

Joel Sharbrough

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EDUCATION

- 2016 Ph.D. Biology
University of Iowa, Iowa City, IA 52241
Advisor: Dr. Maurine Neiman
- 2016 Bioinformatics Certificate
University of Iowa, Iowa City, IA 52241
- 2009 B.Sc. Biological Sciences
University of Notre Dame, Notre Dame, IN 46556
Advisor: Dr. Jeffrey L. Feder
- 2009 Secondary Education Teaching Certification
Saint Mary's College, Notre Dame, IN 46556
Advisor: Dr. Catherine Green

PROFESSIONAL EXPERIENCE

- 2021- Assistant Professor
Department of Biology, New Mexico Institute of Mining and Technology, Socorro, NM
- 2016-2020 Postdoctoral Fellow with Dr. Daniel B. Sloan
Department of Biology, Colorado State University, Fort Collins, CO

RESEARCH FUNDING

- 2022-2027 National Science Foundation. *CAREER – Genomic, cellular, and physiological effects of whole genome duplications on organismal energy production*. PGRP – 2145811 (\$1,200,000). Role: PI and sole author. [See link for NMT press release.](#)
- 2022-2023 Pacific Biosciences Plant and Animal SMRT Grant Award. *Genome architecture and evolution in allotetraploid coffee*. (\$15,000 in-kind). Role: PI and lead-author, in collaboration with Justin L. Conover, Jonathan F. Wendel, and Daniel B. Sloan.
- 2021-2022 NM-INBRE Sequencing and Bioinformatic Core Pilot Project: *Testing for biparental mitochondrial inheritance in a freshwater snail model for mito-nuclear interactions* (\$10,000 in-kind). Role: PI and lead-author, in collaboration with graduate student Bridie Alexander-Lawrie.
- 2021 NM-INBRE Equipment Request: *Improving computational resources in the Cytonuclear Lab at New Mexico Tech*. (\$9,972). Role: PI and sole author.
- 2019-2021 National Science Foundation. *The Cytonuclear Dimension of Allopolyploidy*. PGRP – 1829176 (\$1,829,880). Role: co-PI and co-author (with PI Daniel B. Sloan, co-PI Jonathan F. Wendel, and co-PI Corrine E. Grover). **[This was a collaboration I helped forge between CSU and ISU. I was largely responsible for producing the first draft of the research plan for this proposal, which was then collaboratively developed into the now funded proposal, with a start date of January 1st, 2019. [See link for CSU press release.](#)]**

- 2018-2020 National Science Foundation. *Genomic and functional tests of mitochondrial-nuclear coevolution*. DEB – 1753851 (\$189,998). Role: Senior personnel and co-author (with PI Maurine Neiman and co-PI Kristi L. Montooth). [I was responsible for drafting the molecular evolution aim of this proposal, which was awarded jointly to UI and UNL on July 1st, 2018.]
- 2013-2015 National Science Foundation Doctoral Dissertation Improvement Grant. *Evaluating phenotypic consequences of accelerated mutation accumulation in the absence of sex*. DEB – 1310825 (\$19,600). Role: Co-PI and lead author (with PI Maurine Neiman and co-PI Jennifer L. Cruise).
- 2013-2014 Iowa Academy of Sciences. *Evaluating phenotypic consequences of accelerated mutation accumulation in the absence of sex*. ISF #13-10 (\$5,000). Role: Co-PI and lead author (with PI Maurine Neiman and co-PI Jennifer L. Cruise).

