

Jess A. Millar

Curriculum Vitae

July 2019

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Ann Arbor, MI 48104

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| EDUCATION | <p>University of Michigan 2022</p> <p>Ph.D. Bioinformatics (exp) <i>Advsr.:</i> Aaron A. King & Robert J. Woods <i>Diss.:</i> “Hospital transmission and evolution of Vancomycin-resistant <i>Enterococcus</i>.”</p> <p>M.P.H. Hospital & Molecular Epidemiology <i>Advsr.:</i> Denise E. Kirschner <i>Thesis:</i> “The effects of <i>Mycobacterium tuberculosis</i> on T cell responsiveness in granulomas.”</p> <p>University of Michigan 2020</p> <p>M.S. Bioinformatics (exp) Cert: Computational Discovery & Engineering</p> <p>Portland State University 2017</p> <p>M.S. Biology <i>Advsr.:</i> Rahul Raghavan <i>Thesis:</i> “Uncovering <i>Coxiella burnetii</i>’s pathogenicity by elucidating its metabolism and host interactions.”</p> <p>M.S. Statistics <i>Advsr.:</i> Yiyi Chen & Mara Tableman <i>Exams:</i> Mathematical Statistics, Applied Statistics <i>Thesis:</i> “Machine learning techniques in cancer prognostic modeling and performance assessment.”</p> <p>Portland State University 2014</p> <p>B.S. Micro/Molecular Biology, Health Studies, & Science Minor: Mathematics Coll. & Dept. Honors, <i>magna cum laude</i> <i>Advsr.:</i> Daniel J. Ballhorn <i>Thesis:</i> “Effect of mycorrhizal colonization and light limitation on growth and reproduction of lima bean.”</p> <p>Portland Community College 2010</p> <p>A.S. Science</p> |
| FELLOWSHIPS & SCHOLARSHIPS | <p>University of Michigan Rackham Merit Fellowship (\$163,000) 2017-2022</p> <p>NSF Graduate Research Fellowship (\$138,000) 2016-2021</p> <p>University of Michigan SSE Tuition Scholarship (\$710) 2019</p> <p>University of Washington SIS MID Tuition Scholarship (\$1,650) 2018</p> <p>University of Michigan Benard Maas Fellowship (\$5,000) 2017-2018</p> <p>Fariborz Maseeh Statistics Teaching Assistantship (\$23,500) 2016-2017</p> <p>Portland State Elsa Jorgenson Award [3x] (\$4,500) 2014-2017</p> |

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| | Portland State Laurels Graduate Award (\$10,600) | 2015-2016 |
| | Portland State President's Equal Access Scholarship (\$1,200) | 2015-2016 |
| | Fariborz Maseeh Statistics Teaching Assistantship (\$21,700) | 2014-2015 |
| | Portland State Laurels Graduate Supplemental Tuition Grant (\$1,100) | 2014-2015 |
| | Portland State Honors Laurels Merit Scholarship [2x] (\$1,100) | 2013-2014 |
| | Oregon University System Supplemental Tuition Grant [2x] (\$3,900) | 2010-2014 |
| | Oregon Opportunity Grant [4x] (\$7,800) | 2010-2014 |
| | NIH-NHGRI Genomic Research Fellowship (\$4,150) | 2013 |
| | NIH-NHGRI Genomic Research GRE Prep Scholarship (\$1,450) | 2013 |
| | Portland State Supplemental Tuition Grant [2x] (\$6,000) | 2011-2013 |
| | Ronald E. McNair Scholars Research Fellowship (\$2,800) | 2012 |
| | Ronald E. McNair Scholars Supplemental Tuition Grant (\$1,750) | 2011-2012 |
| | NIH-NIGMS Bridges to Baccalaureate Summer Research Internship (\$1,350) | 2010 |
| RESEARCH & TRAVEL GRANTS | American Society for Microbiology Research Capstone Fellowship (\$6,000) | 2019-2021 |
| | University of Michigan Epidemiology Student Travel Grant (\$500) | 2019 |
| | University of Washington SIS MID Travel Scholarship (\$450) | 2018 |
| | University of Michigan RMF Bridge Stipend (\$500) | 2017 |
| | Society for the Study of Evolution Travel Award (\$500) | 2017 |
| | Emory MITII Summer School Travel and Lodging Grant (\$675) | 2017 |
| | Society for Applied Microbiology Registration Fees Grant (\$200) | 2017 |
| | Sigma Xi Grants-in-Aid of Research Copernicus Fund (\$1,000) | 2016-2017 |
| | Pacific Northwest Women in Science Retreat Scholarship (\$120) | 2016 |
| | Sigma Xi Columbia-Willamette Chapter Research Grant (\$100) | 2016 |
| | Portland State Forbes-Lea Research Award (\$775) | 2015-2016 |
| | American Society for Microbiology Student Travel Grant (\$500) | 2015 |
| | American Society for Microbiology Research Capstone Grant (\$1,500) | 2014 |
| | Rose E. Tucker Trust Undergraduate Research Grant [2x] (\$700) | 2012-2014 |
| | Free Geek Computer Hardware Grant (\$1,000) | 2013 |
| | NIH-NHGRI Genomic Research Conference Travel Grant [2x] (\$2,900) | 2013 |
| | NIH-NHGRI Genomic Research Travel and Lodging Grant (\$2,100) | 2013 |
| | Portland State AAA Conference Travel Grant (\$750) | 2013 |
| | Harvard CCDD Conference Travel Grant (\$850) | 2013 |
| | NIH-NIGMS Bridges to Baccalaureate Conference Travel Grant [2x] (\$1,950) | 2012-2013 |
| | Ronald E. McNair Scholars Research Grant (\$200) | 2012 |
| | Ronald E. McNair Scholars Conference Travel Grant (\$500) | 2012 |
| BOOK CHAPTERS | Chen Y, Millar JA . "Machine learning techniques in cancer prognostic modeling and performance assessment." In: Matsui S, Crowley JJ. (eds.) <i>Frontiers of Biostatistical Methods and Applications in Clinical Oncology</i> . (pp. 193-230). Singapore: Springer. | 2017 |
| REFEREED PUBLICATIONS | Chanderraj R, Millar JA , Patel T, Read AF, Washer L, Kaye KS, Woods RJ. "Vancomycin-resistant <i>Enterococcus</i> acquisition in a tertiary care hospital: Testing the roles of antibiotic use, proton pump inhibitor use, and colonization pressure." <i>Open Forum Infect Dis</i> . 6(4):ofz139. | 2019 |
| | Zou Z, Qin H, Brenner A, Raghavan R, Millar JA , Gu Q, Xie Z, Kreth J, Merritt J. "LytTR Regulatory Systems: A potential new class of prokaryotic sensory system." <i>PLoS Genet</i> . 14(10):e1007709. | 2018 |

