 2011 ISEPEP4, Rennes France (2nd prize, Best Oral Presentation): Presenter of one oral presentation
- 2011 Canadian Society of Zoologists (CSZ), Ottawa ON: Presenter of one oral presentation (**Hoar Award finalist**)
- 2010 American Physiological Society Intersociety meeting, Westminster CO: Presenter of one oral presentation (**Scholander Award and Best Oral Presentation**)
- 2010 CSZ, Vancouver BC: Presenter of one oral presentation
- 2009 SICB, Boston MA: Presenter of one oral presentation

SERVICE CONTRIBUTIONS

SERVICE TO PROFESSIONAL FIELD

| Year | Contribution |
|------------------------------|---|
| 2018 - 2020 | Editorial Board, Proceedings of the Royal Society B |
| 2014 - | Editorial Board, Functional Ecology |
| 2009 - present | <i>Ad hoc</i> reviewer for PNAS, Nature Climate Change, Global Change Biol., Proc Roy Soc B, Ecology, Heredity, Genetics, Biol Letters, J Exp Biol, J Anim Ecol, Physiol Biochem Zool, Funct Ecol, J Evol Biol, Global Change Biol, Comp Biochem Physiol B, Oikos, Physiol Entomol, PLoS ONE, Integr Comp Biol, J Biogeography, J Insect Physiol, Insects, Conservation Physiol, Biol J Linn Soc, J Thermal Biol, Current Opinion Insect Sci, Sci Reports, Current Biology, Frontiers in Physiology, Global Ecology and Biogeography, Annals NY Acad Sci. |
| 2020, 2021 | Berkeley Sigma XI Grant in Aid of Research (GIAR) Review Committee |
| 2021 | External job search committee member Norwegian University of Science and Technology (NTNU) |
| 2019, 2020 | George Bartholemew Award Committee, SICB |
| 2020 | Division of Comparative Physiology and Biochemistry nominations committee, SICB |
| 2018 | <i>Ad hoc</i> reviewer, Czech Science Foundation (1 proposal) |
| 2017 | <i>Ad hoc</i> reviewer, National Research Foundation, South Africa (1 proposal) |
| 2016, 2017, 2018, 2020, 2021 | Division of Comparative Physiology and Biochemistry Student presentations judge, SICB |
| 2017 | National Science Foundation, grant review panel |
| 2013 | <i>Ad hoc</i> reviewer, Texas Academy of Science (1 proposal) |
| 2014, 2020, 2021 | <i>Ad hoc</i> reviewer, National Science Foundation (3 proposals) |

2011 - 2016 *Ad hoc* reviewer, Polish National Science Center (5 proposals)
 2016 *Ad hoc* reviewer, Austrian Science Fund (1 proposal)
 2016 *Ad hoc* reviewer, Czech Science Foundation (3 proposals)

DEPARTMENTAL SERVICE

| Year | Role |
|-------------|---|
| 2021 - | Faculty mentor, Assistant Professor Onja Razafindratsima |
| 2020 - | Integrative Biology Diversity, Equity and Inclusion committee, member |
| 2019 - | Integrative Biology Development Committee, chair |
| 2019 | Life Sciences Cluster hire search committee, member |
| 2017 - 2019 | Integrative Biology Undergraduate Advising committee, member |
| 2014-2017 | Integrative Biology, Seminar Committee (chair and co-chair) |
| 2016-2017 | Integrative Biology, Faculty Search Committee member |
| 2016- | Integrative Biology, Long-range Planning Committee member |
| 2015-2016 | Integrative Biology, Executive Committee member |
| 2014-2015 | Berkeley Initiative on Global Change Biology, Seminar committee chair |

CAMPUS SERVICE

| Year | Role |
|---------------|---|
| 2019 | Life Sciences Cluster hire search committee, member |
| 2018 | "On The Same Page" organizing committee, member |
| 2014- 2015 | Berkeley Initiative on Global Change Biology, Seminar committee chair |

MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS

| Year | Organization |
|-------------------------------------|--|
| 2007 - present | Society of Integrative and Comparative Biology (SICB) |
| 2012 - present | Australian and New Zealand Society for Comparative Physiology and Biochemistry |
| 2014 - present | British Ecological Society |
| 2010- present, intermittently | American Physiological Society |
| 2007-2013 | Canadian Society of Zoologists |

TEACHING AND MENTORING**COURSES TAUGHT**

| Term | Course # | Title | Units | Team Taught |
|--|----------|---|-------|-------------|
| Fall 2014 | IB290 | Graduate seminar in Global Change Biology | 1 | No |
| Spring 2015 | IB290 | Graduate seminar in Global Change Biology | 1 | No |
| Spring 2015 | IB24 | Freshman seminar: Thermal Adaptation | 1 | No |
| Spring 2016 | IB24 | Freshman seminar: Thermal Adaptation | 1 | No |
| Spring 2016, 2017, 2018 | IB150 | Evolutionary Environmental Physiology | 3 | No |
| Fall 2016 | IB148 | Comparative Physiology | 3 | Yes (50%) |
| Spring 2017, Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020 | IB24 | Freshman seminar: Biological Impacts of Climate Change | 1 | No |
| Fall 2017 | IB84 | Sophomore seminar: Biological Impacts of Climate Change | 1 | No |
| Fall 2017 | IB290 | Graduate seminar in grant writing | 2 | Yes |
| Spring 2018, Fall 2018, Spring 2019, Fall 2019, Spring 2020 | IB222 | Graduate seminar in Physiological Energetics and Biomechanics | 2 | Yes |