PUBLICATIONS

† – Corresponding author; * – Supervised Graduate/Undergraduate; § – Supervised High School Intern

Peer-Reviewed Research Papers

1. **Sharbrough J**, Bankers L, Cook EC*, Fields PF, Jalinsky J, McElroy KE, Neiman M, Logsdon Jr. JM, Boore JL. 2023. Single-molecule sequencing of animal mitochondrial genomes reveals chloroplast-like architecture and repeat-mediated recombination. *Molecular Biology and Evolution*. msad007. DOI: <https://doi.org/10.1093/molbev/msad007>
2. **Sharbrough J**[†], Conover JL¹, Fernandes Gyorfy M*, Grover CE, Miller ER, Wendel JF, Sloan DB. 2022. Global patterns of subgenome evolution in organelle-targeted genes of six allotetraploid angiosperms. *Molecular Biology and Evolution*. 39(4): msac074. <https://doi.org/10.1093/molbev/msac074> [† – **Authors contributed equally to this work.**]
3. Forsythe ES, Grover CE, Miller ER, Conover JL, Arick II MA, Chavarro MCF, Leal-Bertioli SCM, Peterson DG, **Sharbrough J**, Wendel JF, Sloan DB. 2022 Organellar transcripts dominate the cellular mRNA pool across plants of varying ploidy levels. *PNAS*. 119: e2204187119. <https://doi.org/10.1073/pnas.2204187119> [[See associated commentary here](#)]
4. Grover CE, Forsythe ES, **Sharbrough J**, Miller ER, Conover JL, DeTar RA, Chavarro C, Arick MA, Peterson DG, Leal-Bertioli SC, Sloan DB, Wendel JF. 2022. Variation in cytonuclear expression accommodation among allopolyploid plants. *Genetics* 222(2): iyac118. <https://doi.org/10.1093/genetics/iyac118>
5. Li L, Chen X, Fang D, Dong S, Guo X, Li N, Campos-Dominguez L, Wang W, Liu Y, Lang X, Peng Y, Tian D, Thomas DC, Mu W, Liu M, Wu C, Yang T, Zhang S, Yang L, Yang J, Liu ZJ, Zhang L, Zhang X, Chen F, Jiao Y, Guo Y, Hughes M, Wang W, Liu X, Zhong C, Li A, Sahu SK, Yang H, Wu E, **Sharbrough J**, Lisby M, Liu X, Xu X, Soltis DE, Van de Peer Y, Kidner C, Zhang S, Liu H. 2022. Genomes shed light on the evolution of *Begonia*, a mega-diverse genus. *New Phytologist*. 234(1): 295-310. <https://doi.org/10.1111/nph.17949>.
6. Grover CE, Arick MA, Thrash A, **Sharbrough J**, Hu G, Yuan D, Miller ER, Ramaraj T, Peterson DG, Udall JA, Wendel JF. 2022. Dual domestication, diversity, and differential introgression in Old World cotton diploids. *Genome Biology and Evolution*. evac170. <https://doi.org/10.1093/gbe/evac170>
7. Eleven E, Esparza C, Abernathy A, Bradshaw A, Garcia M, Jobe N, Pyper K, Skaar C, Goncz K, **Sharbrough J**, DeVaux LC. 2022. Genome Sequences of *Gordonia rubripertincta* Phages LilyPad and PokyPuppy. *Microbial Resource Announcements*. e00958-22. <https://doi.org/10.1128/mra.00958-22>

