

JUSTIN MILLER, Ph.D.

Email: jmiller@byu.edu

Website: <https://biology.byu.edu/millertlab>

Updated: July 24, 2020

EDUCATION

Postdoctoral Fellow: Brigham Young University, UT (2018-Present)

Focus: Epidemiology of Alzheimer's Disease

Mentor: John S.K. Kauwe

Ph.D. Brigham Young University, UT (2015-2018)

Degree: Biology/Bioinformatics

Mentor: Perry Ridge

Graduate Committee Members: Perry Ridge, John S.K. Kauwe, Michael Whiting, Steve Piccolo, Mark Clement

Dissertation: Analyzing Codon Usage and Coding Sequence Length Biases Across the Tree of Life

3.95 G.P.A.

Bachelor of Science: Brigham Young University, UT (2010-2015)

Degree: **Bioinformatics**

Minor: **Computer Science**

Language Certificate in **Portuguese: ACTFL certified, Advanced Proficiency**

Areas of Concentration: **Bioinformatics**, Computer Science, Portuguese

Graduated Cum Laude with 3.91 G.P.A.

COMPUTER SKILLS

- **Programming languages:** Python, VBA, bash, Java, C#, R, C++, SQL, MATLAB, Julia, JavaScript
- **Operating systems:** Windows, Ubuntu, RHEL 7
- **Applications:** MS Office Suite, MS Visual Studio, Adobe Creative Cloud
- **Concepts:** Big Data Analysis, Machine Learning, Parallel Processing, Big O
- **Amateur Radio Operator.** Call sign: KE7GTS

EXTERNAL GRANTS-\$202,800 + travel and lodging

- April 2020: BrightFocus Foundation Fellowship (\$200,000)
- May 2017: Willi Hennig Society Founder's Award (\$2,800)
- June 2016: Grant to Attend the Community Research Education and Engagement for Data Science (CREEDS) workshop at the Icahn School of Medicine (airfare + 2 weeks lodging in New York City + conference registration)

INTERNAL GRANTS AND SCHOLARSHIPS-\$33,132

- October 2018: BYU Research Presentation Award (\$500)
- April 2018: BYU Graduate Mentoring Assistantship (\$15,000)
- February 2018: Three Minute Thesis BYU Life Science College 1st Place (\$600)
- February 2018: Three Minute Thesis BYU Biology Department 1st Place (\$100)
- October 2017: BYU Research Presentation Award (\$400)
- February 2017: Three Minute Thesis BYU Life Science College 1st Place (\$600)
- February 2017: Three Minute Thesis BYU Biology Department 2nd Place (\$50)
- September 2016: BYU Research Presentation Award (\$400)
- August 2010-April 2015: BYU Academic Full Tuition Scholarship (\$15,482)

HONORS AND AWARDS

- December 2014: Phi Kappa Phi Membership.
- January 2013: Golden Key Honour Society Membership.
- February 2011: Phi Eta Sigma Membership.
- August 2006: Boy Scouts of America, Eagle Scout.

GRANT APPLICATIONS SUBMITTED

Date Submitted	Grant Agency	Grant Identifier	Principle Investigator	Funded
May 2020	NIH/ NIA	PAR-18-297 ID: AG066584	Buchwald	Unknown
May 2020	NIH/ NIA	PAS-19-316 ID:731454	Booth; subaward PI: Miller	Unknown
April 2020	Innovative Research	N/A	Miller	No
November 2019	BrightFocus	A2020118F	Miller	Yes-\$200,000
October 2019	NIGMS	PAR-17-190	Ridge	No
September 2019	PhRMA	N/A	Miller	No
August 2019	CCAD	N/A	Miller	No
June 2019	NIH/ NIA	PA-19-056 ID:564624	Kauwe	No
April 2019	NIH/ NIA	PAS-18-187: ADx SBIR 2019-1	Booth, Kauwe	No

WORK EXPERIENCE

Postdoctoral Fellow in BYU Biology Department

Mentor: John S.K. Kauwe, Ph.D.

