

# Jess A. Millar

## Curriculum Vitae

### January 2019

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<b>EDUCATION</b>	<p><b>University of Michigan</b> <span style="float: right;">2022</span></p> <p>Ph.D. Bioinformatics <span style="float: right;">(exp)</span>          Cert: Computational Discovery &amp; Engineering  <i>Mentor:</i> Aaron A. King &amp; Robert J. Woods</p> <p>M.P.H. Hospital &amp; Molecular Epidemiology  <i>Mentor:</i> Denise E. Kirschner  <i>Thesis:</i> “Exploring the direct effects of <i>Mycobacterium tuberculosis</i> on T cell responsiveness.”</p> <p><b>Portland State University</b> <span style="float: right;">2017</span></p> <p>M.S. Biology  <i>Mentor:</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>Mentor:</i> Yiyi Chen &amp; Mara Tableman  <i>Thesis:</i> “Machine learning techniques in cancer prognostic modeling and performance assessment.”</p> <p><b>Portland State University</b> <span style="float: right;">2014</span></p> <p>B.S. Micro/Molecular Biology, Health Studies, &amp; Science          Minor: Mathematics          Coll. &amp; Dept. Honors, <i>magna cum laude</i>  <i>Mentor:</i> Daniel J. Ballhorn  <i>Thesis:</i> “Effect of mycorrhizal colonization and light limitation on growth and reproduction of lima bean.”</p> <p><b>Portland Community College</b> <span style="float: right;">2010</span></p> <p>A.S. Science</p>
<b>FELLOWSHIPS &amp; SCHOLARSHIPS</b>	<p>University of Michigan Rackham Merit Fellowship (\$163,000) <span style="float: right;">2017-2022</span></p> <p>NSF Graduate Research Fellowship (\$138,000) <span style="float: right;">2016-2021</span></p> <p>University of Michigan Benard Maas Fellowship (\$5,000) <span style="float: right;">2017-2018</span></p> <p>Fariborz Maseeh Statistics Teaching Assistantship (\$23,500) <span style="float: right;">2016-2017</span></p> <p>Portland State Elsa Jorgenson Award [3x] (\$4,500) <span style="float: right;">2014-2017</span></p> <p>Portland State Laurels Graduate Award (\$10,600) <span style="float: right;">2015-2016</span></p> <p>Portland State President's Equal Access Scholarship (\$1,200) <span style="float: right;">2015-2016</span></p> <p>Fariborz Maseeh Statistics Teaching Assistantship (\$21,700) <span style="float: right;">2014-2015</span></p> <p>Portland State Laurels Graduate Supplemental Tuition Grant (\$1,100) <span style="float: right;">2014-2015</span></p> <p>Portland State Honors Laurels Merit Scholarship [2x] (\$1,100) <span style="float: right;">2013-2014</span></p> <p>Oregon University System Supplemental Tuition Grant [2x] (\$3,900) <span style="float: right;">2010-2014</span></p> <p>Oregon Opportunity Grant [4x] (\$7,800) <span style="float: right;">2010-2014</span></p>