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| Cicchese JM*, Evans S*, Hult C*, Joslyn LR*, Wessler T*, Millar JA , Marino S, Cilfone NA, Mattila JT, Linderman JJ, Kirschner DE. “Dynamic balance of pro- and anti-inflammatory signals controls disease and limits pathology.” <i>Immunol Rev.</i> 285(1):147-167. (*Co-first authors) | 2018 |
| Schumann C*, Chan S*, Millar JA , Bortnyak YV, Carey K, Fedchyk AF, Wong L, Korzun T, Moses AS, Lorenz A, Shea D, Taratula OR, Khalimonchuk O, Taratula O. “Intraperitoneal nanotherapy for metastatic ovarian cancer based on siRNA-mediated suppression of DJ-1 protein combined with a low dose of cisplatin.” <i>Nanomedicine.</i> 14(4):1395-1405. (*Co-first authors) | 2018 |
| Millar JA* , Beare PA*, Moses AS, Martens CA, Heinzen RA, Raghavan R. “Whole-genome sequence of <i>Coxiella burnetii</i> Nine Mile RSA439 (phase II, clone 4), a laboratory workhorse strain.” <i>Genome Announc.</i> 5(23):e00471-17. (*Co-first authors) | 2017 |
| Moses AS*, Millar JA* , Bonazzi M, Beare PA, Raghavan R. “Horizontally acquired biosynthesis genes boost <i>Coxiella burnetii</i> ’s physiology.” <i>Front Cell Infect Microbiol.</i> 7:174. (*Co-first authors) | 2017 |
| Millar JA , Raghavan R. “Accumulation and expression of horizontally acquired genes in <i>Arcobacter cryaerophilus</i> that thrives in sewage.” <i>PeerJ.</i> 5(2):e3269 (Correction: 5(1):e3269/correction-1). | 2017 |
| Kacharia FR*, Millar JA* , Raghavan R. “Emergence of new sRNAs in enteric bacteria is associated with low expression and rapid evolution.” <i>J Mol Evol.</i> 84(4):204-213. (*Co-first authors) | 2017 |
| Ballhorn DJ, Schädler M, Elias JD, Millar JA , Kautz S. “Friend or foe - Light availability determines the relationship between mycorrhizal fungi, rhizobia and lima bean (<i>Phaseolus lunatus</i> L.).” <i>PLoS ONE.</i> 11(5):e0154116. | 2016 |
| Millar JA , Valdés R, Kacharia FR, Landfear SM, Cambronne ED, Raghavan R. “ <i>Coxiella burnetii</i> and <i>Leishmania mexicana</i> residing within similar parasitophorous vacuoles elicit disparate host responses.” <i>Front Microbiol.</i> 6:794. | 2015 |
| Raghavan R, Kacharia FR, Millar JA , Sislak CD, Ochman H. “Genome rearrangements can make and break small RNA genes.” <i>Genome Biol Evol.</i> 7(2):557-566. | 2015 |
| Millar JA , Ballhorn DJ. “Effect of mycorrhizal colonization and light limitation on growth and reproduction of lima bean (<i>Phaseolus lunatus</i> L.).” <i>J Appl Bot Food Qual.</i> 86(1):172-179. | 2013 |
| Yeh PJ, Simon DM, Millar JA , Alexander HF, Franklin D. “A diversity of antibiotic-resistant <i>Staphylococcus</i> spp. in a public transportation system.” <i>Public Health Res Perspect.</i> 2(3):202-209 (Erratum: 3(1):61). | 2011 |
| MANUSCRIPTS IN PREP | |
| Hebert JF, Millar JA , Raghavan R, Romney A, Podrabsky JE, Rennie M, Felker A, Morgan TK. “Fetal sex affects uteroplacental angiogenesis in mouse model of fetal growth restriction.” <i>Biol Reprod.</i> | 2019 |