2018-Present

Brigham Young University, Provo, UT

- Algorithmic design and bioinformatics analyses focused on the epidemiology of Alzheimer's disease.
- Directly mentor over a dozen undergraduates and ¾ time bioinformaticians.

Ph.D. student and teaching assistant in BYU Biology Department

Mentor: Perry Ridge, Ph.D.

2015-2018

Brigham Young University, Provo, UT

- Analyzed the evolution of codon usage bias across the Tree of Life.
- Assistant lecturer with dedicated office hours for *BIO165: Intro to Bioinformatics* and *BIO365: Computational Biology*.
- Developed a web portal for online submissions.
- Recorded an online lecture about my dissertation that BIO165 students watch each semester.

Data Analyst

Supervisor: Anneliese Pixton

2015-2016

Imagine Learning, Provo, UT

- Created reports that helped generate about \$5 million in revenue.

Research Assistant

Mentor: Perry Ridge, Ph.D.

2014-2015

Brigham Young University, Provo, UT

-Used a variety of bioinformatics tools to analyze codon usage biases and species evolution

Teaching Assistant – Intro to Bioinformatics

Professor: Perry Ridge, Ph.D.

2014-2015

Brigham Young University, Provo, UT

-Taught basic bioinformatics skills during dedicated office hours and in-class workshops.

-Developed an automated grading system to correct programming assignments.

Missionary

2011-2013

The Church of Jesus Christ of Latter-day Saints, Ribeirão Preto, São Paulo, Brazil

REFeree/REVIEWER

- Alzheimer's & Dementia (September 2019)
- Assisted poster review for the *Alzheimer's Association International Conference* (June 2019)
- Assisted grant review for the *Alzheimer's Association Research Grant* (December 2018)
- *BMC Bioinformatics* reviewer (December 2016)
- *BMC Bioinformatics* reviewer (December 2015)

TRAINING/CONFERENCES

- Alzheimer's Association International Conference Remote Conference (July 2020)
- ISCB Rocky Mountain Bioinformatics Conference in Apen/Snowmass, Colorado (December 2019)
- U01 Alzheimer's Disease Omics Meeting in St. Louis, Missouri (October 2019)
- Alzheimer's Association International Conference in Los Angeles, California (July 2019)
- ISCB Rocky Mountain Bioinformatics Conference in Apen/Snowmass, Colorado (December 2018)
- ISCB Rocky Mountain Bioinformatics Conference in Apen/Snowmass, Colorado (December 2017)
- ISMB/ECCB Intelligent Systems for Molecular Biology and Computational Biology in Prague, Czech Republic (July 2017)
- Biotechnology and Bioinformatics Symposium at Brigham Young University in Provo, Utah (December 2016)
- LDS Life Science Symposium at Thanksgiving Point, Utah (July 2016)
- I was accepted to and participated in an extensive two-week bioinformatics training program for the Community Research Education and Engagement for Data Science at Icahn School of Medicine at Mount Sinai in New York City, New York (June 2016).
- Biotechnology and Bioinformatics Symposium at Brigham Young University in Provo, Utah (December 2015)
- Biotechnology and Bioinformatics Symposium at Brigham Young University in Provo, Utah (December 2014)

COMMUNITY OUTREACH

- Science fair judge at Westridge Elementary School (January 2020)
- Science Olympiad Program Manager for Designer Genes at the Utah State Competition (April 2019)
- Science fair judge at Wasatch Elementary School (November 2017)
- Science fair judge at Westridge Elementary School (November 2017)
- Boy Scout leader (2016-2019)

UNDERGRADUATE STUDENTS MENTORED

Year	Total number of undergraduates	Number of undergraduate poster presentations	Number of undergraduates on posters	Number of publications with undergraduate coauthors	Number of undergraduate coauthors on published manuscripts	Number of projects nearing completion with undergraduate coauthors	Projected number of undergraduate coauthors on projects nearing completion
Total	31*	15	32	8	15	10	21
2020	13	0	0	3	5	10	21
2019	15	11	24	2	2	N/A	N/A
2018	2	2	2	1	3	N/A	N/A
2017	4	1	1	2	5	N/A	N/A
2016	9	1	5	0	0	N/A	N/A

*The number of undergraduates that I mentored from the individual years do not add up to the total because I mentored some students for multiple years.

