

JENNIFER A. BRISSON

Department of Biology
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CURRENT POSITION

2021-present Professor, Department of Biology, University of Rochester

EDUCATION

2004 Ph. D. Evolution, Ecology, and Population Biology, Washington University, St. Louis
Advisors: Dr. Alan Templeton and Dr. Ian Duncan
1997 B. A. Biology, Kansas State University

PREVIOUS POSITIONS

2018-2021 Associate Professor, Department of Biology, University of Rochester
2013-2018 Assistant Professor, Department of Biology, University of Rochester
2009-2013 Assistant Professor, School of Biological Sciences, University of Nebraska-Lincoln
2010-2013 Courtesy Appointment, Department of Entomology, University of Nebraska-Lincoln
2006-2009 Postdoctoral Fellow, laboratory of Dr. Sergey Nuzhdin, University of Southern California & UC Davis
2004-2006 Postdoctoral Researcher, laboratory of Dr. David Stern, Princeton University
1997-2004 Graduate Student, laboratories of Dr. Alan Templeton and Dr. Ian Duncan, Washington University, St. Louis
1994-1997 Undergraduate research assistant, laboratories of Dr. Monica Justice and Dr. Robin Denell, Kansas State University

SELECTED HONORS AND AWARDS

2022 Daniel T. Kearns Center Award for Broadening Participation
2018 Fellow, Royal Entomological Society
2018 CAREER Award, National Science Foundation
2012 T.O. Haas Award for Research, UNL (awarded to one faculty member annually)
2010 Kavli Frontiers Fellow, U.S. National Academy of Sciences
2008 NIH Pathway to Independence Award (K99/R00)
2006 NIH Ruth L. Kirschstein National Research Service Award Postdoctoral Fellowship
1997 Howard Hughes Medical Institute Predoctoral Fellowship
1997 National Science Foundation Graduate Fellowship (declined)
1997 Division of Biology H. H. Haymaker Award (Kansas State; given to 1 senior a year)
1996 Barry M. Goldwater Scholar

RESEARCH SUPPORT

Current support:

2022-2026 NIGMS R35GM144001 "Molecular mechanisms and evolution of phenotypic plasticity," \$1,949,476 (direct and indirect).
2018-2023 NSF IOS 1749514 "CAREER: Development and evolution of phenotypic plasticity in aphids," \$1,040,000 (direct and indirect).

Current student support:

2021-2023 American Genetics Association Evolutionary, Ecological, or Conservation Genomics Research Award to Omid Saleh Ziabari, \$6,000.
2020-2023 NSF Graduate Research Fellowship to PhD student Rose Driscoll.

Other awards:

2023-2026 Beckman Scholars Program, co-PI with Sina Ghaemmaghani (PI) and Shauna Paradine (co-PI). \$156,000. Supports six undergraduates for summer and school-year research.

Previous support:

2019-2022 NSF Graduate Research Fellowship to PhD student Omid Saleh Ziabari.

2020-2021 American Genetics Association Evolutionary, Ecological, or Conservation Genomics Research Award to Zoë De Corte, \$7,650.

2015-2021 NIGMS 5R01GM116867, "Characterizing the molecular and developmental basis of environmental versus genetic trait variation in aphids." \$1,518,940 (direct and indirect).

2019-2020 Fulbright Fellowship to support PhD student Zoë De Corte, Belgium.

2013 Eiffel Scholarship to graduate student Mary Chaffee to study in Rennes, France, for four months; award covered her stipend and travel.

2009-2013 NIEHS R00ES017367. "Contrasting environmental and genetic controls of alternative phenotypes." PI. \$746,411 (direct and indirect).

2013 Visiting scientist support from INRA Rennes (France), approximately \$5884

2011 "Epigenetic regulation of alternative morphologies." Research Council Faculty Seed Grants. PI. \$10,000.

2010 NIEHS 4R00ES017367. "Contrasting environmental and genetic controls of alternative phenotypes." ARRA Summer Supplement. PI. \$11,800.

2008-2009 NIEHS 1K99ES017367. "Contrasting environmental and genetic controls of alternative phenotypes." PI. \$90,000.

2006-2008, NIH NRSA. "Genomic analysis of wing dimorphism in pea aphids." \$99,224.

