

David Bryant Lowry
Department of Plant Biology
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APPOINTMENTS

2014 - Present Michigan State University. Assistant Professor
2014 California State University, Monterey Bay. Assistant Professor

EDUCATION

2010 - 2013 University of Texas at Austin. USDA-NIFA Postdoctoral Fellow
 Advisor: Thomas Juenger
2004 - 2010 Ph.D. Duke University. Program in Genetics and Genomics
 Advisor: John Willis
1997 - 2001 B.S. University of California, Berkeley. Genetics and Plant Biology
 High Honors - College of Natural Resources
 Advisor: Ellen Simms

PUBLICATIONS

Peer reviewed papers:

Publications since arriving at MSU are in bold. Lowry Lab members are starred.

47. Santiago J, *Soltani A, Bresson M, Preiser A, *Lowry DB, Sharkey TD. Leaf sucrose export and anther glucose-6-phosphate dehydrogenase activity are essential for pollen health at elevated temperature. *Plant, Cell & Environment*. *In review*

46. *VanWalleendael A, Bonnette J, Juenger TE, Fritschi FB, Fay PA, Mitchell RB, Lloyd-Reilley J, Rouquette FM, Bergstrom GC, *Lowry DB. 2020. Geographic variation in the genetic basis of resistance to leaf rust in locally adapted ecotypes of the biofuel crop switchgrass (*Panicum virgatum*). *New Phytologist*. *In revision*

45. Bowsher AW, Kearns PJ, *Popovic D, *Lowry DB, Shade A. 2020. Locally-adapted *Mimulus* ecotypes differentially impact rhizosphere bacterial and archaeal communities in an environment-dependent manner. *Phytobiomes*. *In press*

44. *Popovic D, *Lowry DB. 2020. Contrasting environmental factors drive local adaptation at opposite ends of an environmental gradient in the yellow monkeyflower (*Mimulus guttatus*). *American Journal of Botany*. *In press*

43. *Lowry DB, Lovell JT, Zhang L, Bonnette J, Fay PA, Mitchell RB, Lloyd Reilley J, Boe AR, Wu Y, Rouquette FM, Wynia RL, Weng X, Behrman KD, Healy A,

Barry K, Lipzen A, Bauer D, Sharma A, Jenkins J, Schumtz J, Fritschi FB, Juenger TE. 2019. QTL x environment interactions underlie adaptive divergence in switchgrass across a large latitudinal gradient. *PNAS*. 116: 12933-12941.

42. Zhang L, Juenger TE, *Lowry DB, Behrman KD. 2019. Climatic impact, future biomass production, and local adaptation of four switchgrass cultivars. *GCB Bioenergy*. 11: 956-970.

41. *Lowry DB, *Popovic D, *Brennan DJ, Holeski LM. 2019. Mechanisms of a locally adaptive shift in allocation among growth, reproduction, and herbivore resistance in *Mimulus guttatus*. *Evolution*. 73: 1168-1181.

40. *Soltani A, Weraduwege SM, Sharkey TD, *Lowry DB. 2019. Elevated temperatures cause loss of seed set in common bean (*Phaseolus vulgaris* L.) potentially through the disruption of source-sink relationships. *BMC Genomics*. 20: 312.

39. Lovell JT, Jenkins J, *Lowry DB, Mamidi S, Sreedasyam A, Weng X, Barry K, Bonette J, Campitelli B, Daum C, Gordon SP, *Gould BA, Khasanova A, Lipzen A, MacQueen A, Palacio-Mejia JD, Plott C, Shakirov EV, Shengqiang S, Yoshinaga Y, Zane M, Kudrna D, Talag JD, Rokhsar D, Grimwood J, Schmutz J, Juenger TE. 2018. The genomic landscape of molecular responses to natural drought stress in *Panicum hallii*. *Nature Communications*. 9: 5213.

38. *Gould BA, Palacio-Mejia JD, Jenkins J, Barry K, Schmutz J, Juenger TE, *Lowry DB. 2018. Population genomics and climate adaptation of a C4 perennial grass, *Panicum hallii* (Poaceae). *BMC Genomics*. 19: 792.

37. *Gould BA, *Chen Y, *Lowry DB. 2018. Gene regulatory divergence between locally adapted ecotypes in their native habitats. *Molecular Ecology*. 27: 4174-4188.

36. *Soltani A, MafiMoghaddam S, OladzadAbbasabadi A, *Walter K, Kearns PJ, Vasquez Guzman J, Mamidi S, Lee R, Shade A, Jacobs JL, Chilivers MI, *Lowry DB, McClean P, Osorno JM. 2018. Genetic analysis of flooding tolerance in an Andean diversity panel of dry bean (*Phaseolus vulgaris* L.). *Frontiers in Plant Science*. 9: 767.