INVITED GUEST EDITOR

2020:

Ongoing. Guest Editor for a Special Issue on the *Genetics of Alzheimer's Disease* for *Genes* (IF=3.759).

INVITED GUEST LECTURER

2020:

April 16-17 (postponed due to COVID-19): Application of Machine Learning Tools to Omics in Neuroscience at Washington University at St. Louis. I will teach a 60 minute lecture on supervised methods, a 3.5 hour hands-on training on deep neural networks, a 60 minute lecture on unsupervised methods, and a 75 minute hands-on workshop on dimensional reduction. (<https://neuroscienceresearch.wustl.edu/resources/workshops/workshop-machine-learning-omics/>)

PUBLICATION RECORD

	First Authorships	Coauthorships
Completed Publications	10	6
Manuscripts with Peer Reviews	1	0
Preprint Manuscripts	1	1
Completed Draft Manuscripts Being Reviewed by Collaborators	2	0
Total	14	7

PUBLICATIONS

⁺: Co-first authors

[^]: Co-last authors

2020:

Justin B Miller⁺, Elizabeth Ward⁺, Lyndsay A Staley, Jeffrey Stevens, Craig C Teerlink, Justina P Tavana, Matthew Cloward, Madeline Page, Louisa Dayton, Alzheimer's Disease Genetics Consortium, Lisa A Cannon-Albright[^], John SK Kauwe[^]. *Identification and genomic analysis of pedigrees with exceptional longevity identifies candidate rare variants*. Vol. 143:104972. doi: <https://doi.org/10.1016/j.nbd.2020.104972>. *Neurobiology of Disease* (2020).

Justin B. Miller and John S.K. Kauwe, for the Alzheimer's Disease Neuroimaging Initiative. *Predicting Clinical Dementia Rating Using Blood RNA Levels*. doi: <https://doi.org/10.3390/genes11060706>. *Genes*, 11, (6):706 (2020).

Justin B. Miller⁺, Lauren M. McKinnon⁺, Michael F. Whiting, Perry G. Ridge. *Codon Pairs are Phylogenetically Conserved: Codon pairing as a new class of phylogenetic characters*. vol. 15,5 e0232260. doi: [10.1371/journal.pone.0232260](https://doi.org/10.1371/journal.pone.0232260). *PLoS One*. (2020).

Elizabeth Vance, Josue Gonzalez, **Justin B. Miller**, Alzheimer's Disease Genetic Consortium (ADGC), Lyndsay Staley, Paul K. Crane, Shubhabrata Mukherjee, John S.K. Kauwe. *Failure to detect synergy between variants in transferrin and hemochromatosis and Alzheimer's disease in large cohort*. doi: <https://doi.org/10.1016/j.neurobiolaging.2020.01.013>. *Neurobiology of Aging* (2020).

Justin B. Miller, Lauren M. McKinnon, Michael F. Whiting, Perry G. Ridge. *Codon use and aversion is largely phylogenetically conserved across the tree of life*. *Molecular Phylogenetics and Evolution* (2020).

2019:

Justin B. Miller, Lauren M. McKinnon, Michael F. Whiting, Perry G. Ridge. *CAM: An alignment-free method to recover phylogenies using codon aversion motifs*. *PeerJ* (2019).

Stewart Morley, Antolín Peralta, Luis Brieba, **Justin Miller**, Amanda Oliphant, Stephen Aldous, Perry Ridge, Brent Nielsen. *Arabidopsis Twinkle and DNA polymerase interactions*. *BMC Plant Biology* (2019).