2000 National Science Foundation Dissertation Improvement Grant. \$9997.

2000 The Nature Conservancy of Missouri Small Research Grants. \$1500.

2000 Missouri Department of Conservation Small Grants Program. \$1000.

PUBLICATIONS

63. Saleh Ziabari, O., Li, B., Hardy, N. B., and **J. A. Brisson**. 2023. Aphid male wing polymorphisms are transient and have evolved repeatedly. *Evolution*, minor revision.

62. Saleh Ziabari, O., Zhong, Q., Purandare, S. R., Reiter, J., Zera, A. J., and **J. A. Brisson**. 2022. Pea aphid winged and wingless males exhibit reproductive, gene expression, and lipid metabolism differences. *Curr. Res. Ins. Sci.* 2:100039.

61. Liu, X., Culbert, E., and **J. A. Brisson**. 2021. Male-biased microRNA discovery in the pea aphid. *Insects* 12:533.

60. Gregory, L., Bickel, R. D., and **J. A. Brisson**. Evolution of development. 2021. In: Encyclopedia of Life Sciences. John Wiley & Sons, Ltd. Chichester. Invited review.

59. Davis G.K., **Brisson J.A.**, Bickel R.D. 2021. Evo-Devo Lessons Learned from Aphids. Pp.817-829 In: Nuno de la Rosa L., Müller G. (eds) Evolutionary Developmental Biology. Springer, Cham.

58. Parker, B. J., Driscoll, R. M. H., Grantham, M. E., Hrcek, J., and **J. A. Brisson**. 2021 Wing plasticity and associated expression varies across the pea aphid biotype complex. *Evolution* 75:1143-1149.

57. Parker, B. J., Hrcek, J., McLean, A. H. C., **Brisson, J. A.**, and H. C. J. Godfray. 2021. Intraspecific variation in symbiont density in an insect-microbe symbiosis. *Molecular Ecology* 30: 1559-1569.

56. Hammelman*, R. E., Heusinkveld*, C. L., Hung, E. T., Meinecke, A, Parker, B. J., and **J. A. Brisson**. 2020. Extreme developmental instability associated with wing plasticity in pea aphids. *equal contributions. *Proceedings of the Royal Society B* 287: 20201349

55. Rispe et al. (74 co-authors, including **J. A. Brisson**). 2020. Genome sequence of the grape phylloxera provides insights into the evolution, adaptation, and invasion routes of an iconic pest. *BMC Biology* 18:90.