35. *Gould BA, *Chen Y, *Lowry DB. 2017. Pooled ecotype sequencing reveals candidate genetic mechanisms for adaptive divergence and reproductive isolation. *Molecular Ecology*. 26: 163-177.

34. *Lowry DB, Hoban S, Kelley JL, Lotterhos KE, Reed LK, Antolin MF, Storfer A. 2017. Responsible RAD: Striving for best practices in population genomic studies of adaptation. *Molecular Ecology Resources*. 17: 366-369.

33. *Lowry DB, Hoban S, Kelley JL, Lotterhos KE, Reed LK, Antolin MF, Storfer A. 2017. Breaking RAD: An evaluation of the utility of restriction site associated DNA sequencing for genome scans of adaptation. *Molecular Ecology Resources*. 17: 142-152.
32. Wadgyamar S, *Lowry DB, *Gould BA, *Byron CN, Mactavish R, Anderson, JT. 2017. Identifying targets and agents of selection: Innovative methods to evaluate the environmental and genetic factors that contribute to local adaptation. *Methods in Ecology and Evolution*. 8: 738–749.
31. Aspinwall MJ, Fay PA, Hawkes CV, *Lowry DB, Khasanova A, Bonnette J, Whitaker BK, Johnson N, Juenger TE. 2017. Intraspecific variation in precipitation responses of a widespread C₄ grass depend on site water limitation. *Journal of Plant Ecology*. 10: 310-321.
30. Milano ER, *Lowry DB, TE Juenger. 2016. The genetic basis of upland/lowland ecotype divergence in switchgrass (*Panicum virgatum*). *G3*. 6: 3561-3570.
29. Lovell JT, Shakirov EV, Schwartz S, *Lowry DB, Aspinwall MJ, Taylor SA, Palacio-Mejía J, Hawkes CV, Fay PA, Juenger TE. 2016. Promises and challenges of eco-physiological genomics in the field: tests of drought responses in switchgrass. *Plant Physiology*. 172: 734-748.
28. Taylor SA, *Lowry DB, Aspinwall MJ, Bonnette JE, Fay PA, Juenger TE. 2016. Phenotypic plasticity and QTL for leaf physiological traits in lowland *Panicum virgatum*. *Bioenergy Research*. 9: 1241-1259.
27. Hoban S, Kelley JL, Lotterhos KE, Antolin MF, Bradburd G, *Lowry DB, Poss ML, Reed LK, Storfer A, Whitlock MC. 2016. Finding the genomic basis of local adaptation in non-model organisms: pitfalls, practical solutions and future directions. *The American Naturalist*. 188: 379-397.
26. Lovell JT, Schwartz S, *Lowry DB, Shakirov EV, Bonnette J, Wang M, Johnson J, Sreedasyam A, Plott C, Jenkins J, Schmutz J, Juenger TE. 2016. Drought responsive gene expression regulatory divergence between upland and lowland ecotypes of a perennial C₄ grass. *Genome Research*. 26: 510-518.
25. Sexton J, Hufford M, Bateman A, *Lowry DB, Meimberg H, Strauss S, Rice K. 2016. Climate structures genetic variation across a species' elevation range: a test of range limits hypotheses. *Molecular Ecology*. 25: 911-928.
24. *Lowry DB, Hernandez K, Taylor SH, Meyer E, Logan TL, Chapman JA, Rokhsar DS, Schmutz J, Juenger TE. 2015. The genetics of divergence and reproductive isolation between ecotypes of *Panicum hallii*. *New Phytologist* 205: 402-414.