Justin B. Miller⁺, Logan R. Brase⁺, Perry G. Ridge. *ExtRamp: A novel algorithm for extracting the ramp sequence based on the tRNA adaptation index and the effective number of codons*. *Nucleic Acids Research*, gky1193, <https://doi.org/10.1093/nar/gky1193> (2019).

2018:

Justin B. Miller, Brandon D. Pickett, Perry G. Ridge. *JustOrthologs: A Fast, Accurate, and User-Friendly Ortholog Identification Algorithm*. *Bioinformatics*, <https://doi.org/10.1093/bioinformatics/bty669> (2018).

Corinne E. Sexton⁺, Mark E. Wadsworth⁺, **Justin B. Miller**⁺, Michael J. Cormier, Perry G. Ridge. *Splice Site Variant Analyzer: Determining the Pathogenicity of Splice Site Variants*. *J Biomed Res Prac* 2(2): 100012. <https://www.onjourn.com/open-access/splice-site-variant-analyzer-determining-the-pathogenicity-of-splice-site-variants-100012.pdf> (2018).

Perry G. Ridge, Mark E. Wadsworth, **Justin B. Miller**, Andrew J. Saykin, Robert C. Green, the Alzheimer's Disease Neuroimaging Initiative, John S. K. Kauwe. *Assembly of 809 whole mitochondrial genomes with clinical, imaging, and fluid biomarker phenotyping*. *Alzheimers & Dementia*, doi: <http://dx.doi.org/10.1016/j.jalz.2017.11.013> (2018).

2017:

Justin B. Miller, Ariel A. Hippen, Sage M. Wright, Caroline Morris, Perry G. Ridge. *Human viruses have codon usage biases that match highly expressed proteins in the tissues they infect*. *Biomedical Genetics and Genomics* 2, doi:10.15761/bgg.1000134 (2017).

Brandon D. Pickett, **Justin B. Miller**, Perry G. Ridge. *Kmer-SSR: A Fast and Exhaustive SSR Search Algorithm*. *Bioinformatics*, 2017.

Justin B. Miller, Ariel A. Hippen, Jonathon R. Belyeu, Michael F. Whiting, Perry G. Ridge. *Missing something? Codon aversion as a new character system in phylogenetics*. *Cladistics*, doi:10.1111/cla.12183 (2017).

2016:

Mark T.W. Ebbert, Mark E. Wadsworth, Lyndsay A. Staley, Kaitlyn L. Hoyt, Brandon D. Pickett, **Justin B. Miller**, John D. Duce, John S.K. Kauwe, Perry G. Ridge: *Evaluating the necessity of PCR duplicate removal from next-generation sequencing data and a comparison of approaches*. BMC Bioinformatics (2016).

2015:

Stewart G. Gardner, **Justin B. Miller**, Tanner Dean, Tanner Robinson, McCall Erickson, Perry Ridge, William R. McCleary: *Genetic analysis, structural modeling and direct coupling analysis suggest a mechanism for phosphate signaling in E. coli*. BMC Genetics, April 2015.

MANUSCRIPTS WITH PEER REVIEWS

†: Co-first authors

2020:

Matthew Hodgman[†], **Justin Miller**[†], Taylor Meurs, John Kauwe (2019). *CUBAP: An Interactive Web Portal for Analyzing Codon Usage Bias Across Populations*. Accepted to *Nucleic Acids Research* pending revisions.

PREPRINT MANUSCRIPTS

†: Co-first authors

2020:

Lauren M. McKinnon, **Justin B. Miller**, Michael F. Whiting, John S.K. Kauwe, Perry G. Ridge. *A Comprehensive Analysis of the Phylogenetic Signal in Ramp Sequences in 211 Vertebrates*. bioRxiv: doi: <https://doi.org/10.1101/2020.03.03.975433>. Submitted to Scientific Reports.