54. Li, B., Bickel, R. D., Parker, B. J., Saleh Ziabari, O., Liu, F., Vellichirammal, M. Simon, J.-C.,

- Stern, D. L., **J. A. Brisson**. 2020. A large genomic insertion containing a duplicated follistatin gene is linked to the pea aphid male wing dimorphism. *eLife* 9:e50608.
53. Chung, S. H., Parker, B., Blow, F., **Brisson, J. A.**, and A. E., Douglas. 2020. Host and symbiont genetic determinants of nutritional phenotype in a natural population of the pea aphid. *Molecular Ecology*. 29:848-858.
 52. Purandare, S. R., and **J. A. Brisson**. 2020. Divergent chemosensory gene expression accompanies ecological specialization of pea aphid morphs. *Ecol. Ent.* 45:364-368.
 51. Grantham, M. E., Dudley, E., Shingleton, A., and **J. A. Brisson**. 2019. Expression profiling of winged and wingless destined pea aphid embryos implicates insulin/insulin growth factor signaling in morph differences. *Evolution & Development* 2019:1-12.
 50. Parker, B. J., and **J. A. Brisson**. 2019. A laterally transferred viral gene modifies aphid wing plasticity. *Current Biology*, 29:2098-2103.
 49. McPhetres, J., Rutjens, B. T., Weinstein, N., and **J. A. Brisson**. 2019. Modifying attitudes about modified foods: increased knowledge leads to more positive attitudes. *Journal of Environmental Psychology*. 64: 21-29.
 48. Zhang, C. H., **Brisson, J. A.**, and H. J. Xu. 2019. Molecular mechanisms of wing polymorphism in insects. *Annual Review of Entomology*. 64:297-314.
 47. Grantham, M. E., and **J. A. Brisson**. 2018. Extensive differential splicing underlies phenotypically plastic aphid morphs. *Molecular Biology and Evolution* 35:1934-1946.
 46. Zera, A. J., Vellichirammal, N. N., and **J. A. Brisson**. 2018. Diurnal and developmental differences in gene expression between adult dispersing and flightless morphs of the wing polymorphic cricket, *Gryllus firmus*: Implications for life-history evolution. *Journal of Insect Physiology*. 107: 233-243.
 45. Jaquierey, J., Peccoud, J., Ouisse, T., Legeai, F., Prunier-Leterme, N., Gouin, A., Nouhaud, P., **Brisson, J. A.**, Bickel, R. D., Purandare, S., Poulain, J., Battail, C., Lemaitre, C., Mieuzet, L., Le Trionnaire, G., Simon, J. C., and C. Rispe. 2018. Disentangling the causes for faster-X evolution in aphids. *Genome Biol. Evol.* 10:507-520.
 44. Vellichirammal, N. N., Gupta, P., Hall, P. T., and **J. A. Brisson**. 2017. Ecdysone signaling underlies the pea aphid transgenerational wing polyphenism. *Proc. Nat. Acad. Sciences*. 114: 1419-1423.
 43. Zera, A. J., Vellichirammal, N. N., and **Brisson, J. A.** 2017. Hormonal circadian rhythm in the wing-polymorphic cricket *Gryllus firmus*: Integrating chronobiology, endocrinology, and evolution. In: *Crickets as a Model Organism*. Eds H. W. Horch, T. Mito, A. Popadic, H. Ohuchi, S. Noji, Springer. Invited chapter.
 42. Grantham, M. E., Antonio, C. J., O'Neil, B. R., Zhan, Y. X., and **J. A. Brisson**. 2016. A case for a joint strategy of diversified bet hedging and plasticity in the pea aphid wing polyphenism. *Biol. Letters* 12:20160654.
 41. Vellichirammal, N. N., Madayiputhiya, N., and **J. A. Brisson**. 2016. The genome-wide transcriptional response underlying the pea aphid wing polyphenism. *Mol. Ecol.* 25:4146-4160.
 40. **Brisson, J. A.**, and G. K. Davis. 2016. The right tools for the job: Regulating polyphenic morph development in insects. *Current Opinion in Insect Science*. 13:1-6. Invited review.
 39. **Brisson, J. A.**, Jaquierey, J., Legai, F., Le Trionnaire, G., and D. Tagu. 2016. Genomics of phenotypic plasticity in aphids. In: *Management of insect pests to agriculture: lessons from deciphering their genome, transcriptome and proteome*. Eds. Czosnek, H. and M. Ghanim. Invited chapter.
 38. Enders, L., Bickel, R. D., **Brisson, J. A.**, Heng-Moss, T., Nandakumar, R., Siegfried, B., Zera, A., and N. Miller. 2015. Abiotic and biotic stressors causing equivalent mortality induce highly variable transcriptional responses in the soybean aphid. *G3: GENES, GENOMES, GENETICS*. 5:261-270.
 37. Grantham, M., **Brisson, J. A.**, Tagu, D., and G. Le Trionnaire. 2015. Integrative genomic approaches to studying epigenetic mechanisms of phenotypic plasticity in the aphid. In: *Short*

