

KRISTI L. MONTTOOTH

Associate Professor of Biology

School of Biological Sciences
University of Nebraska
1104 T Street
Lincoln NE, 68588-0118

402-472-8455
kmontooth2@unl.edu
<http://montoothlab.unl.edu/>
<http://biosci.unl.edu/kristi-montooth>

EDUCATION

- 09/2002 – 01/2005 Ph.D. Genetics & Development, Cornell University, Advisor: Andrew Clark
Dissertation: An evolutionary genetic analysis of metabolic pathways and physiological performance in *Drosophila*
- 09/1998 – 08/2002 Ph.D. Candidate in Biology, Pennsylvania State University, Advisor: Andrew Clark
- 09/1993 – 06/1998 B.S. Biology, specialization in Evolution, University of California, Irvine

PROFESSIONAL EXPERIENCE

- 09/2019 – present Susan J. Rosowski Associate Professor of Biology, School of Biological Sciences, University of Nebraska-Lincoln
- 08/2014 – present Associate Professor, School of Biological Sciences, University of Nebraska-Lincoln
- 03/2008 – 08/2014 Assistant Professor, Department of Biology, Indiana University
- 03/2005 – 02/2008 Postdoctoral Fellow, Brown University, Advisor: David Rand
- 11/2004 – 02/2005 Postdoctoral Associate, Cornell University, Advisor: Andrew Clark
- 01/2001 – 05/2002 Teaching Assistant:
Physiological Ecology, Pennsylvania State University, Spring 2002
Population Genetics, Pennsylvania State University, Spring 2001
- 09/1995 – 06/1998 Undergraduate Research Assistant, University of California, Irvine
Biochemical adaptation of insect cuticular hydrocarbons, Advisor: Allen Gibbs

GRANTS: current

- NSF RII Track-2 FEC: **Using Natural Variation to Educate, Innovate, and Lead (UNVEIL)**: A collaborative research network to advance genome-to-phenome connections in the wild. Co-PI on collaborative proposal with U Montana (PI- Cheviron, \$4,000,000 (\$1,856,000 to UNL with 33% credit each to Meiklejohn, Montooth & Storz), 2017-2021
- NSF DEB SG: Genomic and functional tests of mitochondrial-nuclear coevolution, PI, collaborative proposal with PI-Maurine Neiman (U Iowa), \$89,999 to UNL, 2018-2020
- NSF Rules of Life: FELS EAGER: A Predictive framework of metabolism as an engine of functional environmental responses across levels of biological organization, lead PI (50% credit) with co-PI John DeLong (UNL), \$299,999, 2018-2020
- NIH NRSA award: Linking Host Energetics and Multiple Host Defenses to Transmission and Virulence Evolution, co-sponsor (w/ Dr. Clay Cressler) for Dr. Jessica Hite, \$172,926, 2018-2020

GRANTS: recent submissions

NSF MTM 2: Dissecting the environmental and genetic determinants of microbiome assembly, stability and resilience, co-PI with PI Clay Cressler, \$3,000,000 requested, 2020-2025

NSF BII-IMPLEMENTATION: The UNVEIL Institute: promoting the functional synthesis of evolutionary biology, co-PI with PI Jay Storz, \$12,500,000 requested, 2020-2025, not funded

GRANTS: completed

NSF DEB DDIG: DISSERTATION RESEARCH: Energetic mechanisms underlying fitness consequences of immune responses, PI sponsor for Justin Buchanan, \$19,949, 2017-2019

NSF IOS CAREER award: Physiological adaptation to a complex environment, \$1,052,975, 2012-2019

NSF DEB DDIG: DISSERTATION RESEARCH: The evolutionary genetics of cellular and biochemical adaptation in *Drosophila*, PI sponsor for co-PI Brandon Cooper, \$20,274, 2014-2017

NIH NRSA award: Coping with stress: the cellular maintenance of embryonic development, PI sponsor for Dr. Brent Lockwood, \$146,070, 2012-2014

NIH NRSA Postdoctoral Fellowship: *Drosophila* energetics and mito-nuclear function, \$145,200, 2006-2009

NSF Doctoral Dissertation Improvement Grant: Pathway analysis of ethanol and acetic acid detoxification in *Drosophila*, \$9995, 2001-2004

FELLOWSHIPS AND AWARDS

T.O. Hass Award for Outstanding Service to the School of Biological Sciences, UNL, 2020