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| | Mariita RM, Millar JA , Moss AG. "Draft genome of <i>Pseudoalteromonas</i> sp. strain BMB from the stomodeum of <i>Mnemiopsis leidyi</i> : Insights into biosynthetic gene clusters and antibiotic resistance determinants." | 2019 |
| | Millar JA , Kirschner DE. "Exploring the direct effects of <i>Mycobacterium tuberculosis</i> on T cell responsiveness." <i>J Theor Biol</i> . | 2019 |
| | Millar JA . "Bacterial regulation of replication and adaptation through antisense RNAs." | 2019 |
| PUBLISHED ABSTRACTS | Hebert JF, Millar JA , Romney A, Raghavan R, Podrabsky JE, Morgan TK. "Placental gene expression is affected by male fetal sex and maternal genotype in fetal growth restriction model." <i>Reprod Sci</i> . 24(S1):212A (abstract # F-138). | 2017 |
| | Millar JA , McNulty SN, Zarlenga DS, Mitreva M. "Transcriptional profiling of Ivermectin resistant <i>Cooperia punctata</i> using deep sequencing." <i>Mol Biol Cell</i> . 24(24):3775 (abstract #1026). | 2013 |
| | Millar JA , Ballhorn DJ. "Effects of light limitation on plant-rhizobia and plant-mycorrhiza interactions." <i>Anthós</i> . 4(2). | 2012 |
| | Millar JA . "The SARS virus - Different methods of curbing the epidemic." 55th ISEF Abstracts. Science Service, Washington, D.C. | 2004 |
| HONORS & AWARDS | PeerJ Open Access Ambassador, PeerJ | 2018-2019 |
| | Rackham Merit Fellow Certificate of Achievement, University of Michigan [2x] | 2018-2019 |
| | AAAS/Science Program for Excellence in Science | 2015-2017 |
| | SALP Academic Excellence Award, Portland State University [4x] | 2013-2017 |
| | NRHH Academic Achievement Award, Portland State University [8x] | 2011-2017 |
| | 2 nd Place Poster Competition, Portland State Dept. Biology | 2016 |
| | Sigma Xi (Full Member), Scientific Research Society | 2015 |
| | Pi Mu Epsilon, National Mathematics Honor Society | 2015 |
| | American Society for Microbiology Science Teaching Fellow | 2014-2015 |
| | Most Read Article, Journal of Applied Botany and Food Quality | 2014 |
| | Portland State Dean's Academic Achievement Award (*top undergrad in college) | 2013 |
| | National Residence Hall Honorary, Portland State (*top 1% of student leaders) | 2013 |
| | Phi Kappa Phi National Honor Society (*top 7.5% of students) | 2012 |
| | Golden Key International Honour Society (*top 15% of students) | 2012 |
| | Urban Honors Scholar, Portland State University | 2012 |
| | President's List, Portland State University [4x] | 2010-2012 |
| | President's List, Portland Community College [5x] | 2008-2010 |
| CONFERENCE PRESENTATIONS | Millar JA , Flynn JL, Linderman JJ, Kirschner DE. "The effects of <i>Mycobacterium tuberculosis</i> on T cell responsiveness in granulomas." American Society for Microbiology Microbe 2019. San Francisco, CA. June 20 th -24 th . | 2019 |
| | Millar JA , Flynn JL, Linderman JJ, Kirschner DE. "Using Multi-Scale Modeling to explore the effects of <i>Mycobacterium tuberculosis</i> on T cell responsiveness in granulomas." Society for Industrial and Applied Mathematics | 2019 |