- views on Insect Genomics and Proteomics.” Eds: Raman, C., Goldsmith, M., and T. Agunbiade. Springer International Publishing. Invited chapter.
36. Zera, A. J., and **J. A. Brisson**. 2015. Induction and function of polyphenic morphs: proximate regulatory mechanisms and evolutionary implications. In: Integrative Organismal Biology. Eds: Martin, L. B., Ghalambor, C. K., and A. Woods. Oxford University Press. Invited chapter.
 35. Purandare, S., Bickel, R. D., Jaquiere, J., Rispe, C., and **J. A. Brisson**. 2014. Accelerated evolution of morph-biased genes in pea aphids. *Mol. Biol. Evol.* 31: 2073-2083.
 34. Enders, L., Bickel, R. D., **Brisson, J. A.**, Heng-Moss, T., Siegfried, B., Zera, A. J., and N. Miller. 2014. Soybean aphid (Hemiptera:Aphididae) response to soybean plant defense: stress levels, tradeoffs and cross-resistance. *Environmental Entomology*. 43:47-57.
 33. Purandare, S. R., Tenhumberg, B., and **J. A. Brisson**. 2014. Comparison of the wing polyphenic response of pea aphids (*Acyrtosiphon pisum*) to crowding and predator cues. *Ecological Entomology*. 39:263-266.
 32. Vellichiramal, N. N., Schilder, R. J., Wehrkamp, C., Riethoven, J-J. M., Zera, A. J., and **J. A. Brisson**. 2014. *De novo* transcriptome assembly from fat body and flight muscle transcripts to identify morph-specific gene expression profiles in *Gryllus firmus*. *PLoS ONE*. 9(1): e82129.
 31. Bickel, R. D., Dunham, J. P., and **J. A. Brisson**. 2013. Widespread selection across coding and noncoding DNA in the pea aphid genome. *G3: GENES, GENOMES, GENETICS*. 3: 993-1001.
 30. Ishikawa, A., Ishikawa, Y., Yasukazu, O, Miyazaki, S, Miyakawa, H., Koshikawa, S, **Brisson, J. A.**, and T. Miura. 2012. Screening of up-regulated genes induced by high density in the vetch aphid *Megoura crassicauda*. *J. Exp. Zool. A*. 317:194-203.
 29. Ishikawa, A., Ogawa, K., Gotoh, H., Walsh, T. K., Tagu, D., **Brisson, J. A.**, Rispe, C., Jaubert-Possamai, S., Kanbe, T., Tsubota, T., Shiotsuki, T., and T. Miura. 2012. Juvenile hormone titer and related gene expression during the change of reproductive modes in the pea aphid. *Insect Mol. Biol.* 21: 49-60.
 28. Zera, A. J., and **J. A. Brisson**. 2012. Quantitative, physiological, and molecular genetics of dispersal/migration. In: Dispersal: Causes and Consequences. Clobert, J., Baguette, M., Benton, T., and J. Bullock, eds. Oxford University Press. Invited chapter.
 27. Srinivasan, D. G., and **J. A. Brisson**. 2012. Aphids: a model for polyphenism and epigenetics. *Genetics Research International*. 2012:1-12. Invited review.
 26. Bickel, R. D., and **J. A. Brisson**. Evolution of development. 2011. In: Encyclopedia of Life Sciences. John Wiley & Sons, Ltd. Chichester. Invited review.
 25. Hunt, B., **Brisson, J. A.**, Yi, S., and M. Goodisman. 2010. Functional conservation of DNA methylation in the pea aphid and the honeybee. *Genome Biol. Evol.* 2: 719-728.
 24. International Aphid Genomics Consortium (**Brisson, J. A.**, member Development, Epigenetics & Methylation, Wing development, and JH-related Groups). 2010. Genome sequence of the pea aphid *Acyrtosiphon pisum*. *PLoS Biology* 8:e1000313.
 23. **Brisson, J. A.**, Ishikawa, A., and Miura, T. 2010. Wing development genes of the pea aphid and differential gene expression between winged and unwinged morphs. *Insect Mol. Biol.* 19:63-73.
 22. Walsh, T. K., **Brisson, J. A.**, Robertson, H., Gordon, K., Jaubert-Possamai, S., Tagu, D., and Edwards, O. R. 2010. DNA methylation in the pea aphid, *Acyrtosiphon pisum*. *Insect Mol. Biol.* 19:215-228.
 21. Shigenobu, S., Bickel, R. D, **Brisson, J. A.**, Butts, T., Chang, C-C., Christianens, O., Davis, G, Duncan, E. J., Ferrier, D. E. K., Iga, M., Janssen, R., Lin, G. W., Lu, H.-L., McGregor, A. P., Miura, T., Smagghe, G., Smith, J. M., van der Zee, M., Velarde, R. A., Wilson, M. J., Dearden, P. K., and D. L. Stern. 2010. Comprehensive survey of developmental genes in the pea aphid, *Acyrtosiphon pisum*: frequent lineage-specific duplications and losses of developmental genes. *Insect Mol. Biol.* 19:47-62.