2019:

Justin B. Miller, Michael F. Whiting, John S.K. Kauwe, Perry G. Ridge. *How Codon Usage Bias Affects Our Ability to Recover the Tree of Life*. Preprints, 2019100086 doi: 10.20944/preprints201910.0086.v1. (2019). Submitted to Biology Direct.

COMPLETED DRAFT MANUSCRIPTS BEING REVIEWED BY COLLABORATORS

†: Co-first authors

^: Co-last authors

2020:

Erin Saito[†], **Justin Miller**[†], Oscar Harari, Carlos Cruchaga, Kathie Mihindikulasuriya, John Kauwe, Benjamin Bikman. *Metabolic RNA-seq profiles from sporadic Alzheimer's disease patients show widespread differential expression of glycolytic and ketolytic genes in oligodendrocytes*.

Justin B Miller[†], Elizabeth Ward[†], Lyndsay A Staley, Jeffrey Stevens, Craig C Teerlink, Justina P Tavana, Matthew Cloward, Madeline Page, Louisa Dayton, Alzheimer's Disease Genetics Consortium, Lisa A Cannon-Albright[^], John SK Kauwe[^]. *Evaluating the contributions of rare variants to Alzheimer's disease mortality in pedigrees from the Utah Population Database*

ORAL PRESENTATIONS

2020:

Justin B. Miller, Lauren M. McKinnon, Josue D. Gonzalez Murcia, Gage Black, Elizabeth Ward, Jace Webster, John S.K. Kauwe, Perry G. Ridge (2020). ODO1-01-06 Synonymous variant rs2405442 in PILRA is associated with Alzheimer's disease and affects RNA expression by destroying a ramp sequence. Alzheimer's Association International Conference (AAIC) 2020, Online Conference due to COVID-19.

2019:

Justin B. Miller and John S.K. Kauwe (2019). Pathogenic Synonymous Variants are More Likely to Affect Codon Usage Biases than Benign Synonymous Variants*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

2018:

Justin B. Miller, Logan R. Brase, Perry G. Ridge (2018). *ExtRamp: A novel algorithm for extracting the ramp sequence based on the tRNA adaptation index or relative codon adaptiveness*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

2017:

Justin B. Miller, Lauren M. McKinnon, Michael F. Whiting, Perry G. Ridge (2017). *Codon Aversion Motifs: An alignment-free method to recover phylogenies*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

2016:

Justin B. Miller, Ariel A. Hippen, Sage M. Wright, Caroline Morris, Perry G. Ridge (2016). *Human-infecting viruses have codon usage biases which are highly correlated with proteins that are expressed in infected tissues*. Biotechnology and Bioinformatics Symposium 2016, Brigham Young University, Provo, UT.

2015:

Justin B. Miller, Ariel A. Hippen, Jonathon R. Belyeu, Michael F. Whiting, Perry G. Ridge (2015). *Missing something?: Codon nonusage as a character in phylogenetic inference in Tetrapods*. Biotechnology and Bioinformatics Symposium 2015, Brigham Young University, Provo, UT.

POSTER PRESENTATIONS

First Author Poster Presentations

2019:

Justin B. Miller and John S.K. Kauwe (2019). *Pathogenic Synonymous Variants are More Likely to Affect Codon Usage Biases than Benign Synonymous Variants**. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Justin B. Miller, John S.K. Kauwe, the Alzheimer's Disease Neuroimaging Initiative (2019). *Machine Learning on Blood Microarray Data Accurately Predicts Clinical Dementia Rating*. Alzheimer's Association International Conference, Los Angeles, CA.