8. Fernandes Gyorfy M*, Miller ER, Conover JL, Grover CE, Wendel JF, Sloan DB, **Sharbrough J†**. 2021. Nuclear-cytoplasmic balance: whole genome duplications induce elevated organellar genome copy number. *The Plant Journal*. 108: 219-230. doi.org/10.1111/tpj.15436.
9. McElroy KE, Müller S, Lamatsch D, Bankers L, Fields PD, Jalinsky JR, **Sharbrough J**, Boore JL, Logsdon Jr. JM, Neiman M. 2021. Asexuality associated with marked genomic expansion of tandemly repeated rRNA and histone genes. *Molecular Biology and Evolution*. 38(9): 3581-3592, <https://doi.org/10.1093/molbev/msab121>
10. Conover JL, **Sharbrough J**, Wendel JF. 2021. pSONIC: Ploidy-aware Syntenic Orthologous Networks Identified via Collinearity. *G3: Genes | Genomes | Genetics*. 11(8): jkab170, <https://doi.org/10.1093/g3journal/jkab170>
11. Hong Z, Liao X, Ye Y, Zhang N, Yang Z, Zhu W, Gao W, **Sharbrough J**, Tembrock LR, Xu D, Wu Z. 2021. A complete mitochondrial genome for fragrant Chinese rosewood (*Dalbergia odorifera*, Fabaceae) with comparative analyses of genome structure and intergenomic sequence transfers. *BMC Genomics*. 22: 1-13. DOI: <https://doi.org/10.1186/s12864-021-07967-7>
12. Greimann ES*, Ward SF, Woodell JD*, Hennessey S*, Kline MR*, Moreno JA*, Peters M*, Cruise JL, Montooth KL, Neiman M, **Sharbrough J†**. 2020. Phenotypic variation in mitochondria-related performance traits across New Zealand snail populations. *Integrative and Comparative Biology*. 60: 275-87. DOI: <https://doi.org/10.1093/icb/icaa066>
13. Forsythe ES², **Sharbrough J²**, Havird JC, Warren JW, Sloan DB. 2019. CyMIRA: the Cytonuclear Molecular Interactions Reference for *Arabidopsis*. *Genome Biology and Evolution*. 11: 2194-202 DOI: <https://doi.org/10.1093/gbe/evz144> [² – **Authors contributed equally to this work.**]
14. **Sharbrough J†**, Luse M*, Boore JL, Logsdon Jr JM, Neiman M. 2018. Radical amino acid mutations persist longer in the absence of sex. *Evolution*. 72: 808-24. DOI: <https://doi.org/10.1111/evo.13465>
15. Sloan DB, Wu Z, **Sharbrough J**. 2018. Correction of persistent errors in *Arabidopsis Col-0* reference mitochondrial genome sequence. *The Plant Cell*. 30: 525-7. DOI: <https://doi.org/10.1105/tpc.18.00024>
16. **Sharbrough J³**, Havird JC³, Noe GR, Warren JW, Sloan DB. 2017. The mitonuclear dimension of Neanderthal and Denisovan ancestry in modern human genomes. *Genome Biology and Evolution*. 9: 1567-81. DOI: <https://doi.org/10.1093/gbe/evx114> [³ – **Authors contributed equally to this work.**]
17. **Sharbrough J†**, Cruise JL, Beetch M, Enright NM*, Neiman M. 2017. Genetic variation for mitochondrial function in the New Zealand freshwater snail *Potamopyrgus antipodarum*. *Journal of Heredity*. 108: 759-68. DOI: <https://doi.org/10.1093/jhered/esx041> [**** – Featured cover article.**]
18. McElroy KE, Denton RD, **Sharbrough J**, Bankers L, Neiman M, Gibbs HL. 2017. Genome expression balance in a triploid trihybrid vertebrate. *Genome Biology and Evolution*. 9: 968-80. DOI: <https://doi.org/10.1093/gbe/evx059>
19. Beck EA, Thompson AC, **Sharbrough J**, Brud E, Llopart A. 2015. Gene flow between *Drosophila yakuba* and *D. santomea* in subunit V of cytochrome c oxidase: A potential case of cytonuclear co-introgression. *Evolution*. 69: 1973-86. DOI: <https://doi.org/10.1111/evo.12718>

Peer-Reviewed Review Articles and Perspectives

1. Camus MF, Alexander-Lawrie B*, **Sharbrough J**, Hurst GDD. 2022. Inheritance through the cytoplasm. *Heredity*. 129: 31–43**. <https://doi.org/10.1038/s41437-022-00540-2> [**** – Published as part of the special issue celebrating the 200th birthday of Gregor Mendel**]