20. **Brisson, J. A.** Aphid wing dimorphisms: linking polyphenism and polymorphism. 2010. Invited article for *Phil Trans. R Soc. London B* issue on "From Polyphenism to Complex Metazoan Life Cycles" edited by A. Minelli, G. Fusco. 365:605-616.
19. **Brisson, J. A.**, Nuzhdin, S. V, and D. L. Stern. 2009. Similar patterns of linkage disequilibrium and nucleotide diversity in native and introduced populations of the pea aphid. *BMC Genetics* 10:22.
18. Nuzhdin, S. V. **Brisson, J. A.**, Pickering, A., Wayne, M. L., Harshman, L. G., and L. M. McIntyre, 2009. Natural genetic variation in transcriptome reflects network structure inferred with major effect mutations: insulin / TOR and associated phenotypes in *Drosophila melanogaster*. *BMC Genomics* 10:124.
17. **Brisson, J. A.**, and S. V. Nuzhdin. 2008. Rarity of males in pea aphids results in their mutational decay. *Science*: 319:58.
16. Ostman, Ö, Griffin, N., Strasburg, J. L., **Brisson, J. A.**, Templeton, A. R., Knight, T., and J. Chase. 2007. Habitat area affects arthropod communities directly and indirectly through top predators. *Ecography* 30: 359-366.
15. **Brisson, J. A.***, Davis, G. K.*, and D. L. Stern. 2007. Shared genome-wide gene expression patterns underlying the wing polyphenism and polymorphism in the pea aphid (*Acyrtosiphon pisum*). *Evolution & Development* 9: 338-346. * joint first authors
14. **Brisson, J. A.**, and G. K. Davis. 2007. The Pea Aphid. In: Genome Mapping and Genomics in Animals, Vol. IV. Kole, C and Hunter, W. (eds) Springer, Berlin, Heidelberg, New York. Invited chapter.
13. Braendle, C., Davis, G., **Brisson, J. A.**, and D. L. Stern. 2006. Wing dimorphism in aphids. *Heredity* 97:192-199. Invited review.
12. **Brisson, J. A.**, and D. L. Stern. 2006. The pea aphid, *Acyrtosiphon pisum*: an emerging genomic model system for ecological, developmental and evolutionary studies. *Bioessays* 28:747-755.
11. **Brisson, J. A.**, Wilder, J., and H. Hollocher. 2006. Phylogenetic analysis of the cardini group of *Drosophila* with respect to changes in pigmentation. *Evolution* 60:1228-1251.
10. Macey, J. R., Schulte, J. A., Strasburg, J. L., **Brisson, J. A.**, Anajeva, N. B., Wang, Y., Parham, J. F., and Papenfuss, T. J. 2006. Assembly of the eastern North American herpetofauna: new evidence from lizards and frogs. *Biol. Lett.* 2: 242-245.
9. **Brisson, J. A.**, De Toni, D. C., Duncan, I., and A. R. Templeton. 2005. Abdominal pigmentation variation in *Drosophila polymorpha*: geographic variation in the trait, and underlying phylogeography. *Evolution* 59: 1046-1059.
8. De Toni, D. C., **Brisson, J. A.**, Hoffmann, P. R. P., Martins, M., and H. Hollocher. 2005. First record of *Drosophila parthenogenetica* and *D. neomorpha*, *cardini* group, Heed, 1962 (*Drosophila*, Drosophilidae), in Brazil. *Dros. Inf. Service* 88:33-38.
7. **Brisson, J. A.**, Templeton, A. R., and I. Duncan. 2004. Population genetics of the developmental gene *optomotor-blind* (*omb*) in *Drosophila polymorpha*: evidence for a role in abdominal pigmentation variation. *Genetics* 168:1999-2010.
6. Hutchison, D. W., Strasburg, J. L., **Brisson, J. A.**, and S. Cummings. 2004. Isolation and characterization of eleven polymorphic microsatellite loci in collared lizards (*Crotaphytus collaris*). *Mol. Ecol. Notes* 4: 554-556.
5. **Brisson, J. A.**, Strasburg, J. L., and A. R. Templeton. 2003. Impact of fire management on the ecology of collared lizard (*Crotaphytus collaris*) populations living on the Ozark Plateau. *Anim. Cons.* 6: 247-254.
4. Strasburg J. L., **Brisson, J. A.**, and A. R. Templeton (2002) Fire restoration of a fragmented population of collared lizards (*Crotaphytus collaris collaris*) on the Ozark Plateau - evidence from genetic and life-history data. *Proceedings of the SRM Savanna/Woodland Symposium*, Kansas City, MO.
3. Templeton, A. R., Robertson, R., **Brisson, J.**, and J. Strasburg. 2001. Disrupting evolutionary processes: the effect of habitat fragmentation on collared lizards in the Missouri Ozarks. *Proc. Natl. Acad. Sci. USA.* 98: 5426-5432.
2. Macey, J. R., Strasburg, J. L., **Brisson, J. A.**, Vredenburg, V. T., Jennings, M., and A. Larson.