	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
	McNair Scholars Research Fellowship (\$2,800)	2012
	McNair Scholars Supplemental Tuition Grant (\$1,750)	2011-2012
	NIH-NIGMS Bridges to Baccalaureate Summer Research Internship (\$1,350)	2010
<b>RESEARCH GRANTS</b>	Sigma Xi Grants-in-Aid of Research Copernicus Fund (\$1,000)	2016
	Sigma Xi Columbia-Willamette Chapter Research Grant (\$100)	2016
	Portland State Forbes-Lea Research Award (\$775)	2015
	Rose E. Tucker Trust Undergraduate Research Grant (\$400)	2014
	Free Geek Computer Hardware Grant (\$1,000)	2013
	McNair Scholars Research Grant (\$200)	2012
	Rose E. Tucker Trust Undergraduate Research Grant (\$300)	2012
<b>BOOK CHAPTERS</b>	Chen Y, <b>Millar JA</b> . "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
<b>REFEREED PUBLICATIONS</b>	Zou Z, Qin H, Brenner A, Raghavan R, <b>Millar JA</b> , 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
	Cicchese JM*, Evans S*, Hult C*, Joslyn LR*, Wessler T*, <b>Millar JA</b> , 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*, <b>Millar JA</b> , Bortnyak YV, Carey K, Fedchyk AF, Wang L, Korzun T, Moses AS, Lorenz A, Shea D, Taratula O, 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
	<b>Millar JA</b> *, 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*, <b>Millar JA</b> *, 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
	<b>Millar JA</b> , 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*, <b>Millar JA</b> *, 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, <b>Millar JA</b> , 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
	<b>Millar JA</b> , 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, <b>Millar JA</b> , Sislak CD, Ochman H. "Genome rearrangements can make and break small RNA genes." <i>Genome Biol Evol.</i> 7(2):557-566.	2015
	<b>Millar JA</b> , 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, <b>Millar JA</b> , 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
<b>SUBMITTED MANUSCRIPTS</b>	Chanderraj R, <b>Millar JA</b> , Patel T, Read AF, Washer L, Kaye KS, Woods RJ. "VRE acquisition in a tertiary care hospital: Testing the roles of antibiotic use, proton pump inhibitory use and colonization pressure." <i>Open Forum Infect Dis.</i>	2018
<b>MANUSCRIPTS IN PREP</b>	Hebert JF, <b>Millar JA</b> , 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>	2018
	Mariita RM, <b>Millar JA</b> , 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."	2018
	<b>Millar JA</b> , Kirschner DE. "Exploring the direct effects of <i>Mycobacterium tuberculosis</i> on T cell responsiveness." <i>J Theor Biol.</i>	2018
<b>PUBLISHED ABSTRACTS</b>	Hebert JF, <b>Millar JA</b> , 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
	<b>Millar JA</b> , 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
	<b>Millar JA</b> , Ballhorn DJ. "Effects of light limitation on plant-rhizobia and plant-mycorrhiza interactions." <i>Anthós.</i> 4(2).	2012

	<b>Millar JA.</b> "The SARS virus - Different methods of curbing the epidemic." 55th ISEF Abstracts. Science Service, Washington, D.C.	2004
<b>TRAVEL GRANTS</b>	University of Washington SISMID Tuition and Travel Scholarship (\$2,100)	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
	Pacific Northwest Women in Science Retreat Scholarship (\$120)	2016
	American Society for Microbiology Student Travel Grant (\$500)	2015
	American Society for Microbiology Research Capstone Grant (\$1,500)	2014
	NIH-NHGRI Genomic Research Travel and Lodging Grant (\$2,100)	2013
	NIH-NHGRI Genomic Research Conference Travel Grant [2x] (\$2,900)	2013
	NIH-NIGMS Bridges to Baccalaureate Conference Travel Grant (\$700)	2013
	Portland State AAA Conference Travel Grant (\$750)	2013
	Harvard CCDD Conference Travel Grant (\$850)	2013
	NIH-NIGMS Bridges to Baccalaureate Conference Travel Grant (\$1,250)	2012
	McNair Scholars Conference Travel Grant (\$500)	2012
<b>HONORS &amp; AWARDS</b>	PeerJ Open Access Ambassador, PeerJ	2018-2019
	Rackham Merit Fellow Certificate of Achievement, University of Michigan	2018
	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 <sup>nd</sup> 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
<b>CONFERENCE PRESENTATIONS</b>	<b>Millar JA,</b> Chanderraj R, Woods RJ, King AA. "Quantifying the transmission dynamics of hospital acquired VRE." 17 <sup>th</sup> Annual Michigan Epidemiology Conference. Ann Arbor, MI. March 23 <sup>rd</sup> .	2018
	<b>Millar JA,</b> 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 <sup>rd</sup> -27 <sup>th</sup> .	2017
	<b>Millar JA,</b> 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 <sup>st</sup> -5 <sup>th</sup> .	2017