Susan J. Rosowski Associate Professor, 2019-2024

Indiana University Trustees Teaching Award, \$2500, 2013

NSF CAREER Award, \$1,052,975, 2012-2017

Howard Hughes Predoctoral Fellowship, \$160,000, 1998-2003

J. Ben and Helen D. Hill Memorial Award, \$1200, 1999, 2001

Braddock Scholarship, \$12,000, 1998-2000

Goldwater Scholarship, \$7500, 1997-1998

PROFESSIONAL ACTIVITIES

Associate Editor	eLife, Guest Editor, 2017 Proceedings of the Royal Society B: Biological Sciences, 2014 – 2016 Proceedings of the National Academy of Sciences, Guest Editor, 2014
Society Leadership	Program Officer, Society for Integrative & Comparative Biology DCPB, 2019-2021 Oversight Committee for the journal <i>Evolution Letters</i> , 2017-2022 Society for the Study of Evolution Council Member 2015-2017
Working Groups	Key Participant, Kavli Institute for Theoretical Physics Program in Cellular Energetics, UCSB, Dec 2019 NSF-sponsored Grand Challenges in Organismal Biology: Walking the tightrope between stability and change, Cold Spring Harbor Banbury Center, Feb 2013
Grant Review	NSF: Antarctic Science, IOS: Physiol Struct Systems, IOS: Mol Cell Bio, DEB: Evolutionary Processes, IOS OEI: CAREER, NSF: International Research Fellowship, Human Frontier Science Program NSF IOS Full-proposal Review Panel Member (twice)
Manuscript Review	American Naturalist, BMC Biology, BMC Evol Biol, Comp Biochem Physiol, eLife, Evolution, Fly, Frontiers Immunology, Functional Ecology, G3, Genetica, Genetics, Genome, Genome Biol Evol, Integrative & Comp Biol, J Exp Biol, J Insect

Physiology, J Insect Sci, J Mol Evol, Mol Biol Evol, Mol Ecology, Mol Phylogenetic Evol, Naturwissenschaften, New Phytologist, Physiol Biochem Zool, PNAS, PLoS Genetics, PLoS ONE, Science

- Memberships Genetics Society of America, Society for Integrative and Comparative Biology, Society for the Study of Evolution, Society for Molecular Biology and Evolution
- Workshops Invited presenter and facilitator SICB 2021 Workshop: "A primer on integrating genomics and physiology"
- Invited to develop and run a lunch-time workshop on "Writing Scientific Papers" Genetics Society of America meeting on Population, Evolutionary and Quantitative Genetics, Madison WI, May 2018

PEER-REVIEWED PUBLICATIONS

† Indicates where I am or a trainee from my lab is the corresponding author; * undergraduate coauthor; + authored as part of a working or symposium group

- Greimann, E.S., Ward, S.F., Woodell, J.D., Hennessey, S., Kline, M.R., Moreno, J.A., Peters, M., Cruise, J.L., **Montooth, K.L.**, Neiman, M., Sharbrough, J., 2020. Phenotypic variation in mitochondrial function across New Zealand snail populations. bioRxiv <https://doi.org/10.1101/230979> Online Early at *Integrative and Comparative Biology*
- Chakraborty, M, Chang, C-H, Khost, D, Vedanayagam, J, Adrion, JR, Liao, Y, **Montooth, KL**, Meiklejohn, CD, Larracuente, AM and JJ Emerson. Evolution of genome structure in the *Drosophila simulans* species complex. bioRxiv <https://doi.org/10.1101/2020.02.27.968743> *In revision for Genome Research*
- Wat, LW, Chao, C, Bartlett, R, Buchanan, JL, Millington, JW, Chih, HJ, Chowdhury, ZS, Biswas, P, Huang, V, Shin, LJ, Wang, LC, Gauthier, MPL, Barone, MC, **Montooth, KL**, Welte, MA, and EJ Rideout. 2020 A role for triglyceride lipase *brummer* in the regulation of sex differences in *Drosophila* fat storage and breakdown. PLoS biology 18 (1), e3000595
- Li, H, Rai, M, Buddika, K, Sterrett, MC, Luhur, A, Mahmoudzadeh, NH, Julick, CR, Pletcher, RC, Chawla, G, Gosney, CJ, Burton, AK, Karty, JA, **Montooth, KL**, Sokol, NS, and JM Tennessen. 2019. Lactate dehydrogenase and glycerol-3-phosphate dehydrogenase cooperatively regulate growth and carbohydrate metabolism during *Drosophila melanogaster* larval development. Development 146, dev175315
- Havird, JC, Weaver, RJ, Milani, L, Ghiselli, F, Greenway, R, Ramsey, AJ, Jimenez, AG, Dowling, DK, Hood, WR, **Montooth, KL**+, Estes, S, Schulte, PM, Sokolova, IM, Hill, GE. 2019. Beyond the powerhouse: integrating mitonuclear evolution, physiology, and theory in comparative biology. Integrative and Comparative Biology 59, 856–863
- Montooth**†, **KM**, Dhawanjewar, AS, and CD Meiklejohn. 2019. Temperature-sensitive reproduction and the physiological and evolutionary potential for Mother's Curse. Integrative and Comparative Biology 59, 890–899 (Editor's Choice Article)
- Matoot, O, Julick, CR, and **KL Montooth**. 2019. Genetic variation for ontogenetic shifts in metabolism underlies physiological homeostasis at the mitochondrial and organismal levels. Genetics 212, 537-552 (Issue Highlight Article)
- Buchanan, JL, Meiklejohn, CD, and **KL Montooth**†. 2018. Mitochondrial dysfunction and infection generate immunity–fecundity tradeoffs in *Drosophila*. Integr Comp Biol 58, 591–603.
- Hood, WR, Austad, SN, Bize, P, Jimenez, AG, **Montooth**+, **KL**, Schulte, PM, Scott, GR, Sokolova, I, Treberg, JR, and K Salin. 2018. The mitochondrial contribution to animal performance, adaptation, and life-history variation. Integr Comp Biol 58, 480-485.
- DeLong, JP, Bachman, G, Gibert, JP, Lühring, TM, **Montooth**+, **KL**, Neyer, A, and B Reed. 2018 Habitat, latitude, and body mass influence the temperature dependence of metabolic rate. Biology Letters 20180442.