2. Neiman M, **Sharbrough J**. A tale of two genomes: What drives mitonuclear discordance in asexual lineages of a freshwater snail? 2022. In review at *BioEssays*. EcoEvoRxiv DOI: <https://doi.org/10.32942/X21019>
3. Ghiselli F, Gomes-dos-Santos A, Adema CM, Lopes-Lima M, **Sharbrough J**, Boore JL. 2021. Molluscan mitochondrial genomes break the rules. *Philosophical Transactions of the Royal Society B*, 376(1825), 20200159. <https://doi.org/10.1098/rstb.2020.0159>
4. Sloan DB, Broz AK, **Sharbrough J**, Wu Z. 2018. Detecting rare mutations and DNA damage with sequencing-based methods. *Trends in Biotechnology*. 36: 729-40. DOI: <https://doi.org/10.1016/j.tibtech.2018.02.009>
5. **Sharbrough J**†, Conover JL, Tate JA, Wendel JF, Sloan DB. 2017. Cytonuclear responses to genome doubling. *American Journal of Botany*. 104: 1277-80. DOI: <https://doi.org/10.3732/ajb.1700293>
6. Sloan DB, Havird JC, **Sharbrough J**. 2017. The on-again, off-again relationship between mitochondrial genomes and species boundaries. *Molecular Ecology*. 26: 2212-36. DOI: <https://doi.org/10.1111/mec.13959>

INVITED SEMINARS AND CONFERENCE PRESENTATIONS

* – Supervised Graduate/Undergraduate Researcher; § – Supervised High School Intern

Invited

1. **Sharbrough J**. Regional Alliance of INBRE Networks Collaborative Research Studio. Lightning Talk. *Whole Genome Duplications & Mitochondrial Biology*. June 6th, 2022.
2. **Sharbrough J**. New Mexico Institute of Mining and Technology. Research Ethics Series: Replication & Responsibility. *Standing on the shoulders of giants: Peer review as an instrument for replication*. April 12th, 2022.
3. **Sharbrough J**. University of California, Davis, Department of Plant Biology. *The Cytonuclear dimension of Allopolyploidy*. February 19th, 2021.
4. **Sharbrough J**, Conover JL, Grover CE, Miller ER, Fernandes Gyorfy M*, Wendel JF, Sloan SB. NSF PGRP 23rd Annual Awardee Meeting. *The Cytonuclear Dimension of Allopolyploidy*. September 10th, 2020.
5. **Sharbrough J**, Conover JL, Grover CE, Miller ER, Fernandes Gyorfy M*, Wendel JF, Sloan SB. Polyploid Webinar. *The Cytonuclear Dimension of Allopolyploidy*. June 29th, 2020.
6. **Sharbrough J**. DOE Plant Research Laboratory Seminar, Michigan State University. *Genomes for energy: A tale of Duplication, Conflict, and Cooperation*. February 18th, 2020.
7. **Sharbrough J**. Biology Department Seminar, New Mexico Institute of Mining and Technology. *Genomes for Energy: A Tale of Duplicity, Conflict, and Cooperation*. January 27th, 2020.
8. **Sharbrough J**, Conover JL, Grover CE, Miller ER, Wendel JF, Sloan SB. Plant and Animal Genome Conference XXVIII – Quinoa and Close Relatives Workshop. *Cytonuclear coevolution in allopolyploid quinoa*. January 12th, 2020.
9. **Sharbrough J**, Montooth KL, Neiman M. Society for Integrative and Comparative Biology 2020 – Building Bridges from Genome to Phenome Symposium. *Phenotypic variation for mitochondrial function in a New Zealand freshwater snail*. January 6th, 2020.
10. **Sharbrough J**. Biology Department Seminar, St. Edward’s University. *Genomes for energy: A tale of duplicity, conflict, and cooperation*. November 11th 2019.

11. **Sharbrough J**, Conover JL, Grover CE, Gyorfy M*, Wendel JF, Sloan SB. Genetics Society of America Early Career Seminar Series. *Cytonuclear coevolution in allopolyploid wheat*. September 20th, 2018.
12. **Sharbrough J**, Conover JL, Grover CE, Wendel JF, Sloan DB. Biology Department, Colorado State University. *Cytonuclear coevolution in allopolyploid wheat*. April 4th, 2018.
13. **Sharbrough J**, Conover JL, Grover CE, Wendel JF, Sloan DB. Plant Super Group, Colorado State University. *Cytonuclear coordination and coevolution in polyploid wheat*. February 23rd, 2018.
14. **Sharbrough J**, Neiman M. 3rd Annual Bioinformatics Retreat, University of Iowa. *Comparing radical and conservative amino acid substitutions in mitochondrial genomes of sexual and asexual lineages of Potamopyrgus antipodarum*. August 2013.