2001. Molecular phylogenetics of western North American frogs of the *Rana boylei* species group. *Mol. Phy. Evol.* 19 (1):131-143.

1. Curtis, C. D., **Brisson, J. A.**, DeCamillis, M. A., Shippy, T. D., Brown, S. J., and R. E. Denell. 2001. Molecular characterization of *Cephalothorax*, the *Tribolium* ortholog of *Sex combs reduced*. *Genesis* 30:12-20.

TEACHING EXPERIENCE

- 2022 BIOL190, Genetics and the Human Genome, 58 students
2022 BIOL472, Topics in Evolution & Ecology (Topic: evolutionary developmental biology), 5 students
2021 BIOL190, Genetics and the Human Genome, 61 students
2021 BIO580, Journal Club in Ecology & Evolution, 6 students
2019 BIO190, Genetics and the Human Genome, 94 students
2019 BIO580, Journal Club in Ecology & Evolution, 6 students
2018 BIO472, Topics in Evolution & Ecology (Topic: evolutionary developmental biology), 5 students
2018 BIO190, Genetics and the Human Genome, 96 students
2017 BIO190, Genetics and the Human Genome, 86 students
2016 BIO190, Genetics and the Human Genome, 76 students
2015 BIO190, Genetics & the Human Genome, 55 students
2015 BIO474, Topics in Evolution & Ecology (Topic: evolutionary developmental biology), 5 students
2013 BIO580, Journal Club in Ecology & Evolution, 7 students
2012 BIOS 206, General Genetics, 197 students
2011 BIOS 206, General Genetics, 205 students
2010 BIOS 206, General Genetics, 192 students
2009 Four lectures for BISC499, Evolutionary Biology (at USC)
2003 Tutor, Young Scientist Program, Washington University
1999, 2003 Teaching Assistant, Department of Biology, Washington University
1996-1997 Teaching Assistant, Kansas State University

INVITED SEMINARS

- 2023 (upcoming) George Washington University, Washington, DC
2022 Princeton University, EEB, Princeton, NJ
2022 University of Virginia, Department of Biology, Charlottesville, VA
2021 Uppsala University, Sweden (online)
2021 Royal Entomological Society Aphid Special Interest Group meeting; UK (online)
2020 Sommer Lab, Max-Planck Institute for Developmental Biology, Tuebingen, Germany (online)
2020 University of Maryland, Baltimore County, MD
2019 Indiana University, Biology, Bloomington, IN
2019 New York University, Dept. Biology, New York, NY
2018 Washington University, Dept. Biology, St. Louis, MO
2017 Washington State University, Dept. Biology, Pullman, WA
2017 University of Pittsburgh, Ecology and Evolution, Pittsburgh, PA
2017 The Ohio State University, Dept. Entomology, Wooster, OH
2016 Stony Brook University, Dept. Ecology & Evolution, Stony Brook, NY
2016 University of Georgia, Dept. Entomology, Athens, GA
2015 University of Illinois Urbana-Champaign, Department of Entomology, Urbana-Champaign, IL
2014 Cornell University, Department of Ecology and Evolutionary Biology, Ithaca, NY
2013 Syracuse University, Department of Biology, Syracuse, NY
2013 INRA, Le Rheu, France
2012 EEBB, Michigan State University, East Lansing, MI
2012 Department of Biology, University of Utah, Salt Lake City, UT