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| Great Lakes Section 2019 Meeting. Ann Arbor, MI. April 27 th . | |
| Millar JA , Chanderraj R, Woods RJ, King AA. “Quantifying the transmission dynamics of hospital acquired VRE.” 17 th Annual Michigan Epidemiology Conference. Ann Arbor, MI. March 23 rd . | 2018 |
| Millar JA , Moses AS, Bonazzi M, Beare PA, Raghavan R. “Horizontally acquired biosynthesis genes boost <i>Coxiella burnetii</i> ’s physiology.” Evolution 2017. Portland, OR. June 23 rd -27 th . | 2017 |
| Millar JA , Moses AS, Bonazzi M, Beare PA, Raghavan R. “Horizontally acquired biosynthesis genes boost <i>Coxiella burnetii</i> ’s physiology.” American Society for Microbiology Microbe 2017. New Orleans, LA. June 1 st -5 th . | 2017 |
| Millar JA , Chen Y. “Machine learning techniques in cancer prognostic modeling and performance assessment.” Immunology and Evolution of Influenza Symposium. Emory, Atlanta, GA. May 25 th -26 th . | 2017 |
| Millar JA , Raghavan R. “A sewage microbiome is dominated by <i>Arcobacter cryaerophilus</i> that expresses multiple drug resistance and virulence genes.” American Society for Microbiology Microbe 2016. Boston, MA. June 16 th -20 th . | 2016 |
| Millar JA , Raghavan R. “Pathogens residing within similar intracellular vacuoles elicit discordant host responses.” 1 st Festival of Genomics California. San Mateo, CA. November 3 rd -5 th . | 2015 |
| Millar JA , Valdés R, Cambronne ED, Landfear SM, Raghavan R. “ <i>Coxiella burnetii</i> and <i>Leishmania mexicana</i> residing within similar parasitophorous vacuoles elicit discordant host responses.” 1 st Pacific Northwest Quantitative Biology Meeting. Portland, OR. September 11 th . | 2015 |
| Millar JA , Valdés R, Cambronne ED, Landfear SM, Raghavan R. “ <i>Coxiella burnetii</i> and <i>Leishmania mexicana</i> residing within similar parasitophorous vacuoles elicit discordant host responses.” 115 th General Meeting of the American Society for Microbiology. New Orleans, LA. May 30 th -June 2 nd . | 2015 |
| Millar JA , Raghavan R. “A horizontally acquired tRNA facilitates <i>Coxiella burnetii</i> adaptation to an extreme environment.” 114 th General Meeting of the American Society for Microbiology. Boston, MA. May 17 th -20 th . | 2014 |
| Millar JA , McNulty SN, Zarlenga D, Mitreva M. “Transcriptional profiling of Ivermectin resistant <i>Cooperia punctata</i> using deep sequencing.” 53 rd Annual Meeting of the American Society for Cell Biology. New Orleans, LA. December 14 th -18 th . | 2013 |
| Millar JA , McNulty SN, Zarlenga D, Mitreva M. “Transcriptional profiling of Ivermectin resistant <i>Cooperia punctata</i> using deep sequencing.” 2 nd International Conference on Genomics in the Americas. Sacramento, CA. September 12 th -13 th . | 2013 |
| Millar JA , Ballhorn DJ. “Effect of mycorrhizal colonization and light limitation on growth and reproduction of lima bean (<i>Phaseolus lunatus</i> L.)” 113 th General Meeting of the American Society for Microbiology. Denver, CO. | 2013 |

May 18th-21st.

Millar JA, Ballhorn DJ. "Effects of light limitation on legume-mycorrhizae interactions." 12th Annual Biomedical Research Conference for Minority Students. San Jose, CA. November 7th-10th. 2012

Millar JA, Ballhorn DJ. "Effects of light limitation on plant-rhizobia and plant-mycorrhiza interactions." 20th Annual Pacific NW McNair/EIP/GO-MAP Research Conference. University of Washington, Seattle, WA. May 17th. 2012

Millar JA. "The SARS virus - Different methods of curbing the epidemic." 55th Intel International Science and Engineering Fair. Portland, OR. May 9th-14th. 2004

CAMPUS & MISC PRESENTATIONS

Millar JA, Flynn JL, Linderman JJ, Kirschner DE. "The effects of *Mycobacterium tuberculosis* on T cell responsiveness in granulomas." Research in Hospital and Molecular Epidemiology Seminar Series. University of Michigan, Ann Arbor, MI. November. (*upcoming*) 2019

Millar JA, Flynn JL, Linderman JJ, Kirschner DE. "The effects of *Mycobacterium tuberculosis* on T cell responsiveness in granulomas." Michigan Institute for Computational Discovery and Engineering 6th Annual Symposium. University of Michigan, Ann Arbor, MI. April 10th. 2019

Millar JA, Chanderraj R, Woods RJ, King AA. "Quantifying the transmission dynamics of hospital acquired VRE." Department of Computational Medicine and Bioinformatics 4th Annual Retreat. Frankenmuth, MI. September 14th-16th. 2018

Millar JA, Linderman JJ, Kirschner DE. "Exploring the direct effects of *Mycobacterium tuberculosis* on T cell responsiveness." Michigan Institute for Computational Discovery and Engineering 5th Annual Symposium. University of Michigan, Ann Arbor, MI. March 22nd. 2018

Millar JA, Chanderraj R, Woods RJ, King AA. "Quantifying the transmission dynamics of hospital acquired VRE." Multi-Scale Bio-Imaging in Systems Biology Symposium. University of Michigan, Ann Arbor, MI. January 31st. 2018