23. *Lowry DB, Taylor SH, Bonnette J, Aspinwall MJ, A. L. Asmus, Keitt TH, Tobias CM, Juenger TE. 2015. QTLs for biomass and developmental traits in switchgrass (*Panicum virgatum*). *Bioenergy Research* 8: 1856-1867.
22. Tyford AD, Streisfeld MA, *Lowry DB, Friedman J. 2015. Genomic studies on the nature of species: ecological divergence, adaptation, and speciation in *Mimulus*. *Molecular Ecology* 24: 2601-2609.
21. Lovell JT, Mullen JL, *Lowry DB, Richards JH, Sen S, Verslues P, Juenger TE, McKay JK. 2015. Exploiting epistasis and differential gene expression to discover candidate genes for drought-associated QTLs in *Arabidopsis thaliana*. *The Plant Cell* 27: 969-983.
20. Lowry DB, Behrman KD, Grabowski P, Morris GP, Kiniry JR, Juenger TE. 2014. Adaptation between ecotypes and along environmental gradients in *Panicum virgatum*. *The American Naturalist* 183: 682-692.
19. Lasky JR, Des Marais DL, Lowry DB, Povolotskaya I, McKay JK, Richards JH, Keitt TH, Juenger TE. 2014. Natural variation in abiotic stress responsive gene expression is associated with local adaptation to climate in *Arabidopsis thaliana*. *Molecular Biology and Evolution* 31: 2283-2296.
18. Meyer E, Aspinwall MJ, Lowry DB, Palacio-Mejía J, Logan TL, Fay PA, Juenger TE. 2014. Integrating physiological, transcriptional, and metabolomic responses to drought stress and recovery in switchgrass (*Panicum virgatum* L.). *BMC Genomics* 15: 527.
17. Oneal E, Lowry DB, Wright KM, Zhu Z, Willis JH. 2014. Divergent population structure and climate associations of a chromosomal inversion polymorphism across the *Mimulus guttatus* species complex. *Molecular Ecology* 23: 2844–2860.
16. Lowry DB, Logan TL, Santuari L, Hardtke CS, Richards JH, DeRose-Wilson LJ, McKay JK, Sen S, Juenger TE. 2013. Expression QTL mapping across water availability environments reveals contrasting associations with genomic features in *Arabidopsis thaliana*. *The Plant Cell* 25: 3266–3279.
15. Lowry DB, Purmal CT, Juenger TE. 2013. A population genetic transect of *Panicum hallii* (Poaceae). *American Journal of Botany* 100: 592-601.
14. Aspinwall MJ, Lowry DB, Taylor SH, Juenger TE, Hawkes CV, Johnson MV, Kiniry JR, Fay PA. 2013. Genotypic variation in traits linked to climate and aboveground productivity in a widespread C₄ grass: evidence for a functional trait syndrome. *New Phytologist* 199: 966-980.

13. Wright KM, Lloyd D, Lowry DB, Macnair MR, Willis JH. 2013. Indirect evolution of hybrid lethality due to linkage with a selected locus in *Mimulus guttatus*. PLoS Biology 11: e1001497.
12. Lowry DB. 2012. Ecotypes and the controversy over stages in the formation of new species. Biological Journal of the Linnean Society. 106: 241-257.
11. Lowry DB, Sheng CS, Zhu Z, Juenger TE, Lahner B, Salt DE, Willis JH. 2012. Mapping of ionomic traits in *Mimulus guttatus* reveals Mo and Cd QTLs that colocalize with MOT1 homologues. PLoS One 7: e30730.
10. Lowry DB, Sheng CS, Lasky JR, Willis JH. 2012. Five anthocyanin polymorphisms are associated with a R2R3-MYB cluster in *Mimulus guttatus*. American Journal of Botany 99: 82-91.
9. Lowry DB, Purmal CT, Meyer E, Juenger TE. 2012. Microsatellite markers for the native Texas perennial grass, *Panicum hallii* (Poaceae). American Journal of Botany Primer Notes & Protocols 99: e114-e116.
8. Lowry DB. 2010. Landscape evolutionary genomics. Biology Letters 6: 502-504.
7. Lowry DB, Willis JH. 2010. A widespread chromosomal inversion polymorphism contributes to a major life-history transition, local adaptation, and reproductive isolation. PLoS Biology 8: e1000500.
6. Hall MC, Lowry DB, Willis JH. 2010. Is local adaptation in *Mimulus guttatus* caused by trade-offs at individual loci? Molecular Ecology 19: 2739-2753.
5. Wu CA, Lowry DB, Nutter LI, Willis JH. 2010. Natural variation for drought response in the *Mimulus guttatus* species complex. Oecologia 162: 23-33.
4. Lowry DB, Hall MC, Salt DE, Willis JH. 2009. Genetic and physiological basis of adaptive salt tolerance divergence between coastal and inland *Mimulus guttatus*. New Phytologist 183: 776-788.
3. Lowry DB, Modliszewski JL, Wright KM, Wu CA, Willis JH. 2008. The strength and genetic basis of reproductive isolating barriers in flowering plants. Philosophical Transactions of the Royal Society B 363: 3009-3021.
2. Lowry DB, Rockwood RC, Willis JH. 2008. Ecological reproductive isolation of coast and inland races of *Mimulus guttatus*. Evolution 62: 2196-2214.
1. Wu CA, Lowry DB, Cooley AM, Wright KM, Lee YW, Willis JH. 2008. *Mimulus* is an emerging model system for the integration of ecological and genomic studies. Heredity 100: 220-230.