<b>Millar JA</b> , Chen Y. “Machine learning techniques in cancer prognostic modeling and performance assessment.” Immunology and Evolution of Influenza Symposium. Emory, Atlanta, GA. May 25 <sup>th</sup> -26 <sup>th</sup> .	2017
<b>Millar JA</b> , 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 <sup>th</sup> -20 <sup>th</sup> .	2016
<b>Millar JA</b> , Raghavan R. “Pathogens residing within similar intracellular vacuoles elicit discordant host responses.” 1 <sup>st</sup> Festival of Genomics California. San Mateo, CA. November 3 <sup>rd</sup> -5 <sup>th</sup> .	2015
<b>Millar JA</b> , 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 <sup>st</sup> Pacific Northwest Quantitative Biology Meeting. Portland, OR. September 11 <sup>th</sup> .	2015
<b>Millar JA</b> , 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 <sup>th</sup> General Meeting of the American Society for Microbiology. New Orleans, LA. May 30 <sup>th</sup> -June 2 <sup>nd</sup> .	2015
<b>Millar JA</b> , Raghavan R. “A horizontally acquired tRNA facilitates <i>Coxiella burnetii</i> adaptation to an extreme environment.” 114 <sup>th</sup> General Meeting of the American Society for Microbiology. Boston, MA. May 17 <sup>th</sup> -20 <sup>th</sup> .	2014
<b>Millar JA</b> , McNulty SN, Zarlenga D, Mitreva M. “Transcriptional profiling of Ivermectin resistant <i>Cooperia punctata</i> using deep sequencing.” 53 <sup>rd</sup> Annual Meeting of the American Society for Cell Biology. New Orleans, LA. December 14 <sup>th</sup> -18 <sup>th</sup> .	2013
<b>Millar JA</b> , McNulty SN, Zarlenga D, Mitreva M. “Transcriptional profiling of Ivermectin resistant <i>Cooperia punctata</i> using deep sequencing.” 2 <sup>nd</sup> International Conference on Genomics in the Americas. Sacramento, CA. September 12 <sup>th</sup> -13 <sup>th</sup> .	2013
<b>Millar JA</b> , Ballhorn DJ. “Effect of mycorrhizal colonization and light limitation on growth and reproduction of lima bean ( <i>Phaseolus lunatus</i> L.)” 113 <sup>th</sup> General Meeting of the American Society for Microbiology. Denver, CO. May 18 <sup>th</sup> -21 <sup>st</sup> .	2013
<b>Millar JA</b> , Ballhorn DJ. “Effects of light limitation on legume-mycorrhizae interactions.” 12 <sup>th</sup> Annual Biomedical Research Conference for Minority Students. San Jose, CA. November 7 <sup>th</sup> -10 <sup>th</sup> .	2012
<b>Millar JA</b> , Ballhorn DJ. “Effects of light limitation on plant-rhizobia and plant-mycorrhiza interactions.” 20 <sup>th</sup> Annual Pacific NW McNair/EIP/GO-MAP Research Conference. University of Washington, Seattle, WA. May 17 <sup>th</sup> .	2012
<b>Millar JA</b> . “The SARS virus - Different methods of curbing the epidemic.” 55 <sup>th</sup> Intel International Science and Engineering Fair. Portland, OR. May 9 <sup>th</sup> -14 <sup>th</sup> .	2004

**CAMPUS & MISC  
PRESENTATIONS**

- Millar JA**, Chanderraj R, Woods RJ, King AA. “Quantifying the transmission dynamics of hospital acquired VRE.” Department of Computational Medicine and Bioinformatics 4<sup>th</sup> Annual Retreat. Frankenmuth, MI. September 14<sup>th</sup>-16<sup>th</sup>. 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 5<sup>th</sup> Annual Symposium. University of Michigan, Ann Arbor, MI. March 22<sup>nd</sup>. 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 31<sup>st</sup>. 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 3<sup>rd</sup> Annual Retreat. Oregon, OH. September 15<sup>th</sup>-17<sup>th</sup>. 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 16<sup>th</sup>. 2017
- Millar JA**, Chen Y. “Machine learning techniques in cancer prognostic modeling and performance assessment.” 6<sup>th</sup> Annual OHSU Research Week. Oregon Health Science University, Portland, OR. May 1<sup>st</sup>-3<sup>rd</sup>. 2017
- Millar JA**, Raghavan R. “A sewage microbiome is dominated by *Arcobacter cryaerophilus* that expresses multiple drug resistance and virulence genes.” 20<sup>th</sup> Annual Biology Alumni Night Symposium. Portland State University, Portland, OR. October 21<sup>st</sup>. 2016
- Millar JA**, Raghavan R. “A sewage microbiome is dominated by *Arcobacter cryaerophilus* that expresses multiple drug resistance and virulence genes.” 4<sup>th</sup> Annual Pacific Northwest Women in Science Retreat. Rockaway Beach, OR. July 8<sup>th</sup>-10<sup>th</sup>. 2016
- Millar JA**, Raghavan R. “A horizontally acquired tRNA facilitates *Coxiella burnetii* adaptation to an extreme environment.” Sigma Xi Columbia-Willamette Chapter Annual Meeting. Portland, OR. May 26<sup>th</sup>. 2016
- Millar JA**, Raghavan R. “Pathogens residing within similar intracellular vacuoles elicit discordant host responses.” 19<sup>th</sup> Annual Biology Alumni Night Symposium. Portland State University, Portland, OR. October 23<sup>th</sup>. 2015
- Millar JA**, Raghavan R. “Parallel adaptation of a bacterium and an eukaryote to an intracellular extreme environment.” 18<sup>th</sup> Annual Biology Alumni Night Symposium. Portland State University, Portland, OR. October 17<sup>th</sup>. 2014
- Millar JA**, McNulty SN, Zarlenga D, Mitreva M. “Transcriptional profiling of Ivermectin resistant *Cooperia punctata* using deep sequencing.” 7<sup>th</sup> Annual Opportunities in Genomic Research Undergraduate Scholars Closing Program. Washington University School of Medicine, St. Louis, MO. July 31<sup>st</sup>. 2013

