

CURRICULUM VITAE

Elizabeth R. Everman, PhD

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NCBI: <https://www.ncbi.nlm.nih.gov/sites/myncbi/elizabeth.everman.1/bibliography/53651294/public/?sort=date&direction=ascending>

Website: <https://evermane.wixsite.com/elizabetheverman>

EMPLOYMENT

2017-present Postdoctoral Fellow, University of Kansas, Lawrence, KS, Mentor: Stuart Macdonald

EDUCATION

2017 Ph.D. in Biology, concentration in evolutionary and quantitative genetics, Kansas State University, Morgan Lab, Manhattan, KS (2012-2017), Mentor: Ted Morgan

2012 B.A. in Biology, concentration in population genetics and invasion biology, William Jewell College, Liberty, MO (2008-2012)

GRANTS

2021-23 **Source: 1K99ES033257 NIH K99/R00 Pathway to Independence Award, \$166,666**

Project: Linking genomic, physiological, and behavioral responses using a *Drosophila* model of heavy metal stress

Role: PI

Direct Costs: K99 component \$166,666

Summary: This award seeks to combine powerful, highly replicated genetic mapping with multiple behavioral and physiological assays and whole genome and RNA sequencing to characterize the genetic basis of resistance to copper poisoning.

2021 **K-INBRE Matching Funds awarded by The Office of Research, KU, \$25,000**

2021 **K-INBRE Postdoctoral Award, \$25,000 (awarded and returned due to NIH K99 award)**

2019-21 **Source: 5F32GM133111-02 NIH F32 Postdoctoral Research Fellowship, \$122,836**

Project: Genetic dissection and characterization of variation in copper resistance in *Drosophila melanogaster*

Role: PI

Direct Costs: \$122,836

Summary: The objective of this proposal is to characterize allelic and gene expression variation that contributes to adult physiological copper resistance using a combination of QTL mapping, expression QTL mapping, and RNA sequencing.

2017-18 **Source: K-INBRE Postdoctoral Award, \$25,000**

Project: Genetic dissection of variation in copper resistance across multiple life stages in *Drosophila melanogaster*

Role: Postdoctoral Researcher

Direct Costs: \$25,000

Summary: The objective of this proposal was to characterize the genetic architecture of copper resistance in adult and developing individuals using genetically diverse *Drosophila melanogaster* strains from a large multiparental mapping population.

2017 **H. H. Haymaker Graduate Scholarship, KSU, \$1000**

2017 **Dr. Christopher Smith Graduate Scholarship, KSU, \$1000**

2016 **Animal Behavior Society Student Travel Award, \$500**

2016 **Biology Graduate Student Association Travel Grant, \$500**

2015 **Graduate Student Arts and Sciences Research Travel Award, \$1000**

2015 **Biology Graduate Student Association Research Grant, \$500**

2015	Biology Graduate Student Association Training Grant \$300
2014	Dane Hansen Foundation Summer Graduate Fellowship, \$5,123
2012-14	Timothy R Donoghue Graduate Student Scholarship \$10,000
2012	Graduate Research Fellowship Honorable Mention
2011	Hall Summer Enrichment Grant Recipient: Organization for Tropical Studies, \$5000
2010	Beta Beta Beta Biological Honor Society Grant recipient, \$1000

PUBLICATIONS

11 publications, 9 first author. 103 citations as of October 2021.