Non-peer reviewed book chapters, book reviews, commentaries, notes, and reviews:

8. *Lowry DB, Sobel JM, Angert AL, Ashman T-L, Baker RL, Blackman BK, Brandvain Y, Byers KJRP, Cooley AM, Coughlan JM, Dudash MR, Fenster CB, Ferris KG, Fishman L, Friedman J, Grossenbacher DL, Holeski LM, Ivey CT, Kay KM, Koelling VA, Kooyers NJ, Murren CJ, Muir CD, Nelson TC, Peterson ML, Puzey JR, Rotter MC, Seeman JR, Sexton JP, Sheth SN, Streisfeld MA, Sweigart AL, Twyford AD, Vallejo-Marin M, Willis JH, Wu CA, Yuan YW. 2019. The case for the continued use of the genus name *Mimulus* for all monkeyflowers. *Taxon*. 68: 617-623.
7. *VanWallendael A, *Soltani A, *Emery NC, *Peixoto MM, *Olsen J, *Lowry DB. 2019. A molecular view of plant local adaptation: Incorporating stress-response networks. *Annual Reviews in Plant Biology*. 70: 559-583.
6. Kenaley SC, Bergstrom GC, Montes Ortiz ZK, *VanWallendael A, *Lowry DB, Bonnette JE, Juenger TE. 2019. First report of the head smut fungus, *Tilletia maclaganii*, affecting switchgrass in Texas. *Plant Disease*. 103: 578.
- 5.* Lowry DB, *Gould BA. 2016. “The Speciation Continuum.” In R. Kilman (ed.) *Encyclopedia of Evolutionary Biology*. Pp. 159-165. Elsevier Science, Philadelphia, PA, USA.
4. *Lowry DB. 2015. Book Review: *Approaches to Plant Evolutionary Ecology*. *Rhodora* 117: 400-402.
3. Selby JP, Jeong AL, *Toll K, Wright KM, *Lowry DB. 2014. “Methods and discoveries in the pursuit of understanding the genetic basis of adaptation to harsh environments in *Mimulus*.” In N. Rajakaruna (ed.). *Plant Ecology and Evolution in Harsh Environments*. Pp. 243-265. NOVA Science Publishers, Inc. Hauppauge, NY, USA.
2. Lowry DB, Hopkins R. 2013. “Speciation and natural selection.” In J. Losos (ed.). *The Princeton Guide to Evolution*. Pp. 512-519. Princeton University Press, Princeton, NJ, USA.
1. Lowry DB. 2012. Local adaptation in The model plant. *New Phytologist*. 194: 888-890.

GRANTS, FELLOWSHIPS, AND AWARDS

- 2019-2022 NSF IOS Integrative Ecological Physiology Program. “The mechanisms of adaptive shifts in allocation among growth, reproduction, and defense.” \$763,491. \$442,180 to lead PI Lowry.

- 2017-2022 DOE Great Lakes Bioenergy Research Center. \$125,000,000. \$819,614 (through year 3) to Co-Investigator Lowry, who co-wrote 2 of the 10 aims of the proposal.
- 2017-2020 DOE Plant Feedstocks Genomics for Bioenergy. “Identification of adaptive fungal pathogen resistance loci in switchgrass.” \$1,144,104. \$836,971 to lead PI Lowry.
- 2016-2020 Plant Resilience Institute. MSU. “Genetic and Physiological Basis of Heat Tolerance in Common Bean (*Phaseolus vulgaris*).” \$410,985 to Lowry
- 2016-2017 Plant Resilience Institute. MSU. “Microbiome of Coastal and Inland Ecotypes of *Mimulus guttatus*.” \$10,000 to Lowry
- 2015-2019 NSF IOS Plant Genome Research Project. “The Genetics and Genomics of Local Adaptation and Acclimation in *Panicum* Grasses.” \$4,155,099. PI: Thomas Juenger. Grant funds to Senior Collaborator Lowry include salary for one field technician, which is equivalent to \$183,708 over the duration of the grant period.
- 2015-2017 DOE Great Lakes Bioenergy Research Center. “Switchgrass Using Maize as a Model Discovery Engine.” \$68,814 to Lowry.
- 2013 DOE Joint Genome Institute. Community Sequencing Program. “Resequencing diverse collections and mapping resources for *Panicum hallii*.” PI: Thomas Juenger. Co-PI: David Lowry.
- 2011-2013 USDA National Institute of Food and Agriculture AFRI Postdoctoral Fellowship (2011-67012-30696). PD: David Lowry. \$130,000
- 2010 W. D. Hamilton Outstanding Presentation Award (Honorable Mention) International Evolution Society Conference. Portland, OR
- 2010 Cold Spring Harbor Laboratory Bioinformatics Course Scholarship. \$1000
- 2007-2009 NSF Doctoral Dissertation Improvement Grant (DEB-0710094). \$11,943
- 2007 Best student talk, Duke University Program in Genetics and Genomics
- 2006 NSF Graduate Student Fellowship (Honorable Mention)
- 2005 Duke University International Travel Grant. \$2500
- 2004-2006 NIH Graduate Student Fellowship in Genetics at Duke University
- 2001 Phi Beta Kappa Honor Society, UC Berkeley
- 2000 Howard Hughes Undergraduate Fellowship. \$4000
- 2000 Sigma Xi Grant-in-Aid. \$900
- 1999 NSF Research Experience for Undergraduates