Contributed

1. **Sharbrough J**. Society for Integrative and Comparative Biology Conference. *Cytonuclear stoichiometry in the wake of genome duplication*. January 5th, 2023.
2. **Sharbrough J**, Castillo R*, Conover JL, Gyorfy MF*, Forsythe ES, Grover CE, Kao M*, Miller ER, Sloan DB, Wendel JF. Evolution Conference. Society for the Study of Evolution. *Cytonuclear stoichiometry in the wake of genome duplication*. June 27th, 2022.
3. **Sharbrough J**, Bankers LR, Cook E*, Fields P, Jalinsky J, McElroy KE, Wilton PR, Logsdon, Jr. JM, Neiman M, Boore JL. Evolution Conference. Society for the Study of Evolution. *Long reads reveal chloroplast-like architecture, recombination in mitochondrial genomes of a New Zealand freshwater snail*. June 2021.
4. **Sharbrough J**, Conover JL, Grover CE, Wendel JF, Sloan SB. Population, Evolutionary, and Quantitative Genetics Conference. Genetics Society of America. *Cytonuclear coordination and evolution in allotetraploid wheat*. May 2018.
5. **Sharbrough J**, Sloan DB, Montooth KL, Neiman M, Bankers LA, Boore JL, Fields PD, Jalinsky J, Logsdon Jr. JM, McElroy KE, Wilton PR. Evolution Conference. Society for the Study of Evolution. *Mitochondrial coevolution in the absence of sex*. June 2017.
6. **Sharbrough J**, Luse M*, Cherukurri P^s, Greimann E*, Lin M*, Zhang M^s, Boore JL, Logsdon, Jr. JM, Neiman M. Evolution Conference. Society for the Study of Evolution. *Effects of mutation-drift-equilibrium, purifying selection, and sex on mitochondrial mutation accumulation*. June 2016.
7. **Sharbrough J**, Luse M*, Boore JL, Logsdon Jr. JM, Neiman M. Evolution Conference. Society for the Study of Evolution. *Patterns of amino acid sequence evolution across various time scales in mtDNA of sexual and asexual lineages*. June 2014.
8. **Sharbrough J**. Midwest Ecology and Evolution Conference. *Patterns of molecular evolution across mating systems and ploidy classes*. March 2012.

HONORS AND AWARDS

2022	NSF CAREER Award: <i>Genomic, cellular, and physiological effects of whole genome duplications on organismal energy production</i> , National Science Foundation
2022	Pacific Biosciences Plant and Animal SMRT Grant Award. <i>Genome architecture and evolution in allotetraploid coffee</i> .
2022	New Mexico State Senate Letter of Recognition for contributions to New Mexico Science
2015	Outstanding Teaching Assistant Award, Department of Biology, University of Iowa

2014 W.D. Hamilton Award Finalist, Society for the Study of Evolution, Evolution Conference

FELLOWSHIPS AND SCHOLARSHIPS

2015 Evelyn Hart Watson Summer Fellowship, University of Iowa (\$2,448)
2014 Graduate College Summer Fellowship, University of Iowa (\$3,000)
2013-2014 NIH Bioinformatics T32 Training Grant, University of Iowa (\$32,000)
2008 National Science Foundation Global Linkages of Biology, Environment, and Society
Research Experience for Undergraduates Fellowship University of Notre Dame (\$4,500)

TEACHING AND MENTORING EXPERIENCE

Courses Taught

2022- Bioinformatics, Evolution, Genetics, SEAPHAGES – Bioinformatics, The DNA Sequencing Revolution, Life Sciences Seminar
2021- Bioinformatics, Evolution, Plant Biology CURE, Graduate Seminar, Life Sciences Seminar