MENTORING (SINCE STARTING FACULTY POSITION IN 2014)**UNDERGRADUATE STUDENTS MENTORED**

| Dates | Name | Program or School | Role | Current Position |
|--------|----------------|---|-------------------------|-----------------------|
| 2017 - | Hannah Ritchie | Molecular Cellular Biol, UCB | Research advisor | Undergraduate student |
| 2017 - | Francesco Rica | Undeclared, UCB | Research advisor | Undergraduate student |
| 2017 - | Makayla Arkara | Environmental Science, Policy and Management, UCB | Research project mentor | Undergraduate student |

Curriculum vitae

Caroline Williams

| | | | | |
|----------------|-----------------------|---|-------------------------|--|
| 2016 - | Chris Huebner | Integrative Biol, UCB | Research advisor | Undergraduate student |
| 2016 - | Gina Kotos | Integrative Biol, UCB | Research advisor | Undergraduate student |
| 2017 - | Anne Sompayrac | Integrative Biol, UCB | Honor's thesis advisor | Graduated with honors, working as research assistant in my lab |
| 2015 - | Melissa Lopez | Environmental Science, Policy and Management, UCB | Research project mentor | Undergraduate student |
| 2016 - 2016 | Paul Yoon | Integrative Biol, UCB | Research advisor | Undergraduate student |
| 2015 - 2017 | Jessica Lee | Integrative Biol, UCB | Research project mentor | Graduated, employed as medical scribe to prepare for medical school applications. Graduated |
| 2015 - 2015 | Andrea Tam | Biology, U Penn | Research project mentor | Graduated |
| 2015 - 2017 | Katelyn Adam | Environmental Science, Policy and Management, UCB | Research project mentor | Graduated, seeking work as lab technician and preparing to apply to graduate school. Graduated |
| 2014 - 2015 | Vishruth Venkataraman | Integrative Biol, UCB | Research advisor | Graduated |
| 2014 - 2015 | Hannah Berman | Integrative Biol, UCB | Research advisor | Graduated |
| 2014 - 2016 | Rose Kang | Integrative Biol, UCB | Honor's thesis advisor | Graduated with honors, at Case Western Medical School |
| 2014 - 2017 | Varun Bahl | Molecular and Cellular Biology, UCB | Research project mentor | Graduated, at U Penn Physiology PhD program |
| 2014 - 2015 | Mimi Zhao | Integrative Biol, UCB | Research project mentor | Graduated |

GRADUATE STUDENTS MENTORED

| Dates | Name | Program or School | Faculty Role | Current Position |
|----------------|---------------------|-----------------------|---|------------------------|
| 2015- | Lisa Treidel | Integrative Biol, UCB | PhD advisor and research mentor | PhD student, UCB |
| 2015- | Kevin Roberts | Integrative Biol, UCB | PhD advisor and research mentor | PhD student, UCB |
| 2016 - | Ana Lyons | Integrative Biol, UCB | PhD advisor and research mentor | PhD student, UCB |
| 2016 - | Andre Szejner Sigal | Integrative Biol, UCB | PhD advisor and research mentor | PhD student, UCB |
| 2016 - | Emily King | Integrative Biol, UCB | PhD co-advisor and research mentor | PhD student, UCB |
| 2016 - | Victoria Dahloff | Woods lab, U Montana | Dissertation committee, outside member | PhD student, U Montana |
| 2017 | Mallory Ballinger | Integrative Biol, UCB | Qualifying exam inside member | PhD student, UCB |
| 2017 | Matt Kling | Integrative Biol, UCB | Qualifying exam inside member | PhD student, UCB |
| 2017 - present | Richelle Tanner | Integrative Biol, UCB | Qualifying exam inside member, Dissertation committee inside member | PhD student, UCB |
| 2017 | Erik Sathe | Integrative Biol, UCB | Qualifying exam inside member | PhD student, UCB |
| 2017 | Jeffrey Frederick | Integrative Biol, UCB | Qualifying exam inside member | PhD student, UCB |
| 2016 | Sara Elshafie | Integrative Biol, UCB | Qualifying exam inside member | PhD student, UCB |
| 2016 | Philip Georgakakis | Integrative Biol, UCB | Qualifying exam inside member | PhD student, UCB |

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|----------------|--------------------|---|--|-----------------------------|
| 2016 | Kathryn Wilsterman | Integrative Biol, UCB | Qualifying exam inside member | PhD student, UCB |
| 2015 | Weston Stauffer | Integrative Biol, UCB | Qualifying exam inside member | PhD student, UCB |
| 2015 | Rachel Thayer | Integrative Biol, UCB | Qualifying exam inside member | PhD student, UCB |
| 2015 | Michelle Miller | Integrative Biol, UCB | Qualifying exam inside member | PhD student, UCB |
| 2014 - 2015 | Leo Darrigade | Agro Paris Tech, MSc exchange | Research project mentor | PhD student, U Paris Saclay |
| 2015 – present | Eric Armstrong | Integrative Biol, UCB | Dissertation committee, inside member | PhD student, UCB |
| 2014 - present | Maria Tonione | Environmental Science, Policy and Management, UCB | Dissertation committee, outside member | PhD student, UCB |

POSTDOCTORAL FELLOWS MENTORED

| Dates | Name | Program or School | Faculty Role | Current Position |
|----------------|------------------------|---|------------------|---------------------------------|
| 2015 - 2017 | Rebecca Clark, PhD | Integrative Biology, UCB (start-up funding) | PI | Faculty, Siena College New York |
| 2020 - present | Serena Padilla Caplins | Integrative Biology, UC Davis EEB | Research advisor | Postdoc, Williams and Bay labs |