2012 Department of Biology, University of Texas, Arlington, TX
2012 Department of Biological Sciences, University of Cincinnati, Cincinnati, OH
2012 Biology Department, University of Rochester, Rochester, NY
2012 Department of Biological Sciences, Virginia Tech, Blacksburg, VA
2012 Department of Biological Sciences, Dartmouth College, New Hanover, NH
2012 Department of Biology, University of Kentucky, Lexington, KY
2012 Ecology & Evolutionary Biology, University of Kansas, Lawrence, KS
2012 Department of Biology, University of Missouri, St. Louis, MO
2011 EEOB Department, Ohio State University, Columbus, OH
2011 Biology Department, Indiana University, Bloomington, IN
2011 Department of Entomology, Texas A&M, College Station, TX
2011 Department of Biology, Black Hills State University, Spearfish, SD
2010 Ecology & Evolutionary Biology, University of Kansas, Lawrence, KS
2010 Ecology, Evolution & Organismal Biology, Iowa State U., Ames, IA
2010 Department of Entomology, Kansas State University, Manhattan, KS
2009 Biology Department, University of Nebraska-Omaha, Omaha, NE
2008 Department of Zoology, University of Hawaii at Manoa, Honolulu, HI
2008 School of Biological Sciences, University of Nebraska-Lincoln, Lincoln, NE
2008 Department of Biological Sciences, University of Pittsburgh, Pittsburgh, PA
2008 Department of Biology, University of Texas, Arlington, TX
2008 Department of Biology, University of Oregon, Eugene, OR
2008 Ecology and Evolutionary Biology, Rice University, Houston, TX
2008 Department of Biological Sciences, SUNY, Buffalo, NY

PRESENTATIONS AT NATIONAL AND INTERNATIONAL MEETINGS

Meetings, workshops, and symposia organized:

2019 Mechanisms of Intergenerational Change, Wellcome Genome Campus Scientific Conferences; Cambridge, UK; co-organizer.
2017 Workshop: Insect Genome Editing: Why and How. Entomology Society of America, Denver, CO; co-organizer.
2016 Symposium on Insect Genetic Technologies: State of the Art and Promise for the Future, International Congress of Entomology, Orlando, FL. Co-organizer.
2016 Symposium on Epigenetics and Insect Adaptation to Their Environment, International Congress of Entomology, Orlando, FL. Co-organizer.
2015 Insect Genetic Technologies, prior to Arthropod Genomics Symposium, Manhattan, KS. Co-organizer.
2014 Sessions on Long noncoding RNA & Communication of science to the public. Chinese-American Kavli Frontiers of Science Symposium, China. Co-chair of the entire meeting and co-organizer of the sessions.
2012 Session on Epigenetics, Fifteenth Annual Chinese-American Kavli Frontiers of Science Symposium, Irvine, CA. Co-organizer.
2011 Session on Genetics of Behavior, Fourteenth Annual Chinese-American Kavli Frontiers of Science Symposium, Shenzhen, China. Co-organizer.
2011 Symposium on Epigenetics, Phenotypic Plasticity, and Insect Evolution: First Insights from an Emerging Field, Entomology Society of America, Reno, NV, USA. Co-organizer.

Invited talks:

2021 Entomology Society of America (online; talk presented by PhD student Omid Saleh Ziabari)
2021 Evolution (contributed, not invited)
2021 Royal Entomological Society Aphid Special Interest Group meeting; UK (online)
2020 Integrative Organismal Systems CAREER Awardee Meeting, NSF (online)
2019 Evo-devo PanAm, Miami University, invited from abstracts
2019 Society for Developmental Biology Mid-Atlantic Regional Meeting, Pennsylvania State