- Hoekstra, LA, Julick, CR, Mika, KM, and **KL Montooth**[†]. 2018 Energy demand and the context-dependent effects of genetic interactions underlying metabolism. *Evolution Letters* 2:102-113.
- Lockwood[†], BL, Julick, CR, and **KL Montooth**. 2017 Maternal loading of a small heat shock protein increases embryo thermal tolerance in *Drosophila melanogaster*. *Journal of Experimental Biology* 220: 4492-4501
- Zhang, C, **Montooth, KL**, and BR Calvi. 2017 Incompatibility between mitochondrial and nuclear genomes during oogenesis results in ovarian failure and embryonic lethality. *Development* 144: 2490-2503
- DeLong, JP, Gibert, JP, Luhning, TM, Bachman, G, Reed, B, Neyer, A, and **KL Montooth**⁺. 2017 The combined effects of reactant kinetics and enzyme stability explain the temperature dependence of metabolic rates. *Ecology & Evolution*, DOI: 10.1002/ece3.2955
- Siddiq, MA, Loehlin, DW, **Montooth, KL** and JW Thornton. 2017 Experimental test and refutation of a classic case of molecular adaptation in *Drosophila melanogaster*. *Nature Ecol Evol* 1, 0025
- Adrion, JR, White, PS, and **KL Montooth**[†]. 2016 The roles of compensatory evolution and constraint in aminoacyl tRNA synthetase evolution. *Mol Biol Evol*, 33: 152-161
- Cooper, BS, Burrus, C, Ji, C, Hahn, MW and **KL Montooth**[†]. 2015 Similar efficacies of selection shape mitochondrial and nuclear genes in both *Drosophila melanogaster* and *Homo sapiens*. *G3* 5: 2165-2176
- Greenlee¹, KJ, **Montooth**^{†1}, **KL** and BR Helm. 2014 Predicting performance and plasticity in the development of respiratory structures and metabolic systems. *Integr Comp Biol* 54: 307-322
¹ Co-first and corresponding authors contributed equally to this work
- Coopert, BS, Hammad, LA and **KL Montooth**. 2014 Thermal adaptation of cellular membranes in natural populations of *Drosophila melanogaster*. *Functional Ecology* 28: 886-894
- Hoekstra, LA, Siddiq, MA*, and **KL Montooth**[†]. 2013 Pleiotropic effects of a mitochondrial-nuclear incompatibility depend upon the accelerating effect of temperature in *Drosophila*. *Genetics* 195: 1129-1139
- Hoekstra, LA and **KL Montooth**. 2013 Inducing extra copies of the *Hsp70* gene in *Drosophila melanogaster* increases energetic demand. *BMC Evolutionary Biology* 13: 68
- Kobeyt, RL, and **KL Montooth**. 2013 Mortality from desiccation contributes to a genotype-by-temperature interaction for cold survival in *Drosophila melanogaster*. *J Exp Biol* 216: 1174-1182
- Meiklejohn, CD, Holmbeck, MA, Siddiq*, MA, Abt, DN, Rand, DM and **KL Montooth**[†]. 2013 An incompatibility between a mitochondrial tRNA and its nuclear-encoded tRNA synthetase compromises development and fitness in *Drosophila*. *PLoS Genetics* 9: e1003238 (*F1000 selection*)
- Coopert, BS, Hammad, LA, Fisher*, NP, Karty, JA and **KL Montooth**[†]. 2012 In a variable thermal environment selection favors greater plasticity of cell membranes in *Drosophila melanogaster*. *Evolution* 66: 1976-1984
- Hammad, LA, Cooper, BS, Fisher*, NP, **Montooth, KL**, and JA Karty. 2011 Profiling and quantification of *Drosophila melanogaster* lipids using liquid chromatography/mass spectrometry. *Rapid Communications in Mass Spectrometry* 25: 2959-2968
- Petzold, J, Winterman, B and **KL Montooth**. 2010 Science Seeker: A new model for teaching information literacy to entry-level biology undergraduates. *Issues in Sci Tech Librarianship*, <http://www.istl.org/10-fall/refereed2.html>
- Montooth**^{†1}, **KL**, Meiklejohn¹, CD, Abt, DN and DM Rand. 2010 Mitochondrial-nuclear epistasis affects fitness within species but does not contribute to fixed incompatibilities between species of *Drosophila*. *Evolution* 64: 3364-3379 ¹ Co-first authors contributed equally to this work
- Montooth**[†], **KL**, Abt, DN, Hofmann*, JW and DM Rand. 2009 Comparative genomics of *Drosophila* mtDNA: Novel features of conservation and change across functional domains and lineages. *J Mol Evol* 69: 94-114
- Montooth, KL** and DM Rand. 2008 The spectrum of mitochondrial mutation differs across species. *PLoS Biol* 6: e213