PRESENTATIONS

Invited talks:

- 2019 Keynote Speaker. California Botanical Society, 27th Graduate Student Symposium. San Luis Obispo, CA.
- 2019 Keynote Speaker. 4th International *Brachypodium* Conference. Huesca, Spain.
- 2019 Purdue University. Department of Botany and Plant Pathology. West Lafayette, IN.
- 2019 University of California, Davis. Department of Plant Sciences. Davis, CA.

2019 Miami University. Department of Biology. Oxford, OH.
 2019 International Switchgrass V Conference. Champaign, IL.
 2019 International *Mimulus* Meeting. Brown University. Providence, RI.
 2019 Switchgrass Collaborators Meeting. Noble Research Institute. Ardmore, OK.
 2018 Green Life Symposium. University of Michigan. Ann Arbor, MI.
 2018 Second Joint Congress on Evolutionary Biology. Symposium on Evolution of Physiology. Montpellier, France.
 2018 University of Utah. Department of Biology. Salt Lake City, UT.
 2018 DOE Genomic Sciences Program Annual Principal Investigator (PI) Meeting. Tysons, VA.
 2017 Cinvestav Laboratorio Nacional de Genomica para la Biodiversidad (LANGEBIO). Irapuato, Mexico.
 2017 RIKEN Center for Sustainable Resource Science. Yokohama, Japan.
 2017 University of Tsukuba. Tsukuba Global Science Week. T-PIRC Symposium: Leading University Forum on Plant Resilience and Innovation. Tsukuba, Japan.
 2017 University of Minnesota, Plant and Microbial Biology Seminar, Saint Paul, MN.
 2017 Duke University, Population Biology Seminar. Durham, NC.
 2016 Kellogg Biological Station. Friday Seminar. Hickory Corners, MI.
 2016 “Cultivating an Online Scholarly Presence Workshop” hosted by MSU Dean of Arts & Letters, Chris Long.
 2015 University of California, Davis. Center for Population Biology Seminar. Davis, CA.
 2015 Michigan State University. Genetics Forum. East Lansing, MI.
 2015 Michigan State University. Horticulture Seminar. East Lansing, MI.
 2014 Stony Brook University, Department of Ecology and Evolution. Stony Brook, NY.
 2014 University of North Carolina. Biology Department. Chapel Hill, NC.
 2013 Colorado State University. Bioagricultural Sciences and Pest Management. Fort Collins, CO.
 2013 Annual Society for Advancement of Chicanos and Native Americans in Science National Conference. San Antonio, TX.
 2013 Switchgrass II. University of Wisconsin. Madison, WI.
 2012 “Natural Selection in the Wild: From Genotype to Phenotype” American Society of Naturalists Vice-Presidential Symposium. International Evolution Society Conference. Ottawa, Canada.
 2012 University of California, Davis. Department of Viticulture and Enology. Davis, CA.
 2011 Ecological and Evolutionary Genomics Gordon Research Conference. University of New England, Biddeford, ME.
 2011 University of Toronto. Ecology & Evolutionary Biology Department. Toronto, Ontario, Canada.
 2011 University of Arizona. Ecology & Evolutionary Biology. Tucson, AZ.
 2011 California State University, Chico. Biology weekly seminar. Chico, CA.

- 2009 “The Origin of Species 150 years after Darwin” Symposium. Japanese Society for Evolutionary Studies Meeting. Sapporo, Japan.
- 2009 University of Virginia. EEBio Seminar. Charlottesville, VA.
- 2009 University of California, Berkeley. Ecolunch Seminar. Berkeley, CA.
- 2009 University of Southern California. Los Angeles, CA.
- 2007 Ecological Genomics Symposium. Kansas City, MO.