Guest Lecturer

2022 Molecular Biotechnology, NMT – *DNA sequencing technology: then and now*
2021 SEAPHAGES, NMT – *Introduction to long-read sequencing techniques*
2021 Introduction to Biology & Biomedical Sciences, NMT – *Genomes for energy: What can nature tell us about energy production?*
2019 Molecular and General Genetics, CSU – *Sex-Linked Inheritance*
2015-2016 Genetic Analysis of Biological Systems, UIowa – *Potamopyrgus antipodarum*
2015 Evolution, UIowa – *Endosymbiotic origin of mitochondria*

Teaching Assistant

2012-2016 Evolution, UIowa
2014-2015 Foundations of Biology I, UIowa
2011 Principles of Biology I, UIowa

High School Science Teacher

2010 Biology, Earth Sciences, Mishawaka High School, Mishawaka, IN 46544
2009-2010 Biology, Biology II, Mishawaka High School, Mishawaka, IN 46544

Graduate Students

2022- Willie Hughes (Ph.D. rotation student)
2022- Andre Ortiz (M.S.)
2022- Evita Chee (Ph.D. rotation student)
2022- Raymond Castillo (M.S.)
2022- Damilola Odumade (M.S.)
2020- Cameron Steffensen (M.S.)
2020-2022 Catherine Batchelder (M.S.) – Thesis: *Effects of polyploidy on cytonuclear interactions*
2020-2022 Bridie Alexander-Lawrie (M.S.) – Thesis: *Recombination and inheritance in mitochondrial genomes of a freshwater gastropod*

2021-2022 Joseph Couls (M.S.) (Co-advisor) – Thesis: *Seeking the Cure: Identification of AKS7-induced transcriptomic changes which engender the cure of T. cruzi infected cells*

Supervised Undergraduate Researchers

2022- Emma Piercey
2022- Breana Silvis
2022-2022 Andre Ortiz
2022- Mireya Sinaí Grijalva
2020- Aaron Ortiz
2021-2022 Mae-Ling Kao
2021-2022 Anna Hunt
2020-2022 Emily Cook
2020-2022 Raymond Castillo
2020-2021 Mya Martinez Metzgar
2017-2019 Matheus Fernandes Gyorfy
2016-2018 Marissa Roseman
2015-2016 Emma Greimann
2014-2016 James D. Woodell
2013-2015 Nicole Enright
2013-2014 Michelle Sullivan
2013 Nikhil Puttagunta
2011-2014 Meagan Luse

Supervised High School Interns

2014 Michelle Zhang
2013 Praakruti Cherukuri

PROFESSIONAL SOCIETIES

2021- Botanical Society of America
2021- American Society of Plant Biologists
2019- Global Invertebrate Genomics Alliance
2019- Society for Integrative and Comparative Biology
2017- Genetics Society of America
2014- Society for the Study of Evolution
2013- Society for Molecular Biology and Evolution

PROFESSIONAL DEVELOPMENT

2022 Regional Alliance of INBRE Networks Collaborative Research Studio. RAIN – Reno, NV
2019 Next Generation Sequencing Platforms and Libraries Course. CSU – Fort Collins, CO
2019 Illumina Sequencing Symposium. CSU – Fort Collins, CO
2017-2018 Genetics Society of America Peer Reviewing Training Program

2017

Plant Genome Editing Conference, Colorado State University, Fort Collins, CO

PROGRAMMING LANGUAGES

1. Python
2. R
3. Bash

ACADEMIC SERVICE

Journal Reviewer for –

- 2023 *Horticultural Research*
- 2022 *Briefings in Bioinformatics; Horticultural Research; Plant Physiology; Scientific Reports*
- 2021 *American Naturalist; Briefings in Bioinformatics; Integrative and Comparative Biology; Genome Biology and Evolution; Genome Research; Molecular Biology and Evolution; New Phytologist*
- 2020 *Frontiers in Ecology and Evolution; Frontiers in Genetics; Genome Biology and Evolution; G3: Genes | Genomes | Genetics; Journal of Heredity; Plants*
- 2019 *Evolution; Genes; Genetics; Molecular Biology and Evolution; Open Biology*
- 2018 *Canadian Journal of Zoology; Genetics (3); Heredity; Plant Biology; The Plant Journal; Proceedings of the Royal Society of London B*
- 2017 *BioEssays; Canadian Journal of Zoology; Current Biology; Proceedings of the Royal Society of London B*
- 2016 *Molecular Biology and Evolution (2)*
- 2014 *Journal of Experimental Zoology; Molecular Biology and Evolution*
- 2013 *Biological Journal of the Linnean Society*