- Drosophila 12 Genomes Consortium. 2007. Evolution of genes and genomes on the *Drosophila* phylogeny. *Nature* 450: 203-218 (I contributed assembly, annotation and evolutionary analysis of mtDNAs)
- Meiklejohn, CD, **Montooth, KL** and DM Rand. 2007 Positive and negative selection on the mitochondrial genome. *Trends in Genetics* 23: 259-263
- Montooth, KL**, Siebenthal*, KT and AG Clark. 2006 Membrane lipid physiology and toxin catabolism underlie ethanol and acetic acid tolerance in *Drosophila melanogaster*. *J Exp Biol* 209: 3837-3850
- Zhang, M, **Montooth, KL**, Wells, MT, Clark, AG and D Zhang. 2005 Mapping multiple quantitative trait loci by Bayesian classification. *Genetics* 169: 2305-18
- Civetta, A, **Montooth, KL** and M Mendelson. 2005 Quantitative trait loci and interaction effects responsible for variation in female postmating mortality in *Drosophila simulans* and *D. sechellia* introgression lines. *Heredity* 94: 94-100
- Montooth, KL**, Marden, JH and AG Clark. 2003 Mapping determinants of variation in energy metabolism, respiration and flight in *Drosophila*. *Genetics* 165: 623-635
- Montooth, KL** and AG Gibbs. 2003 Cuticular pheromones and water balance in the house fly, *Musca domestica*. *Comp Biochem Physiol A* 135: 457-465
- Marden, JH, Rogina, B, **Montooth, KL** and SL Helfand. 2003 Conditional tradeoffs between aging and organismal performance of *Indy* long-lived mutant flies. *PNAS* 100: 3369-3373

INVITED SYMPOSIA and PANELS

- Society for Integrative and Comparative Biology, Invited Speaker for Genomics Workshop, Washington DC, January 2021
- Society for Integrative and Comparative Biology, Invited Symposium participant: Building Bridges from Genome to Phenome: Molecules, Methods and Models, Austin TX, January 2020
- Congress of the European Society of Evolutionary Biology, Invited Symposium speaker: Mitochondrial-nuclear evolution, Turku, Finland, August 2019
- Annual *Drosophila* Research Conference, Invited Workshop speaker: Intro to the *Drosophila* microbiome: How can I control the microbiome in my research? Dallas, TX March 2019
- Society for Integrative and Comparative Biology, Symposium speaker: Beyond the powerhouse: integrating mitonuclear evolution, physiology, and theory in comparative biology, Tampa FL, January 2019
- Society for Integrative and Comparative Biology, Symposium speaker: Inside the Black Box: The Mitochondrial Basis of Life-history Variation and Animal Performance, San Francisco, January 2018
- Society for the Study of Evolution, Symposium speaker: Cytonuclear Evolution, Austin TX, June 2016
- Society for Developmental Biology, Symposium speaker: Growth and Metabolism, Snowbird UT, July 2015
- APS Intersociety Meeting: Comparative Approaches to Grand Challenges in Physiology, Symposium speaker: Genomics in Integrative and Comparative Biology, San Diego, October 2014
- Program of Excellence Symposium in Population Biology Speaker, Lincoln, NE, September 2014
- Iowa City Darwin Day Speaker, University of Iowa & Iowa City, February 2014
- IGERT Symposium Panel Member: The Future of Evo-Devo, February 2012
- IGERT Symposium Speaker: Evolution, Genomics and Development, November 2009
- U of Michigan Early Career Scientist Symposium Speaker: Networks in Ecology and Evolution, 2008

INVITED SEMINARS

- (*) indicates student-invited speaker
- Vienna Graduate School of Population Genetics, date TBD
- Auburn University, Biology Seminar, date TBD
- Washington State University, Biology Seminar, Fall 2020
- Vanderbilt University, Biology Seminar, Spring 2019
- North Dakota State University, Biology, Spring 2019
- University of Nebraska-Lincoln, Entomology Spring 2019
- Pennsylvania State University, Entomology, Fall 2018
- University of Kansas, Molecular Biosciences, Spring 2018