1. **Everman ER**, Cloud-Richardson KM, and Macdonald SJ. 2021. Characterizing the genetic basis of copper toxicity in *Drosophila* reveals a complex pattern of allelic, regulatory, and behavioral variation. **Genetics** 217(1) PMID: [PMC8045719](#); DOI: [10.1093/genetics/iyaa020](#)
2. Gleason JM, Roy RP, **Everman ER**, Gleason TC, and Morgan TJ. 2019. Phenology of *Drosophila* species across a temperate growing season and implications for diurnal behavior. **PLoS One** PMID: [PMC6521991](#); DOI: [10.1371/journal.pone.0216601](#)
3. **Everman ER**, McNeil CL, Hackett JL, Bain CL, and Macdonald SJ. 2019 Dissection of complex, fitness-related traits in multiple *Drosophila* mapping populations offers insight into the genetic control of stress resistance. **Genetics** 211(4): 1449-1467. PMID: [PMC6456312](#); DOI: [10.1534/genetics.119.301930](#)
4. **Everman ER**, Freda PJ, Brown M**, Scheiferecke AJ**, Ragland GJ, and Morgan TJ. 2018. Ovary development and cold tolerance of the invasive pest *Drosophila suzukii* Matsumura in the central plains. **Environmental Entomology** 47(4): 1013-1023. PMID: 29846535; DOI: [10.1093/ee/nvy074](#)
5. **Everman ER**, Delzeit JL**, Hunter FK**, Gleason JM, and Morgan TJ. 2018. Costs of cold acclimation for survival and reproductive success in *Drosophila melanogaster*. **PLoS One** PMID: [PMC5965859](#); DOI: [10.1371/journal.pone.0197822](#)
6. Smith WL, **Everman ER**, and Richardson C. 2018. Phylogeny and taxonomy of flatheads, scorpionfishes, sea robins, and stonefishes (Percomorpha: Scorpaeniformes) and the evolution of the lachrymal saber. **Copeia** 106(1): 94-120. DOI: [https://doi.org/10.1643/CG-17-669](#)
7. **Everman ER**, Morgan TJ. 2018. Antagonistic pleiotropy and mutation accumulation contribute to age-related decline in stress response. **Evolution** 72(2): 303-317. DOI: [10.1111/evo.13408](#)
8. Noh S*, **Everman ER***, Berger CM**, Morgan TJ. 2017. Seasonal variation in basal and plastic cold tolerance: Adaptation is influenced by both long- and short-term phenotypic plasticity. **Ecol Evol** 14: 5248-5257. doi: [10.1002/ece3.3112](#). eCollection. PMID: [PMC5528237](#); DOI: [10.1002/ece3.3112](#)
9. **Everman ER**, Ledbetter N**, Morgan TJ. 2017. The persistence of short-term cold acclimation in *Drosophila melanogaster* (Diptera: Drosophilidae). **Physiological entomology** 42(4): 291-298. DOI: [https://doi.org/10.1111/phen.12191](#)
10. **Everman ER**, Cloyd RA, Copland C, Morgan TJ. 2015. First report of Spotted Wing *Drosophila*, *Drosophila Suzuki* Matsumura (Diptera: Drosophilidae). **Journal of the Kansas Entomological Society** 88:128-133. DOI: [https://doi.org/10.2317/JKES1402.14.1](#)
11. **Everman ER**, Klawinski PD. 2013. Human-facilitated jump dispersal of a non-native frog species on Hawai'i Island. **Journal of Biogeography** 40:1961-1970. DOI: [https://doi.org/10.1111/jbi.12146](#)

Dissertation: Everman ER. 2017. The evolution and genetic control of stress tolerance in a complex world. Available from ProQuest Dissertations and Theses Global. Record URL: [http://hdl.handle.net/2097/35437](#)

*Co-first author, **Undergraduate trainee

TEACHING AND MENTORING EXPERIENCE

2021	Guest Lecturer, BIO 807 Introduction to Molecular Biosciences, University of Kansas, Lawrence, KS
2021	Instructor of Record, BIO 440 Bioinformatics, William Jewell College, Liberty MO
2019-present	Software Carpentry Instructor: R programming, Bioinformatics, Bash, Git
2017-present	Undergraduate mentor (2 students: 2019-20 and 2021-present), University of Kansas, Lawrence, KS
2012-2017	Graduate Teaching Assistant, Kansas State University, Manhattan, KS BIOL455 General Microbiology Lab (9 semesters) BIOL198 Principles of Biology (1 semester)

- 2014-2017 Graduate Student REU Mentor, Kansas State University, Manhattan, KS
 Henry Escobar (2017): Effects of cold stress on mating frequency in *Drosophila melanogaster*
 Jennifer Delzeit (2016-2017): Effects of cold stress on song production in *Drosophila melanogaster*
 Nicholus Ledbetter (2015): Persistence of short-term acclimation in *Drosophila melanogaster*
 Kate Hunter (2014): Effects of cold stress on mating behavior in *Drosophila melanogaster*

COMPLETED TRAINING AND WORKSHOPS

- 2022-present Aspiring Leaders 2022, University of Kansas, 7 months
 2021 Negotiate with Success, European Molecular Biology Organization, 2.5 days
 2020 PI Crash Course, Columbia University, NY, 3 days
 2019 Advanced Sequencing Technologies, Cold Spring Harbor Laboratories, NY, 2 weeks
 2019 Software Carpentries Instructor Training, University of Kansas, KS, 2 days
 2019-present GENETICS Peer Review Training Program, Genetics Society of America, ongoing
 2018 Supervisory Leadership Training, KU, Overland Park, KS, 3 days
 2018 Software Carpentry, Lawrence, KS, 2 days
 2015 National Institute for Mathematical and Biological Synthesis (NimBioS), Knoxville, TN, 5 days
 2014 19th Summer Institute in Statistical Genetics (SISG), Seattle, WA, 9 days
 2011 Organization for Tropical Studies (OTS): Conservation and Restoration Genetics, Costa Rica, 16 days