Contributed talks and posters:

- 2019 International Evolution Society Conference. Providence, RI.
- 2019 Integrating Diversity in the Study of Speciation Gordon Conference. Ventura, CA.
- 2019 DOE Genomic Sciences Program Annual Principal Investigator (PI) Meeting. Tysons, VA.
- 2019 Plant Resilience Institute. Brown Bag Lunch Seminar. Michigan State University. East Lansing, MI.
- 2017 Switchgrass IV. University of Nebraska. Lincoln, NE.
- 2017 Midwest Population Genetics Meeting. East Lansing, MI.
- 2017 International Evolution Society Conference. Portland, OR.
- 2017 Michigan State University Ecology, Evolutionary Biology, and Behavior Symposium. Lansing, MI.
- 2016 International Evolution Society Conference. Austin, TX.
- 2016 International Plant Speciation Meeting. Austin, TX.
- 2016 Great Lake Bioenergy Research Center Retreat. Lake Geneva, WI.
- 2015 Biology of Genomes Meeting. Cold Spring Harbor, NY.
- 2015 Great Lake Bioenergy Research Center Retreat. South Bend, IN.
- 2015 Midwest Population Genetics Meeting. Ann Arbor, MI.
- 2014 International Evolution Society Conference. Raleigh, NC.
- 2013 Ecological and Evolutionary Genomics Gordon Research Conference. University of New England, Biddeford, ME.
- 2012 USDA NIFA Fellows Meeting. Washington D.C.
- 2012 Plant and Animal Genomes Conference. San Diego, CA.
- 2011 ASA-CSSA-SSSA International Annual Meeting. San Antonio, TX.
- 2010 International Evolution Society Conference. Portland, OR.
- 2010 Plant and Animal Genomes Conference. San Diego, CA.
- 2009 Ecological and Evolutionary Functional Genomics. Gordon Research Conference. Tilton, NH.
- 2008 International Evolution Society Conference. Minneapolis, MN.
- 2007 Joint Conference of Botany and Plant Biology. Chicago, IL.
- 2007 *Mimulus* community meeting. Durham, NC.
- 2007 Duke University Program in Genetics/Genomics Retreat. Nags Head, NC.
- 2006 Genetics of Speciation Conference. Vancouver, BC, Canada.
- 2006 International Evolution Society Conference. Stony Brook, NY.

TEACHING AND MENTORING EXPERIENCE:

Undergraduate Teaching:

2019	Honors Evolution (IBIO445H-7 Students)	Michigan State University
2019	Evolution (IBIO 445 – 84 Students)	Michigan State University
2018	Evolution (IBIO 445 – 72 Students)	Michigan State University
2017	Genetics (PLB/IBIO 341-196 Students)	Michigan State University
2015	Genetics (PLB/IBIO 341-185 Students)	Michigan State University
2014	Evolution & Population Genetics (SEP 341)	CSU Monterey Bay
2011-2012	Biology of Biofuels (Genetics Section)	University of Texas at Austin

Graduate Teaching:

2018	Genetics Seminar (GEN800 – 18 students)	Michigan State University
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Guest Lectures in Graduate Courses:

2019	Evolutionary Biology (IBIO849)	Michigan State University
2017, 2018	Foundations of Plant Biology (PLB801)	Michigan State University
2011	Evolutionary Genetics	University of Colorado, Boulder
2010	Graduate Ecology and Evolution	North Carolina State University

Graduate Students Mentored:

2017-Present	Jason Olsen	Michigan State University
2017	Fateme Shaki (Visiting Student)	University of Tehran
2015-2018	Damian Popovic (MS 2018)	Michigan State University
2015-2018	Caitlyn Byron (MS 2018)	Michigan State University

Postdocs Mentored

2019-Present	Kyle Christie	Michigan State University
2019-Present	Ian Willick	Michigan State University
2019-Present	Nathan Emery	Michigan State University
2018-Present	Acer VanWallendael	Michigan State University
2018-Present	Katherine Toll	Michigan State University
2017-Present	Ali Soltani	Michigan State University
2018	Murilo Peixoto	Michigan State University
2014-2016	Yani Chen	Now at Iowa State University
2015-2017	Billie Gould	Now at Counsyl Inc.