2018:

Justin B. Miller, Logan R. Brase, Perry G. Ridge (2018). *ExtRamp: A novel algorithm for extracting the ramp sequence based on the tRNA adaptation index or relative codon adaptiveness*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Justin B. Miller⁺, Lauren M. McKinnon⁺, Michael F. Whiting, Perry G. Ridge (2018). *Codon Pairs are phylogenetically conserved: Codon pairing as a novel phylogenetic character state for maximum parsimony and alignment-free methods*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

2017:

Justin B. Miller, Lauren M. McKinnon, Michael F. Whiting, Perry G. Ridge (2017). *Codon Aversion Motifs: An alignment-free method to recover phylogenies*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Justin B. Miller, Brandon D. Pickett, Perry G. Ridge (2017). *JustOrthologs: A Fast, Accurate, and User-Friendly Ortholog-Identification Algorithm*. ISMB/ECCB Intelligent Systems for Molecular Biology and Computational Biology Conference, Prague, Czech Republic.

2016:

Justin B. Miller, Brandon D. Pickett, Perry G. Ridge (2016). *JustOrthologs: A Fast, Accurate, and User-Friendly Ortholog-Identification Algorithm*. American Society of Human Genetics, Vancouver, B.C., Canada.

Justin B. Miller, Brandon D. Pickett, Perry G. Ridge (2016). *JustOrthologs: A Fast, Accurate, and User-Friendly Ortholog-Identification Algorithm*. LDS Life Science Symposium, Thanksgiving Point, UT.

Justin B. Miller, Ariel A. Hippen, Jonathon R. Belyeu, Michael F. Whiting, Perry G. Ridge (2016). *Missing Something?: Codon Aversion as a New Character System in Phylogenetics*. Community Research Education and Engagement for Data Science at Icahn School of Medicine, New York City, NY.

2015:

Justin Miller, Ariel Hippen, Andy Himebaugh, Ryan Miller, Caroline Morris, Perry Ridge (2015). *Viral Codon Bias Mimics Human Host Proteins*. Biotechnology and Bioinformatics Symposium, Brigham Young University, Provo, UT.

2014:

Justin B. Miller, John D. Duce, Perry G. Ridge (2014). *The Alignable Portion*. Biotechnology and Bioinformatics Symposium 2014, Brigham Young University, Provo, UT.

Justin B. Miller, Kaitlyn L. Hoyt, Jordon B. Richie, Artem V. Golotin (2014). *Assembling a Chromosome from Overlap Regions*. Biotechnology and Bioinformatics Symposium, Brigham Young University, Provo, UT.

Co-authored Poster Presentations

2020:

Erin Saito⁺, **Justin Miller**⁺, Oscar Harari, Carlos Cruchaga, Kathie Mihindukulasuriya, John Kauwe, Benjamin Bikman (2020). *Metabolic RNA-seq profiles from sporadic Alzheimer's disease patients: Analysis of glycolytic and ketolytic pathways*. Experimental Biology 2020, San Diego, CA.

2019:

Lauren McKinnon, **Justin Miller**, Josue Gonzalez, Gage Black, Elizabeth Vance, Jace Webster, John Kauwe, Perry Ridge (2019). *Using Ramp Sequences to Identify Causes of Disease Association*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Justin Hunt, Lauren Cutler, **Justin Miller**, Lauren McKinnon, John Kauwe, Perry Ridge (2019). *Comprehensive Ortholog Analysis*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Matthew Hodgman, **Justin Miller**, Taylor Meurs, John Kauwe (2019). *CUBAP: An Interactive Web Portal for Analyzing Codon Usage Bias Across Populations*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Matthew Cloward, Elizabeth Vance, Louisa Dayton, Madeline Page, **Justin Miller**, John Kauwe (2019). *PRSKB: A Web-based Calculator for Quantifying Genetic Risk*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Madeline Page, Elizabeth Ward, **Justin Miller**, John Kauwe (2019). *The Utility of Polygenic Scores in High-risk Pedigrees*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Elizabeth Ward, **Justin Miller**, Lyndsay Staley, Lisa Cannon Albrigh, Craig Teerlink, Jim Farnham, John Kauwe (2019). *Leveraging Familial-based Relationships for Rare Variant Discovery*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Katrisa Ward, **Justin Miller**, Brandon Pickett, John Kauwe (2019). *Identifying Functional Relationships Using Protein Coevolution*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Austin Gale, Katrisa Ward, **Justin Miller**, John Kauwe (2019). *Using Mutual Information to Validate Functional Interactions Between Clusterin and Amyloid Precursor Protein*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Ed Ringger, **Justin Miller**, Erin Saito, Ben Bikman, Oscar Harari, Carlos Cruchaga, Kathie Mihindikulasuriya, John Kauwe (2019). *Different Metabolic RNA Levels Exist in Alzheimer's Disease Brains*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Taylor Meurs, **Justin Miller**, John Kauwe (2019). *Codon Usage Biases Have Significant Implications in Population Stratification*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Erik Huckvale, **Justin Miller**, John Kauwe (2019). *Machine Learning on Blood Microarray Data Accurately Predicts Clinical Dementia Rating*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