University of Montana, Spring 2018
University of Oklahoma, Dept. of Biology, Fall 2017
Harvard Medical School, Dept of Systems Biology, Theory Lunch, Fall 2017
University of Wisconsin-Madison, Evolution Seminar, Spring 2017
University of Wisconsin-Madison, Genetics Colloquium, Spring 2017
University of Nebraska-Lincoln, Redox Biology Seminar Series, Spring 2017
Nebraska Wesleyan University Student-invited Seminar Series, Spring 2017 (*)
Kansas State University, Division of Biology, Spring 2016
Clemson University, Department of Biological Sciences, Fall 2015
Vienna Graduate School of Population Genetics, invited 2014, declined due to maternity leave
University of Illinois, Integrative Biology, invited 2014, declined due to maternity leave
Dartmouth College, Cramer Seminar Series, Fall 2013
Marine Biological Labs, Woods Hole, Spring 2013
University of Georgia, Dept. of Genetics, Spring 2013
University of Nebraska, School of Biological Sciences, Spring 2013
Washington University in St. Louis, Evolution, Ecology and Population Biology Seminar, Fall 2012
Portland State University, Dept. of Biology, Spring 2011
University of Western Ontario, Dept. of Biology, Fall 2010
Stanford's Hopkins Marine Station, Fall 2010 (*)
Binghamton University, Dept. of Biology, Fall 2010
University of Chicago, Dept. of Ecology & Evolution, Spring 2010
University of Nebraska, School of Biological Sciences, Spring 2009
University of Pennsylvania, Dept. of Biology, Spring 2009
Duke University, Population Genetics Seminar Series "Super Speaker", Fall 2008 (*)
Indiana State University, Dept. of Biology, Fall 2008
University of Massachusetts Amherst, Entomology Seminar Series, Fall 2007
University of Oregon, Center for Ecology and Evolutionary Biology, Spring 2007
Indiana University, Dept. of Biology, Spring 2007
Harvard University, Dept. of Organismal and Evolutionary Biology, Fall 2006
University of Massachusetts Lowell, Dept. of Biological Sciences, Fall 2006
University of Nevada Las Vegas, Dept. of Biological Sciences, Fall 2006
University of Oregon, Center for Ecology and Evolutionary Biology, Fall 2005
Harvard University, Population and Evolutionary Genetics/Genomics Seminar, Fall 2005
University of Rochester, Evolution seminar, Fall 2003

CONFERENCE PRESENTATIONS

Evolutionary Genetics of Adaptation, UNVEIL symposium 2018 (talk)
GSA Population, Evolutionary and Quantitative Genetics Conference 2018 (talk)
GSA Drosophila Research Conference 2017 (poster)
GSA Drosophila Research Conference 2015 (poster)
Society of Integrative and Comparative Biology 2014 (talk)
Evolution 2013 (talk)
GSA Drosophila Research Conference 2013 (talk)
Midwest Drosophila Conference 2012 (talk)
Midwest Drosophila Conference 2011 (talk)
Congress of the European Society of Evolutionary, Tubingen, Germany Biology 2011 (Symposium talk)
Society for Integrative and Comparative Biology Meetings 2011 (talk)
GSA Drosophila Research Conference 2010 (poster)
Midwest Drosophila Meetings 2009 (talk)
Midwest Drosophila Meetings 2008 (talk)
Society for Molecular Biology and Evolution, Barcelona, Spain 2008 (talk)
American Genetics Association: Genome Evolution Meetings 2007 (poster)
Gordon Conf Quant Genet and Genomics 2007 (poster)

GSA Drosophila Research Conf 2007 (poster)
Evolution 2006 (talk)
GSA Drosophila Research Conf 2006 (poster)
GSA Drosophila Research Conf 2005 (talk)
Society for Molecular Biology and Evolution Meetings 2004 (poster)
Keystone Meeting on Natural Variation and Quantitative Genetics in Model Organisms 2004 (poster)
GSA Drosophila Research Conf 2003 (poster)
GSA Drosophila Research Conference 2002 (poster)
Congress of the European Society of Evolutionary Biology, Aarhus, Denmark 2001 (talk)
GSA Drosophila Research Conference 2001 (poster)
Society for Integrative and Comparative Biology Meetings 2001 (talk)
GSA Drosophila Research Conference 2000 (poster)
Society for Integrative and Comparative Biology Meetings 2000 (talk)
Evolution 1999 (talk)
American Genetics Association: Genome Diversity and Evolution Meeting, 1999 (poster)

TRAINING OF STUDENTS AND POSTDOCTORAL RESEARCHERS

Postdoctoral researchers:

Dr. Brent Lockwood, PhD Stanford University, 2011-2014
Currently Assistant Professor, University of Vermont
NIH NRSA Postdoctoral Fellowship, \$146,070

Dr. Katherine O'Brien, PhD University of Pennsylvania, 2014-2016
Currently Instructor and Science Communicator at Ohio State U

Dr. Omera Matoi, PhD University of North Carolina Charlotte, 2014-present
NSF EPSCoR UNVEIL Postdoctoral Fellowship

Dr. Jessica Hite, PhD Indiana University, co-mentored with C. Cressler, 2018-present
Starting Assistant Professor, U Wisconsin Madison, Fall 2020
NIH NRSA Postdoctoral Fellowship

Dr. Ibrahim El-Shesheny, Assistant Professor at Tanta University, Egypt, 2018-present
Visiting Assistant Professor