Masters Committees:

2017-Present	Erika LaPlante	Michigan State University
2016-2017	Eleanor Siler	Michigan State University
2015-2018	Damian Popovic	Michigan State University
2015-2018	Caitlyn Byron	Michigan State University

PhD Committees:

2019-Present	Michael Ryskamp	Michigan State University
2017-Present	Jason Olsen	Michigan State University

2017-Present	Ava Garrison	Michigan State University
2016-2019	Bethany Moore	Michigan State University
2015-2019	Christina Azodi	Michigan State University
2015-2018	Shujun Oh	Michigan State University
2015-2017	Sam Perez	Michigan State University
2014-2017	Emily Dittmar	Michigan State University
2013-2018	Juan Diego Palacio	University of Texas at Austin

Workshops taught:

2016, 2018	Quantitative Trait Locus Mapping	Kellogg Biological Station/MSU
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Teaching Assistantships:

2007	AIDS and Emerging Diseases in Africa	Duke University
2006, 2008	Comparative Vertebrate Anatomy	Duke University
1999-2000	Biology 1B Field Ecology Section	UC Berkeley

Mentoring Programs:

2019	Plant Genomics @ MSU Summer NSF REU Program
2018	Plant Genomics @ MSU Summer NSF REU Program
2016	Kellogg Biological Station Summer NSF REU Program
2015	Plant Genomics @ MSU Summer NSF REU Program
2014	McNairs Scholars Program. CSU Monterey Bay
2009	Howard Hughes Medical Institute summer undergraduate mentorship
2008	Howard Hughes Medical Institute summer precollege mentorship
2007	Summer Research Opportunities Program (SROP) for minority students

Undergraduate Students Mentored:

2019	John Wrath	CSU Dominguez Hills
2019	Sydney Burtovoy	Michigan State University
2019	Georgia Warmbein	Michigan State University
2018-2019	Chelsea Fisk	Michigan State University
2018-2019	Natalie Philips	Michigan State University
2018-2019	Katy Ferro	Michigan State University
2018	Jim Cramton	Bemidji State University
2017-2018	Dash Devanshi	Michigan State University
2016-2018	Sara Simonte	Michigan State University
2016-2017	Darlene Brennan	Michigan State University
2016	Josh McCauley	The University of Texas at Austin
2016	Genevieve Gibson	Michigan State University
2015	Karen Chanchavac	Spring Arbor University
2014-2015	Maria DeNunzio	Michigan State University
2014-2016	Erin Gumper	Michigan State University
2014	Rachel Spellenberg	CSU Monterey Bay
2014	Elizabeth Alger	CSU Monterey Bay
2012-2013	Jacob Heiling	The University of Texas at Austin
2011	Tiffany Liu	The University of Texas at Austin

2011	Ashley Asmus	The University of Texas at Austin
2011	Daniel Dillon	The University of Texas at Austin
2010-2011	Colin Purmal	The University of Texas at Austin
2009-2010	Por Tangwancharoen	Duke University
2008-2009	Zhirui Zhu	Duke University
2007-2010	Calvin Sheng	Duke University
2007-2009	Laura Nutter	Duke University
2008	Nettie McMiller	Jordan High School, Durham, NC
2007	Mike Yan	Duke University
2007	Porsha Andrews	Winston Salem University

SERVICE, OUTREACH, AND SYNERGISTIC ACTIVITIES

2019-Present	Co-Chair of the <i>Mimulus</i> Community Steering Committee.	
2017-Present	Educational development of inquiry-based learning modules for 7 th -grade classrooms in Detroit and Flint, MI. Modules based on local adaptation research program in <i>Mimulus guttatus</i> .	
2015-Present	Plant Biology Representative to the MSU University Greenhouse Committee	
2014-2019	Chair of the MSU Plant Biology Greenhouse Committee	
2019	MSU College of Natural Science Strategic Planning Committee	
2019	Poster and talk judge at the California Botanical Society, 27 th Graduate Student Symposium. San Luis Obispo, CA.	
2018-2020	MSU Plant Biology Department Advisory Council (DAC)	
2018-2019	<i>Ad Hoc</i> committee for the MSU Plant Biology Department on Workload Balance	
2018-2019	<i>Ad Hoc</i> committee for the MSU Plant Biology Department on Future Hires	
2017-2018	Global Impact Initiative Search Committee for the MSU Department of Plant Biology and the Plant Resilience Institute.	
2017	Invited Panelist for World Economic Forum: “How will the Fourth Industrial Revolution Affect Humans and Society?” Tsukuba, Japan.	
2017	Invited Faculty Career Panelist for the MSU Genetics Program.	
2017	Michigan State University committee for vertical integration of Biology undergraduate curriculum.	
2014-2017	MSU Plant Biology Graduate Student Committee Member	
2016	Invited Faculty Career Panelist for GLBRC Retreat, Lake Geneva, WI.	
2016	Interviewed for the “Extra Credit” podcast on the topic of Evolution	
2016	Invited Faculty Speaker for Genomes @ MSU Summer REU Program	
2015-2016	Member of the Advisory Group for MSU Global Impact Initiative Search Committee for Genomics	
2014-2016	Invited Participant: “Computational Landscape Genomics” working group at NIMBioS. Knoxville, TN.	
2015	Judge for MSU Plant Science Graduate Student Symposium	
2015	Invited Faculty Panelist for the UC Davis Mini-Conference “Questions and Methods in Ecological Genetics”	