Millar JA, Moses AS, Bonazzi M, Beare PA, Raghavan R. "Horizontally acquired biosynthesis genes boost *Coxiella burnetii*'s physiology." Department of Computational Medicine and Bioinformatics 3rd Annual Retreat. Oregon, OH. September 15th-17th. 2017

Millar JA, Moses AS, Bonazzi M, Beare PA, Raghavan R. "Horizontally acquired biosynthesis genes boost *Coxiella burnetii*'s physiology." Biology Graduation Symposium. Portland State University, Portland, OR. June 16th. 2017

Millar JA, Chen Y. "Machine learning techniques in cancer prognostic modeling and performance assessment." 6th Annual OHSU Research Week. Oregon Health Science University, Portland, OR. May 1st-3rd. 2017

Millar JA, Raghavan R. "A sewage microbiome is dominated by *Arcobacter cryaerophilus* that expresses multiple drug resistance and virulence genes." 20th Annual Biology Alumni Night Symposium. Portland State University, 2016

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| Portland, OR. October 21 st . | |
| Millar JA , Raghavan R. “A sewage microbiome is dominated by <i>Arcobacter cryaerophilus</i> that expresses multiple drug resistance and virulence genes.” 4 th Annual Pacific Northwest Women in Science Retreat. Rockaway Beach, OR. July 8 th -10 th . | 2016 |
| Millar JA , Raghavan R. “A horizontally acquired tRNA facilitates <i>Coxiella burnetii</i> adaptation to an extreme environment.” Sigma Xi Columbia-Willamette Chapter Annual Meeting. Portland, OR. May 26 th . | 2016 |
| Millar JA , Raghavan R. “Pathogens residing within similar intracellular vacuoles elicit discordant host responses.” 19 th Annual Biology Alumni Night Symposium. Portland State University, Portland, OR. October 23 th . | 2015 |
| Millar JA , Raghavan R. “Parallel adaptation of a bacterium and an eukaryote to an intracellular extreme environment.” 18 th Annual Biology Alumni Night Symposium. Portland State University, Portland, OR. October 17 th . | 2014 |
| Millar JA , McNulty SN, Zarlenga D, Mitreva M. “Transcriptional profiling of Ivermectin resistant <i>Cooperia punctata</i> using deep sequencing.” 7 th Annual Opportunities in Genomic Research Undergraduate Scholars Closing Program. Washington University School of Medicine, St. Louis, MO. July 31 st . | 2013 |
| Millar JA , Ballhorn DJ. “Effect of mycorrhizal colonization and light limitation on growth and reproduction of lima bean (<i>Phaseolus lunatus</i> L.)” 9 th Annual Sigma Xi Columbia-Willamette Chapter Student Research Symposium. Portland State University, Portland, OR. April 12 th . | 2013 |
| Millar JA , Ballhorn DJ. “Effects of light limitation on plant-microbe interactions.” 9 th Annual PSU Ronald E. McNair Scholars Program Summer Symposium. Portland State University, Portland, OR. August 15 th . | 2012 |
| Millar JA , Ballhorn DJ. “Effects of light limitation on plant-rhizobia and plant-mycorrhiza interactions.” 9 th Annual PSU Undergraduate Research Conference. Portland State University, Portland, OR. May 23 rd . | 2012 |
| Millar JA , Kelley AL, Buckley BA. “Antibody testing for C/EBP δ in aquatic snails.” Portland Bridges to Baccalaureate Annual Meeting. Portland State University, Portland, OR. October 15 th . | 2010 |
| Millar JA . “Galinstan: Useful applications of a eutectic alloy.” 1 st Annual Better Living Through Chemistry in the 21 st Century. Portland Community College, Portland, OR. March, 10 th . | 2007 |

RESEARCH EXPERIENCE

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|---|-----------|
| NSF Graduate Research Fellow, UM RMF Fellow , University of Michigan Depts. of Mathematics, Ecology & Evolutionary Biology, Advisor: Dr. King Dept. of Internal Medicine, Advisor: Dr. Woods Transmission and evolution of antibiotic resistant bacteria in hospitals. | 2017-2019 |
| NSF Graduate Research Fellow, UM RMF Fellow , University of Michigan Department of Microbiology & Immunology, Advisor: Dr. Kirschner | 2018-2019 |