Louisa Dayton, **Justin Miller**, Elizabeth Ward, Monica Mackay, Matthew Cloward, John Kauwe (2019). *Using Mendelian Randomization to Assess Disease Causality*. ISCB Rocky Mountain Bioinformatics Conference, Aspen/Snowmass, CO.

2018:

Stewart Morley, Antolín Peralta-Castro, Luis G. Brieba, **Justin Miller**, Kai Li Ong, Perry Ridge, Amanda Oliphant, Stephen Aldous, Brent L. Nielsen (2018). *Ancient Enemies Working Together; How Plant Organelles Reconciled Phage and Bacterial Systems to Replicate DNA*. International Plant & Animal Genome XXVII, San Diego, CA.

Stewart Morley, **Justin Miller**, Perry Ridge, Brent Nelson (2018). *Twinkle twinkle is a star; at the center of plant organelle DNA replication*. Tri-Branch ASM Meeting 2018, Durango, CO.

2017:

Stewart Morley, **Justin Miller**, Perry Ridge, Brent Nielson (2017). *Assembling the Arabidopsis Mitochondrial DNA Replisome*. 28th International Conference on Arabidopsis Research, St. Louis, MO.

2016:

Mark Wadsworth, **Justin Miller**, Michael Cormier, Sage Wright, Perry G. Ridge (2016). *Determining the Effects Variants have on Gene Splicing*. Biotechnology and Bioinformatics Symposium, Brigham Young University, Provo, UT.

Brandon D. Pickett, **Justin B. Miller**, Perry G. Ridge (2016). *Efficient, Accurate, and Complete Identification of Simple Sequence Repeats in Genomic Sequences*. American Society of Human Genetics, Vancouver, B.C., Canada.

Brandon D. Pickett, **Justin B. Miller**, Perry G. Ridge (2016). *Efficient, Accurate, and Complete Identification of Simple Sequence Repeats in Genomic Sequences*. LDS Life Science Symposium, Thanksgiving Point, UT.

2014:

Mark E. Wadsworth, Brandon D. Pickett, **Justin B. Miller**, John D. Duce, Ronald G. Munger, Christopher D. Corcoran, JoAnn T. Tschanz, Maria C. Norton, John S.K. Kauwe, Karl V. Voelkerding, Perry G. Ridge (2014). *The Variant Characterization of 211 Whole Genome Sequences: The Cache County Study on Memory Health and Aging*. Biotechnology and Bioinformatics Symposium, Brigham Young University, Provo, UT.

Mark E. Wadsworth, Brandon D. Pickett, **Justin B. Miller**, John D. Duce, Ronald G. Munger, Christopher D. Corcoran, JoAnn T. Tschanz, Maria C. Norton, John S.K. Kauwe, Karl V. Voelkerding, Perry G. Ridge (2014). *The Variant Characterization of 211 Whole Genome Sequences: The Cache County Study on Memory Health and Aging*. The American Society of Human Genetics, San Diego, CA.