Dr. Megan Kobiela, Ph.D. University of Minnesota, 2019-present
NSF EPSCoR UNVEIL Postdoctoral Fellowship

Doctoral students:

Luke Hoekstra, PhD student, 2008-2014
Currently Adjunct Professor, Oklahoma State University
Research/training awards, fellowships and grants totaling \$92,864

Robert Kobey, MS student, 2009-2014
Research/training awards, fellowships and grants totaling \$85,280

Brandon Cooper, PhD student, 2010-2014
Currently Assistant Professor, University of Montana
Research/training awards, fellowships and grants totaling \$126,874

Jeff Adrion, PhD student, co-advised with M. Hahn at Indiana University, 2013-2018
Currently postdoctoral researcher, University of Oregon
Research/training awards, fellowships and grants totaling \$252,500

Justin Buchanan, PhD student, 2014-2019
Currently postdoctoral fellow, Vanderbilt University, July 2019

Abhilesh Dhawanjewar, PhD student co-advised with C. Meiklejohn, 2015-present
Cole Julick, PhD student, 2016-present

Alex Toalson, MS student co-advised with C. Meiklejohn, 2019-present
Nitin Bansal, PhD student, Fall 2020-present

Dissertation committees:

Catherine Hogan, University of Massachusetts, Lowell, MS student
Tami Cruishank, Indiana University, EEB PhD student
Wenli Li, Indiana University, EEB PhD student
Jonathan Andicoechea, Indiana University, MS student
Sam Miller, Indiana University, MS student
Amy Cash, Indiana University, MCDB PhD student
Daniel Schrider, Indiana University, EEB and Informatics PhD student
Mark Peterson, Indiana University, EEB PhD student
Harald Parzar, Indiana University, EEB PhD student
Mikus Abolins-Abols, Indiana University, EEB PhD student
Matt Ackerman, Indiana University, EEB PhD student
Dean Castillo, Indiana University, EEB PhD student
Logan Cole, Indiana University, EEB PhD student
Amy Dapper, Indiana University, EEB PhD student
Amanda Gibson, Indiana University, EEB PhD student
CJ Jewell, Indiana University, EEB PhD student
Jamie Kostyun, Indiana University, EEB PhD student
Parul Johri, Indiana University, EEB PhD student
Weiyi Li, Indiana University, EEB PhD student
Casey McGrath, Indiana University, EEB PhD student
James Pease, Indiana University, EEB PhD student
Rebecca Penny, Indiana University, EEB PhD student
Nathan Taylor, Indiana University, MCDB PhD student
Melissa Touns, Indiana University, EEB PhD student
Daniela Vergara, Indiana University, EEB PhD student
Laura Weingartner, Indiana University, EEB PhD student
Yen-chi Wu, Indiana University, MCDB PhD student
Chunyang Zhang, Indiana University, MCDB PhD student
Alissa Anderson, UNL, EEB PhD Student
Maria Goller, UNL, EEB PhD Student
Chelsea Stehle, UNL, EEB MS Student
Rudy Villegas, UNL, EEB PhD Student
Emily Wynn, UNL, GCMB PhD Student
Itzela Cruz-Solanilla, UNL, GCMB PhD Student
Noori Choi, UNL, EEB PhD Student
Natalia Gutierrez-Pinto, UNL, EEB PhD Student
Erin Carr, UNL, GCMB PhD Student
Miranda Salsbery, UNL, EEB PhD Student
Keely Corder, U of Montana, PhD Student
Alaina Pfenning, UNL, EEB PhD student
Annie Krueger, UNL, Entomology PhD student
Lianna Walker, UNL, Animal Science PhD student
Lyndsie Wszola, UNL, EEB PhD student
Sterling Ericsson, UNL, GCMB PhD student
Laura Segura Hernández, UNL, EEB PhD student
Ana Martinez-Hottovy, UNL, GCMB PhD student
Ashley Foltz, UNL, GCMB PhD student
Brandi Pessman, UNL, EEB PhD student
Jeremy Brown, UNL, Biochemistry PhD student

Undergraduate researchers trained:

Nicholas Molby, 2008-2010, Currently medical student
Elizabeth Eggleston, Hutton-Holland student, 2008-2010
Hutton Research Partnership Grant, \$750, Spring 2009
Lindsay Davies, Honors student, 2008-10, Currently PhD student Sustainable Agriculture, U of Georgia
Hutton Research Partnership Grant, \$750, Spring 2009
Nicholas Fisher, Honors student, 2010-2011, Currently medical student
Hutton Honors Research Grant, \$2500, Summer 2010
Katie Mika, Honors student 2008-2012, Currently PhD student Human Genetics, U of Chicago
Hutton Research Partnership Grant, \$750, Spring 2009
STARs summer research fellowship, \$3000, Summer 2010
Mohammad Siddiq, Honors student, 2009-2012, Currently PhD student in Evolution, U of Chicago
Hutton Research Grants (4), \$7,000
Departmental awards (2), \$1,500
Inaugural Victoria Finnerly Travel Award from the Genetics Society of America, \$750
Cecilia Lemke, Honors student, 2009-2012
Anna Guanzon, Honors student, 2011-2012
Hutton Honors Research Grant, \$3000, Summer 2011
Sonya Josephs, Honors student, 2011
Rob Gassert, IFLE and STARs student, 2010-2014, Currently medical student
Dan Gutt, 2011-2012, Currently law student
Nathan Byrd, 2012-2014, Currently medical student
Hutton Research Partnership Grant, \$750, Summer 2012
Hutton Honors Research Grant, \$3000, Summer 2013
Shaye Mentzer, 2012-2014, Cox Scholar
Cole Julick, 2013-2014, Currently research assistant in evolutionary physiology, UNL
Kathleen Gordon, Honors student, 2013-14, Currently research assistant in speciation genetics, UNL
Hutton Research Partnership Grant, \$1000, Summer 2013
Shelby Beil, 2013-2014, Currently medical student
Hutton Research Partnership Grant, \$750, Spring 2010
Carl Kulow, 2013-2014
Cassie Treu, 2015-2016, UCARE scholar
Katie Church, 2015-2017, UCARE scholar, Currently research assistant in my lab, UNL
Madeleine Koenig, 2015-2018, UCARE scholar
Matthew Baier, 2016-2018, UCARE scholar (co-advised with Colin Meiklejohn)
Jenny Libov, 2018-2019, UCARE scholar
Brittini McGuire, 2018
Olivia Miller, 2018-2019, UCARE scholar
Lauren Reiman, 2018-2020, UCARE scholar (co-advised with Clay Cressler and Jessica Hite)
Vanessa Reiser, 2018-2019
Chloe Hogue, 2018-2019
Ava Westerly, 2018-2019
Alex Toalson, 2018-2019 (post-bac)
Gina Marcuzzo, 2019-present
Joevy Sun, 2019-present, UCARE scholar
Alexus Hansen, 2019-present, UCARE scholar
Kathryn Whittaker, 2019-2020
Nicole Valentina Acosta Sandoval, 2019-present, UCARE Scholar
Karyssa Richardson, 2019-2020
Miranda Shreves, 2019-present, FYRE student

Haley DeWitt, 2019-present, UCARE scholar
Jaden Feeny, 2019-present, UCARE scholar
Kennedy Whiting, 2019-present, FYRE student

Undergraduate honors thesis committees:

Clare Crosh, Cherbas lab, 2010
Jenny Kulow, Hangarter lab, 2011
Katelyn Mika, Montooth lab, 2012
Mohammad Siddiq, Montooth lab, 2012
Emily Jezewski, Christensen lab, 2018-2019
Jenny Libov, Montooth lab, 2018-2019
Rose McCoy, Christensen lab, 2019-2020
Lauren Reiman, Montooth lab, 2019-2020
Nicole Valentina Acosta Sandoval, Montooth lab, 2020-2021
Haley DeWitt, Montooth lab, 2020-2021
Joevy Sum, Montooth lab, 2020-2021

TEACHING ACCOMPLISHMENTS

Classroom teaching:

UNL:

Bios915E: EEB seminar, 2016-2017
Bios998: Graduate Evolutionary Genetics (3 credits, 7-9 students), Fall 2015, Fall 2017
Life 121 (3 credits, ~100 students), Spring 2015, 2016, 2018
Bios497/897 Special Topics: Biochemical Adaptation & Disease (3 credits, 20 students), Fall 2018, 2020
Bios206 Genetics (4 credits, 240 students), Spring 2019, 2020
Covid-19 Course (with many other instructors; new 1 credit, 5-week online course), Summer 2020

SBS Trainee Writing Retreat, Cedar Point Biological Station, co-led with Dr. Meredith Steck, May 2019
SBS Trainee Writing Retreat (16 participants), Virtual Pandemic version, May 2020

Indiana University:

EEB Brown Bag Seminar, Spring 2014
Biology L111, Foundations in Biology: Ecology, Evolution & Diversity (3 credits, 100-150 students), Fall 2008, 2010, 2011, 2012, 2013
Biology Z620/L568, Graduate Evolutionary Genetics (3 credits, ~20 students), Fall 2009, 2011
Biology L433, Tropical Biology (3 credits, 15 students), Intersession 2009/2010

Contributions to the Scholarship of Teaching and Learning:

Member of BUILD team (Biology Undergraduate Information Literacy Development), 2012-2014
Presenter at "From Note-Taking to Knowledge-Making: Engaging Students in Scientific Inquiry," 2012
Taught a master class on working with primary literature, data and graphs in intro biology lectures, 2011
Course Development Institute, Indiana University, 2009

Peer-reviewed contributions in pedagogy:

Petzold, J, Winterman, B and **KL Montooth**. 2010 Science Seeker: A new model for teaching information literacy to entry-level biology undergraduates. Issues in Sci Tech Librarianship, <http://www.istl.org/10-fall/refereed2.html>