NSF Panel Reviewer

- 2023 *Plant Genomes Research Program*
- 2021-2023 NSF panelist

NSF ad hoc Reviewer

- 2022 *Molecular and Cell Biology (MCB) – Genetic Mechanisms*

Guest Associate Editor for –

- 2022- *G3: Genes | Genomes | Genetics*

NCKRI Panel Reviewer

2021

Review Editor for –

- 2019- *Frontiers in Genetics*

Thesis Reviewer for –

- 2022 University of Bologna. Ph.D. Thesis by Ran Xu. “*Mitochondrial Inheritance, Mito-nuclear Coevolution, and Sex-associated Genes in Bivalve Molluscs: Transcriptomics and Molecular Evolution*”.

Committees – *Served as Committee Chair, **Served as committee Co-Chair

- 2022- Kathryn Perea-Schmittle (Ph.D.)

- 2022- Katey Green (M.S.)*
- 2021-2022 Ankita Schwarting (M.S.)*
- 2021-2022 Betty Baker (M.S.)
- 2021- Raymond Castillo (M.S.)*
- 2021-2023 Marina Hein (M.S.)
- 2021-2022 Kasandra Velarde (M.S.)
- 2021-2022 Joseph Couls (M.S.)** – *Seeking the Cure: Identification of AKS7-induced transcriptomic changes which engender the cure of T. cruzi infected cells*
- 2021- New Mexico Tech Faculty Senate
- 2021- Genetics Society of America Education Committee
- 2021- New Mexico Institute of Mining and Technology Safety in Research Committee
- 2020- Rocky Mountain Advanced Computing Consortium Member Committee
- 2020-2022 Bridie Alexander-Lawrie (M.S.)* – *Recombination and Inheritance in Mitochondrial Genomes of a Freshwater Gastropod*
- 2020-2022 Catherine Batchelder (M.S.)* – *Effects of Polyploidy on Cytonuclear Interactions*
- 2020- Cameron Steffensen (M.S.)*
- 2020-2021 Primal Silva (M.S.)
- 2019 Genetics Society of America Peer Review Training Program Committee

COMMUNITY OUTREACH

- 2023 SICB Conference 2023 Division of Botany Poster Judge
- 2022- Designer and executer of whole-genome sequencing laboratory module, North Tahoe High School
- 2022 TriBeta Society Poster Judge
- 2021- New Mexico State Science Fair Judge
- 2021- Judge. NMT Student Research Symposium.
- 2021 Panelist. NMT Student COVID Forum.
<https://drive.google.com/file/d/1kyATHw2mmlOmOUjtjXydFc10xk8LaPdJ/view?usp=sharing>
- 2021 Organizer, Moderator. “What to do when your number is called: A COVID-19 Vaccine Information Panel”. https://www.youtube.com/watch?v=uR_oHyV-__4&t=368s
- 2017-2020 Co-organizer. Presentations for first-year “Key Communities” undergraduates at Colorado State University on career opportunities and educational resources in bioinformatics
- 2017 Colorado Science Education Foundation State Science Fair Judge
- 2014-2016 Organized and implemented evolutionary biology lab module at Taylor Elementary School, Cedar Rapids, IA
- 2010-2016 Designer and executer of Iowa City Darwin Day High School outreach program
- 2010-2015 Organizing Committee for Iowa City’s Darwin Day Celebration
- 2011-2012 Organized and implemented evolutionary biology lab module at Solon High School, Solon, IA
- 2011-2016 Solon High School Science Fair Judge

2012

St. Matthias Transfiguration School Science Fair Judge