University

2018 Genetics Day, University of Rochester
2018 Keynote Speaker, Kansas State Univ. 50th anniversary celebration, Manhattan, KS
2017 Entomology Society of America, Denver, CO
2017 Global Biodiversity Conference, Washington DC
2016 Ecological Genomics, invited from abstracts
2016 International Congress of Entomology, Orlando, FL
2015 Entomology Society of America, Minneapolis, MN
2013 6th Minisymposium on Epigenetics & Genome Stability, U. of Rochester Medical Center
2013 Entomology Society of America, Austin, TX
2013 Arthropod Genomics, South Bend, IN
2012 Thirteenth Japanese-American Kavli Frontiers of Science symposium, Irvine, CA
2012 Ecological Genomics Symposium, Kansas City, MO
2012 Entomology Society of America, Knoxville, TN
2011 Plant-insect interactions symposium. Monsanto, St. Louis, MO
2011 Cell Press symposium on the “Epigenetics and inheritance of acquired states”, Boston, MA
2011 Entomology Society of America, Reno, NV
2010 European Evolutionary Developmental Biology Meetings, Paris, France
2008 International Workshop on Natural Selection and Speciation, Mainz, Germany

Reviewer

Manuscripts: American Naturalist, Biochem. Systematics and Ecology, Biol. J. Linnean Society, Biology Letters, BMC Genomics, BMC Evolutionary Biology, Brazilian Archives of Biology & Technology, Cell Reports, Current Biology, Curr Op Genet Dev, Ecological Entomology, eLife, Evolution and Development, European Journal of Entomology, Evolutionary Ecology, Frontiers in Ecology and Evolution, G3, Genetics, Genome Biology and Evolution, Genome Biology, Insects, Molecular Ecology, Molecular Ecology Notes, FEBS Letters, Insect Biochemistry and Molecular Biology, Insect Molecular Biology, Insects, International Journal of Biological Sciences, J of Insect Physiology, J. of Insect Science, Molecular Biology and Evolution, Molecular Ecology, Nature Communications, Naturwissenschaften, Philosophical Transactions of the Royal Society B, Physiological Entomology, Proc. National Academy Sciences, PNAS Plus, Proceedings of the Royal Society B, Science, Scientifica, Zoologica Scripta, Zoomorphology
Grants: BBSRC (UK), UKRI Medical Research Council (UK), European Research Council (EU), France Génomique (France), Deutsche Forschungsgemeinschaft (German), National Research Agency (France), National Science Foundation (USA), Missouri EPSCoR
Fellowships: Rutherford Discovery Fellowship (New Zealand)

Editor-in-Chief (one of three EICs), *Insect Molecular Biology* 2018-present

Editorial Board, *Current Opinion in Insect Science*, 2015-present

Insect Molecular Biology, 2016-2018

Journal of Experimental Zoology, part B, 2019-present

Current Research in Insect Science, 2020-present

Contributor, *Faculty Opinions*, Developmental Evolution Section.

Panel Service:

NSF DDIG EP Panel, 2012 & 2014

NSF EDGE, May 2019 & 2021

NIH CSR Special Emphasis Panel, Fellowship: Cell Biology, Developmental Biology, and Bioengineering, July 2020

NIH CSR Special Emphasis Panel, Fellowship: Cell Biology, Developmental Biology, and Bioengineering, November 2022 (co-Chair), February/March 2023 (Chair)

Elected Office: Council of the American Genetic Association, 2018-2021

SERVICE AT UNIVERSITY OF ROCHESTER

2022-present Ombuds affiliate for graduate students in Arts, Sciences, & Engineering
2018-present Member or Chair, Diversity Committee
2014-present Member or co-Chair, Community Engagement Committee
2019-2021 Diversity in Biological Sciences (co-founder and co-organizer)
2019-2022 College Curriculum Committee
2019-2022 Departmental Strategic Planning Committee
2018-2022 College Administrative Committee
2016-2019 Seminar Committee
2016-2019 Graduate Committee
2017-2018 Member, Dean of the Faculty of Arts, Sciences and Engineering search committee
2017-2018 Member, E2G2 faculty search committee
2016-2017 Member, EEB faculty search committee
2016 Chair, EEB faculty search committee
2013-2016 IT Committee
2013-2014 Graduate Committee

OTHER ACTIVITIES

2020-present External Advisory Board Member for NSF "BII-Implementation: Behavioral Plasticity Research Institute (BPRI): Transforming the Study of Phenotypic Plasticity through Biological Integration".
2014-2018 Member of conference committee for an NSF funded Research Coordination Network on Insect Genetic Technologies
2022-present Organizer, Royal Entomological Society Aphid Special Interest Group