SERVICE TO THE UNIVERSITY

Departmental service:

UNL:

Ad hoc committee member to draft the SBS Strategic Diversity Initiative, Summer 2020
Research Committee, SBS UNL 2020-2022

Executive Committee, SBS UNL 2017-2020
Graduate committee, SBS UNL 2015-2017
Faculty search committee in Infectious Disease Biology, SBS UNL 2014-2015

Indiana University:

Departmental Policy Committee, 2012-2014
Committee to write an EEB hiring vision plan, 2012
Evaluated Dissertation Year Fellowship Applications, 2012
Graduate Admissions Committee, 2012
Undergraduate Biology Specializations Committee, 2011
Undergraduate Curriculum Study Committee, 2009-2010
Graduate recruitment weekend committee, chair, 2009, 2011
IGERT student steering committee, 2008-2011

University service:

UNL:

Ad hoc committee member to revise the Fall 2020 Attendance Policy, Summer 2020
CAS Research Advisory Committee member, UNL, 2019-present
Dean of CAS Search Committee member, UNL, 2018-2019
SciComm Conference Organizing Committee, UNL, 2017-present
Biotechnology Seminar Series Committee, UNL, 2017-present
Panel member: CAREER workshop offered by ORED, UNL, Spring 2017
College of Arts & Sciences Space Committee, UNL, 2016-2018

Indiana University:

Steering and admissions committee, Complex Biosystems Graduate Program, UNL, 2014-2018
Workshop presenter: CITL roundtable: Active learning in STEM, 2012
Panel member: CAREER workshop offered by Proposal Development Services, 2012
Discussion leader: Women in Science Luncheon, 2012
BSES exchange program: I worked with a senior faculty from Hanoi University in my L111 course during Fall 2011. Invited to teach L111 at Hanoi University for two weeks in 2012, but declined.
Panel member: Training Future Faculty Workshop, 2011
Judge: Women in Science Research Conference, 2010, 2011
Judge: STARs Undergraduate Research Symposium, 2010
Panel member: Associate Instructor Workshop on Campus Climate, 2009

PROFESSIONAL SERVICE

2020	Workshop organizer, Genetic Society of America The Allied Genetics Conference, virtual
2019	Invited panel speaker, Work / Life Balance, SDSU course organized by Dr. Charlie Fenster
2019	Conference Organizer, 2nd Annual Symposium on the Evolutionary Genomics of Adaptation
2019-2021	DCPB Program Officer, Society for Integrative and Comparative Biology, elected
2017-2022	Oversight Committee for the journal Evolution Letters, appointed by the Society for the Study of Evolution
2017	Invited chair for Evolution & Population Genetics Session, Drosophila Research Conference
2015-2017	Society for the Study of Evolution Council Member, elected
2015	Co-chair & poster judge for Evol & Quant Genet Session, Drosophila Research Conference
2014	SMBE Symposium Co-organizer, The Role of Epistasis in Molecular Evolution
2011	Conference Co-organizer, 2011 Midwest Drosophila Meetings
2010	Conference Organizer, 2010 Midwest Drosophila Meetings
2009-2010	Society for Molecular Biology and Evolution, nominating committee
2009, 2013	College of Reviewers for the Canada Research Chairs, served
2008	Society for Molecular Biology and Evolution, poster judging

SERVICE TO THE COMMUNITY

Public presentations:

Natural history, evolution, disease and the mitochondrial DNA – that other genome in your cells. Iowa City Darwin Day Public Lecture, 2014

Evolving metabolisms: A story of why the fruit fly loves your kitchen. Secular Alliance of Indiana University, 2010

Lessons learned from the genomes of chimps and flies. Isles of Shoals, New Hampshire, 2003

Mapping complex gene interactions underlying physiological performance in Drosophila. Cornell Life Science Forum, American Museum of Natural History 2003

Judge:

Pennsylvania Junior Science and Humanities Symposium, State College, PA 2000, 2001

Scituate RI High School Science Fair, 2008

Community Engagement & Outreach:

Summer engagement with Upward Bound students from Lincoln high schools, 2019-2020

SciComm 2020, Organizing Committee

SciComm 2018, Organizer for meeting that attracted ~125 local and out-of-state attendees for a two-day conference and workshop centered on how we communicate science at all levels

UNL Women in Science, Battle of the Beaks Workshop on Evolution, 2017

Saturday Investigate, Battle of The Beaks, 2017

Scientist speed-dating at Science Night Live!, A community event at the Cube in the Lincoln Haymarket associated with the SciComm 2016 Conference

Sunday with a Scientist at the NE State Museum at Morrill Hall: Evolution on the Wing, 2016

National Science Olympiad, UNL Science EXPO experiment, 2015

Indiana University Jim Holland Summer Science Research Program, 2013

Indiana University Lilly Scholars Program, hosted minority high school students in the lab to do research projects using *Drosophila*, 2008, 2010, 2011

Brownie Math & Science Day, 2010

Garden leader at the Bloomington Community Garden, 2010-2012