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| | Modeling <i>Mycobacterium tuberculosis</i> within-host infection and treatment. | |
| | Graduate Research Assistant , Oregon Health & Science University Department of Public Health & Preventive Medicine, Advisor: Dr. Chen Oncological prognostic modeling using machine learning techniques. | 2016-2017 |
| | PSU Laurels Graduate Scholar , Portland State University Department of Biology, Advisor: Dr. Raghavan Pathogenic bacterial genome evolution and adaption to host niches. | 2013-2017 |
| | Graduate Research Assistant , Portland State University Fariborz Maseeh Dept. of Mathematics & Statistics, Advisor: Dr. Tableman Experimental design and analysis of agriculture data. | 2012-2017 |
| | NIH-NHGRI Genomic Research Scholar , Washington Univ. in St. Louis McDonnell Genome Institute, Advisor: Dr. Mitreva Differential gene expression of Ivermectin resistant <i>Cooperia punctata</i> in cattle in response to drug treatment. | 2013 |
| | Ronald E. McNair Scholar, PSU Urban Honors , Portland State University Department of Biology, Advisor: Dr. Ballhorn Fitness shifts between <i>Phaseolus lunatus</i> and mycorrhizae in response to light limitation. | 2011-2013 |
| | Undergraduate Research Assistant , Portland State University Department of Biology, Advisor: Dr. Yeh Diversity of <i>Staphylococcus</i> ssp. antibiotic resistance in public transit. | 2011 |
| | NIH-NIGMS Bridges Scholar , Portland State University Department of Biology, Advisor: Dr. Buckley Protein expression level analysis of physiological heat shock and bacterial infection response in marine animals. | 2010-2011 |
| | Undergraduate Research Assistant , Oregon Health & Science University Department of Cell & Developmental Biology, Advisor: Dr. Danilchik Furrow-specific endocytosis during cytokinesis in <i>Xenopus laevis</i> . | 2002-2003 |
| MEDIA FEATURES | “Students of MI: Jess.” Michigan Association of State Universities: Get MI Degree. Website feature. February 14 th . | 2019 |
| | “LytTR Regulatory Systems: A potential new class of prokaryotic sensory system.” PLoS Genet. 14(10). Website feature cover image. October 12 th -26 th . | 2018 |
| | “Second Annual LGBTQ Monologues event creates space for intersectional identities.” The Michigan Daily. 128(10):1A. Newspaper. October 12 th . | 2018 |
| | “Stateside: Detroit hospital under investigation; coming out stories; politics in the classroom.” Michigan Radio. Radio interview. October 11 th . | 2018 |
| | “Introduction to modeling viral infections and immunity.” Immunol Rev. 285(1):5-8. Editorial feature. August 11 th . | 2018 |
| | “The Spell of Coxiella.” Small Things Considered. Blog post. July 10 th . | 2017 |
| | “Living in the Stomach of a Cell.” This Week in Microbiology. #155. Podcast. June 28 th . | 2017 |
| | “Portland State graduate student Jess Millar wins NSF GRFP award.” Portland | 2016 |

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| State University News. Website feature. May 16 th . | |
| “Jess Millar: Honors success.” Portland State University News. Website feature. December 4 th . | 2013 |
| “Is the public transportation system safe from a public health perspective?” Public Health Res Perspect. 2(3):149-150. Editorial feature. November 25 th . | 2011 |
| “Germs on wheels.” PSU Vanguard. 66(4):4. Newspaper. July 19 th . | 2011 |
| “Riding TriMet? Plenty of bugs could be sharing your seat.” The Oregonian. Front page article. July 14 th . | 2011 |
| “Study: TriMet bus seats tested for bacteria.” KGW News. TV interview. July 14 th . | 2011 |

MENTORED STUDENTS

| | |
|---|-----------|
| Amanda Brenner (<i>PSU Biology undergraduate</i>) | 2017 |
| Auguste Dutcher (<i>PSU Biology postbac</i>) | 2016-2017 |
| Abe Moses (<i>PSU Biology postbac</i>) | 2013-2014 |
| Tina Schroyer (<i>PSU Biology & Envir. Sciences undergrad, McNair Scholar</i>) | 2012-2014 |
| Janice Ballantine (<i>PSU P.A.C.E. graduate</i>) | 2012 |
| Katherine Huynh (<i>PSU Biology undergraduate, Millennium Gates Scholar, LSAMP Scholar, McNair Scholar</i>) | 2011 |
| Dominick Keim-bay (<i>PSU Biology undergraduate, LSAMP Scholar</i>) | 2011 |

TEACHING ACTIVITIES

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|---|-----------|
| Guest Lecturer , University of Michigan Department of Epidemiology Molecular Epidemiology (Win. '19) | 2019 |
| Assistant Grader , University of Michigan Department of Biology Principles of Animal Physiology (Win. '18, Win. '19) | 2018-2019 |
| Guest Lecturer , Portland State University McNair Scholars Program “Preparing for Grad School.” McNair Seminar (Spr. '16, Spr. '17, Spr. '19) “Funding Outside of McNair.” McNair Seminar (Spr. '15, Spr. '16, Spr. '17, Spr. '19) Department of Mathematics and Statistics Applied Statistics for Business (Sum. '17) Statistical Consulting (Spr. '17) | 2015-2019 |
| Guest Lecturer , Oregon Health & Science University Department of Public Health & Preventive Medicine Categorical Data Analysis (Spr. '17) | 2017 |
| Teaching Assistant , Portland State University Department of Mathematics and Statistics Intro to Probability & Statistics I (Win. '15, Fall '16, Spr. '17) Intro to Probability & Statistics II (Spr. '15, Win. '17) Intro to Probability & Statistics for Business II (Fall '14) | 2014-2017 |
| Teaching Assistant , Portland Community College Department of Mathematics Calculus I (Spr. '13, Sum. '14) | 2013-2014 |