INVITED TALKS

1. **Everman ER**. 2021. Understanding heavy metal response by disentangling genetic, expression, and behavioral variation. University of Oklahoma.
2. **Everman ER** and Macdonald SJ. 2021. Allelic, expression, and behavioral variation contribute to copper resistance in *Drosophila melanogaster*. Center for Genomics, KU.
3. **Everman ER** and Morgan TJ. 2017. Evolution and genetic control of stress tolerance: How age, season, and behavior shape fitness in *Drosophila*. William Jewell College, Liberty, MO.
4. **Everman ER**. 2017. The evolution and genetic control of stress tolerance in a complex world. University of Kansas, Lawrence, KS.
5. **Everman ER**. 2017. The evolution and genetic control of stress tolerance in a complex world. University of Arkansas, Fayetteville, AR.
6. **Everman ER** and Morgan TJ. 2015. Age-related change in cold tolerance in *Drosophila melanogaster*. Ecological Genomics Symposium, Manhattan, KS.
7. **Everman ER**. 2015. Studies in cold tolerance, aging, and fitness. Smithville High School, Smithville, MO.

TALKS

15 talks total. See <https://evermane.wixsite.com/elizabetheverman> for complete list.

1. **Everman ER**, Cloud-Richardson KM, and Macdonald SJ. 2019. The genetic and physiological response to copper across populations and life stages. Genetics of Development, KU
2. **Everman ER**, Cloud-Richardson KM, and Macdonald SJ. 2019. Dissecting the genetic architecture of copper resistance. Evolution Conference
3. **Everman ER**, Cloud-Richardson KM, and Macdonald SJ. 2019. Dissecting the genetic architecture of copper resistance. Genetics of Development, KU
4. **Everman ER**, Cloud-Richardson KM, and Macdonald SJ. 2019. Dissecting the genetic architecture of copper resistance. Missouri Academy of Sciences
5. **Everman ER**, Cloud-Richardson KM, and Macdonald SJ. 2019. Genetic dissection of variation in copper resistance across multiple life stages in *Drosophila melanogaster*. K-INBRE Conference
6. **Everman ER**. 2017. The evolution and genetic control of stress tolerance in a complex world. Dissertation Defense. Kansas State University, Manhattan, KS

POSTERS

11 posters total. See <https://evermane.wixsite.com/elizabetheverman> for complete list.

1. **Everman ER** and Macdonald SJ. 2021 (virtual). Expression QTL mapping of tissue-specific copper response in the DSPR. The Annual *Drosophila* Research Conference
2. **Everman ER** and Macdonald SJ. 2020 (canceled). Tissue-specific patterns in gene expression contribute to variation in metal resistance in *Drosophila melanogaster*. The Allied Genetics Conference
3. **Everman ER**, Cloud-Richardson KM, and Macdonald SJ. 2019. Genomic dissection of natural variation in resistance to copper. The Annual *Drosophila* Research Conference
4. **Everman ER**, Cloud-Richardson KM, and Macdonald SJ. 2019. Genomic dissection of natural variation in resistance to copper poisoning in *Drosophila melanogaster*. K-INBRE Conference

SERVICE AND OUTREACH

2021-present Co-coordinator for KU Center for Genomics Symposium
 2021 K-INBRE Symposium Presentation and Poster Judge
 2020 Missouri Region 3 Science Olympiad Event Judge (wrote, proctored, and judged exams for middle school and high school level Heredity and Designer Genes event)
 2017-present Reviewer for *Genetics*, *Journal of Developmental Biology*, *BMC Biology*, *BMC Evolutionary Biology*, *BMC Genomics* (14 total reviews: <https://publons.com/researcher/1351655/elizabeth-everman/>)
 2016-2017 Graduate Student Representative for Ecological Genomics Program, KSU
 2012-2017 Graduate Student Association committee chair, KSU

REFERENCES

Research

Dr. Stuart J Macdonald, Professor, University of Kansas, sjmac@ku.edu (Postdoctoral Mentor)
 Dr. John K Kelly, Professor, University of Kansas, jjk@ku.edu (Co-mentor)
 Dr. Robert L Unckless, Associate Professor, University of Kansas, unckless@ku.edu
 Dr. Theodore J Morgan, Kansas State University (currently NSF), theodorejmorgan99@gmail.com (Doctoral Advisor)

Teaching

Jamene Brooks-Kieffer, Associate Librarian/Data Services Librarian University of Kansas, jamenebk@ku.edu
 Dr. Rose M Reynolds, Associate Professor, William Jewell College, reynoldsr@william.jewell.edu