- 2014 Panelist for Different Paths, Different Institutions – preparing to teach in undergraduate-focused environments at the Symposium on “Plant Biotechnology for Health and Sustainability.” Michigan State University.
- 2014, 2016 Judge for Hamilton Prize for Society for the Study of Evolution meeting
- 2013 Invited Participant: “Landscape Genomics” Catalysis Meeting at NESCent. Durham, NC
- 2011 Editorial Contributor: The Austin-American Statesman
- 2010-2012 Web Host: Texas Switchgrass Collaborative Wiki page
- 2010 Guest Blogger: Discover Magazine, The Intersection
- 2008 Collaborator: Building Opportunities and Overtures in Science and Technology, a program for introducing middle school students to science in Durham, NC
- 2007 Education Outreach Presentations. Northwest High School, Lenexa, KS
- 2007-2008 Czar: Duke Population Biology Seminar Series
- 2006-2010 Web Host: *Mimulus* Community Wiki page
- 2005-2009 Education Collaborator: Provided plant material for Bio. 26 at Duke
- 2005-2009 Organizer: *Mimulus* seed collection center
- 2005-2006 Chairperson: Duke Biology Department Steering Committee
- 2004-2005 Representative: Duke Graduate and Professional Student Council

CONFERENCE/SYMPOSIUM ORGANIZATION

- 2018 Lead Symposium Organizer: “Gene Regulatory Evolution in Natural Populations.” Second Joint Congress on Evolutionary Biology, Montpellier, France
- 2017 Lead Organizer: International *Mimulus* Conference, Portland, OR
- 2016 Lead Organizer: International Plant Speciation Conference, Austin, TX
- 2010 Symposia Co-Organizer: “The Population Genetics of Development” European Society for Evolutionary Developmental Biology Conference
- 2005-2006 Organizer: Duke Graduate Student Symposium, Durham, NC

GRANT REVIEWER

- 2019 NSF CAREER (*Ad Hoc*)
- 2019 NSF IOS Enabling Discovery through Genomic Tools (*Ad Hoc*)
- 2019 NSF Division of Molecular and Cellular Biosciences (*Ad Hoc*)
- 2019 The Icelandic Research Fund (*Ad Hoc*)
- 2019 Vienna International Postdoctoral Program (*Ad Hoc*)
- 2018 NSF IOS Enabling Discovery through Genomic Tools (Panelist)
- 2017 USDA NIFA Biomass and Bioproduct Feedstock Genetic Development (Panelist)
- 2017 United States - Israel Binational Agricultural Research and Development Fund (*Ad Hoc*)
- 2017 NSF CAREER (*Ad Hoc*)
- 2017 NSF DEB Evolutionary Genetics (*Ad Hoc*)

- 2016 United States - Israel Binational Agricultural Research and Development Fund (*Ad Hoc*)
- 2016 NSF Arctic Natural Sciences Program (*Ad Hoc*)
- 2015 NSF CAREER (*Ad Hoc*)
- 2015 Maryland Sea Grant (*Ad Hoc*)
- 2012-2014 NSF DEB Evolutionary Ecology and Evolutionary Genetics (*Ad Hoc*)
- 2014 Genome British Columbia (*Ad Hoc*)
- 2013 National Geographic Global Exploration Fund (*Ad Hoc*)
- 2011 Texas Natural Science Center's "Evolution in Action" museum exhibit (NSF-BEACON)

JOURNAL REVIEWER

Evolution (22), Molecular Ecology (20), New Phytologist (18), The American Naturalist (6), PLoS One (4), American Journal of Botany (3), Molecular Ecology Resources (3), Genetics (3), Molecular Biology and Evolution (3), Proceedings of the Royal Society B (3), Journal of Evolutionary Biology (2), Journal of Heredity (2), Annals of Botany (1), BMC Evolutionary Biology (1), BMC Genomics (1), Current Opinion in Plant Biology (1), Evolutionary Ecology (1), Functional Plant Biology (1), Global Change Biology Bioenergy (1), Heredity (1), International Journal of Ecology (1), PeerJ (1), Plant Cell & Environment (1), The Plant Genome (1), PLoS Biology (1), PLoS Genetics (1), Trends in Ecology and Evolution (1), Journal of Ecology (1)

SOCIETY MEMBERSHIP

Society for the Study of Evolution (Lifetime Member), American Society of Naturalists, American Association for the Advancement of Science, Botanical Society of America, California Botanical Society