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| PROFESSIONAL SERVICES | Peer Mentor – Bioinformatics Peer Mentorship Program, UM | 2019-2020 | |
| | Panelist – “1st Gen Student Success.” National Academic Advising Association Great Lakes Region Conference | 2019 | |
| | Application Mentor – Office of National Scholarships and Fellowships, UM | 2017-2019 | |
| | Panelist – “NSF GRF Workshop.” Program in Biomedical Sciences, UM | 2017-2019 | |
| | Journal Reviewer – Environmental Science & Technology | 2018 | |
| | Abstract Reviewer – ASM Microbe Conference | 2018 | |
| | Panelist – “Research Methodology.” McNair Scholars Program, PSU | 2013-2017 | |
| | Judge – Intel Northwest Science Expo Regional Science Fair | 2016 | |
| | Panelist – “Options After Undergrad.” TRiO Student Support Services, PSU | 2015 | |
| | Committee Member – Portland State Student Educational Travel Committee | 2013-2014 | |
| | Conference Volunteer – XXXII Scientific Committee on Antarctic Research | 2012 | |
| | Website Developer – Portland State Biology Professor (Dr. Yeh) | 2011 | |
| | UNIVERSITY SERVICE | Committee Member – PIBS Curriculum Committee, UM | 2019 |
| | | Committee Member – Bioinformatics Website Committee, UM | 2018-2019 |
| Student Host – Program in Biomedical Sciences Interview Weekend, UM | | 2018-2019 | |
| Panelist – Student Life Professional Development Conference, UM | | 2017 | |
| Statistics Tutor – Math/Stats Dept., PSU | | 2015-2017 | |
| Computer Lab Assistant – Math/Stats Dept., PSU | | 2014-2017 | |
| Planning Member – National Residence Hall Honorary, PSU Viking Chapter | | 2013-2014 | |
| Tech Chair – Golden Key International Honour Society, PSU Chapter | | 2013 | |
| Computer Lab Assistant – Graphic Design Dept., PSU | | 2011-2012 | |
| OUTREACH & COMMUNITY SERVICE | Speaker – “Becoming Comfortable with Failure.” Rackham Student Government Failure Symposium, UM | 2019 | |
| | Panelist – “Navi(Gay)ting Grad School.” Spectrum Center, UM | 2019 | |
| | Science Communicator – “Ask a Scientist.” Engaging Scientists in Policy and Advocacy, UM | 2018 | |
| | Symposium Volunteer – LGBTQ Inclusion as Researchers & in Research, UM | 2018 | |
| | Committee Member – Teach-in for Freedom, Democracy, and Diversity, UM | 2018 | |
| | Secretary – Biology Investigation and Outreach, PSU Chapter | 2016-2017 | |
| | Volunteer – Portland State Reuse Room | 2013-2014 | |
| | Volunteer – Free Geek, Portland, OR | 2012-2013 | |
| | Archives Assistant – City of Portland Archives and Records Center | 2010-2011 | |
| | Assistant Docent – 3D Center of Art and Photography | 2010 | |
| | Lab Assistant – Red Cross, Portland, OR | 2006-2008 | |
| | SHORT COURSES | University of Michigan | 2016-2019 |
| 54 th Annual Summer Session in Epidemiology. Ann Arbor, MI. July 7 th -26 th . Spatial Statistics for Epidemiologic Data | | | |
| Python for Everybody. Coursera. Programming for Everybody (Getting Started with Python) Python Data Structures Using Python to Access Web Data (<i>in progress</i>) Using Databases with Python (<i>in progress</i>) | | | |
| University of Washington | | 2018 | |
| 10 th Annual Summer Institute in Statistics and Modeling in Infectious Diseases. Seattle, WA. July 9 th -25 th . | | | |

Simulation-based Inference for Epidemiological Dynamics
 Evolutionary Dynamics and Molecular Epidemiology of Viruses
 Spatial Statistics in Epidemiology and Public Health

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| Emory University | 2017 |
| 12 th Annual Summer School on Modeling Immunology. Atlanta, GA. May 21 st -24 th . | |
| Infectious Diseases, Immunology, and Within-Host Models | |
| Spatial Spread of Virus Infections and Immunity Using Agent-Based Models | |
| Pathogen Evolution, Selection, and Immunity | |
| Portland Community College | 2012 |
| Introduction to Perl Programming. Community Education Online Learning. | |
| Perl Programming Level I | |

**CONFERENCES,
 SEMINARS, &
 WORKSHOPS
 ATTENDED**

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| ASM 9 th Annual Microbe Academy for Professional Development; American Society for Microbiology. San Francisco, CA. June 19 th -20 th . | 2019 |
| MAC-EPID 31 st Symposium: Evolving Perspectives on Microbial Systems. University of Michigan, Ann Arbor, MI. March 29 th . | 2019 |
| Tools & Technology Seminar Series. University of Michigan, Ann Arbor, MI. | 2017-2019 |
| Bioinformatics Student Research Hour. University of Michigan, Ann Arbor, MI. | 2017-2019 |
| MAC-EPID 30 th Symposium: Malaria Ecology and Epidemiology: Challenges to Interrupting Transmission. University of Michigan, Ann Arbor, MI. October 26 th . | 2018 |
| LGBTQ Inclusion as Researchers & in Research Symposium. University of Michigan, Ann Arbor, MI. September 6 th . | 2018 |
| Mentoring Others Results in Excellence Mentoring Plan Workshop. University of Michigan, Ann Arbor, MI. May 8 th . | 2018 |
| Mentorship and Professional / Personal Support Program. University of Michigan, Ann Arbor, MI. | 2018 |
| Microbiology Career Choices: What's Available and How to Succeed Workshop; American Society for Microbiology. New Orleans, LA. June 1 st . | 2017 |
| Lester Newman Seminar Series. Portland State University, Portland, OR. | 2011-2017 |
| All-levels Career Development Workshop: Moving Forward in the Professional Public Health Field. Oregon Public Health Association. Portland OR. May 22 nd . | 2016 |
| Data After Dark - BD2K Data Science Workshop. Oregon Health Science University, Portland, OR. January 13 th -14 th . | 2016 |
| Maseeh Mathematics & Statistics Colloquium Series. Portland State University, Portland, OR. | 2014-2016 |
| SIAM Student Chapter Seminar. Portland State University, Portland, OR. | 2012-2016 |
| Microbiology Career Choices: What's Available and How to Succeed Workshop; American Society for Microbiology. Boston, MA. May 17 th . | 2014 |
| ASM 4 th Annual Capstone Research Institute; American Society for Microbiology. Boston, MA. May 16 th -17 th . | 2014 |
| Studying Whole-Genome Microbial Epigenetics Workshop; American Society for Microbiology. Denver, CO. May 18 th . | 2013 |
| America's Next Top Infectious Disease Model: HIV and Influenza Conference; Center for Communicable Disease Dynamics. Chicago, IL. April 21 st -22 nd . | 2013 |
| 10th Western Regional International Health Conference. Portland, OR. April 5 th -7 th . | 2013 |

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| PROFESSIONAL AFFILIATIONS | American Public Health Association | 2018-2019 |
| | Michigan Public Health Association | 2018-2019 |
| | American Statistical Association | 2017-2019 |
| | Association for Women in Mathematics | 2015-2019 |
| | American Association for the Advancement of Science | 2015-2019 |
| | American Mathematical Society | 2014-2019 |
| | Sigma Xi | 2013-2019 |
| | Society for Industrial and Applied Mathematics | 2012-2019 |
| | American Society for Microbiology | 2011-2019 |
| | Society for the Study of Evolution | 2017 |
| | Genetics Society of America | 2016-2017 |
| | Society for Applied Microbiology | 2014-2017 |
| American Society for Cell Biology | 2013-2014 | |

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| PUBLICATION METRICS | Papers | 14 | Cites/paper | 9.43 | h-index | 8 |
| | Citations | 132 | Cites/author | 33.19 | g-index | 11 |
| | Years | 9 | Papers/author | 3.38 | i-10 index | 7 |
| | Cites/Year | 14.67 | Authors/paper | 5.86 | Erdős number | 4 |

TECHNICAL SKILLS

Computer Languages
 Shell script, Python, Perl, SQLite, LaTeX, HTML, CSS

Statistical Software
 R, SAS, MATLAB, Minitab, Maple, SPSS

Statistics/Machine Learning Techniques
 Logistic Regression, Classification Trees, Random Forrest, Boosting, SVM, Naïve Bayes, Bayesian Networks, LDA, QDA, KNN, K-means, EM algorithm, Survival analysis, ARIMA, Experimental design

Bioinformatics Software
 PhyML, PHYLIP, RAxML, MrBayes, Clustal Omega, Gblocks, Mesquite, CLC Genomic Workbench, FastQC, Trimmomatic, BowTie, TopHat, Trinity, SAMtools, BLAST, InterProScan, Prodigal, Gfold, Rfam, FUNC, QuickGO, DESeq, EBSeq, STAR, RSEM, kallisto, STRING, HMMER, IDBA, HGTector, Circos

Bioinformatics Techniques
 Sequence alignment, Neighbor-joining, Maximum likelihood trees, Bayesian trees, RNA-Seq, De novo assembly, Metagenomic assembly, GO term enrichment, Differential gene expression, Differential isoform expression, Protein-protein interaction networks

Molecular Biology
 Gel electrophoresis, Western blot, PAM fluorometry, Cell staining, Confocal microscopy

Microbiology

Cell culture, PCR, MIC, MPC, Kirby-Bauer Disk