<b>Millar JA</b> , Ballhorn DJ. "Effect of mycorrhizal colonization and light limitation on growth and reproduction of lima bean ( <i>Phaseolus lunatus</i> L.)." 9 <sup>th</sup> Annual Sigma Xi Columbia-Willamette Chapter Student Research Symposium. Portland State University, Portland, OR. April 12 <sup>th</sup> .	2013
<b>Millar JA</b> , Ballhorn DJ. "Effects of light limitation on plant-microbe interactions." 9 <sup>th</sup> Annual PSU Ronald E. McNair Scholars Program Summer Symposium. Portland State University, Portland, OR. August 15 <sup>th</sup> .	2012
<b>Millar JA</b> , Ballhorn DJ. "Effects of light limitation on plant-rhizobia and plant-mycorrhiza interactions." 9 <sup>th</sup> Annual PSU Undergraduate Research Conference. Portland State University, Portland, OR. May 23 <sup>rd</sup> .	2012
<b>Millar JA</b> , Kelley AL, Buckley BA. "Antibody testing for C/EBP $\delta$ in aquatic snails." Portland Bridges to Baccalaureate Annual Meeting. Portland State University, Portland, OR. October 15 <sup>th</sup> .	2010
<b>Millar JA</b> . "Galinstan: Useful applications of a eutectic alloy." 1 <sup>st</sup> Annual Better Living Through Chemistry in the 21 <sup>st</sup> Century. Portland Community College, Portland, OR. March, 10 <sup>th</sup> .	2007

**RESEARCH  
EXPERIENCE**

<b>NSF Graduate Research Fellow, UM RMF Fellow</b> , 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
<b>NSF Graduate Research Fellow, UM RMF Fellow</b> , University of Michigan Department of Microbiology & Immunology, Advisor: Dr. Kirschner Modeling <i>Mycobacterium tuberculosis</i> within-host infection and treatment.	2018-2019
<b>Graduate Research Assistant</b> , Oregon Health & Science University Department of Public Health & Preventive Medicine, Advisor: Dr. Chen Oncological prognostic modeling using machine learning techniques.	2016-2017
<b>PSU Laurels Graduate Scholar</b> , Portland State University Department of Biology, Advisor: Dr. Raghavan Pathogenic bacterial genome evolution and adaption to host niches.	2013-2017
<b>Graduate Research Assistant</b> , Portland State University Fariborz Maseeh Dept. of Mathematics & Statistics, Advisor: Dr. Tableman Experimental design and analysis of agriculture data.	2012-2017
<b>NIH-NHGRI Genomic Research Scholar</b> , 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
<b>Ronald E. McNair Scholar, PSU Urban Honors</b> , 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

	<b>Undergraduate Research Assistant</b> , Portland State University Department of Biology, Advisor: Dr. Yeh Diversity of <i>Staphylococcus</i> ssp. antibiotic resistance in public transit.	2011
	<b>NIH-NIGMS Bridges Scholar</b> , 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
	<b>Undergraduate Research Assistant</b> , Oregon Health & Science University Department of Cell & Developmental Biology, Advisor: Dr. Danilchik Furrow-specific endocytosis during cytokinesis in <i>Xenopus laevis</i> .	2002-2003
<b>MEDIA FEATURES</b>	“Stateside: Detroit hospital under investigation; coming out stories; politics in the classroom.” Michigan Radio. Radio interview. October 11 <sup>th</sup> .	2018
	“Second Annual LGBTQ Monologues event creates space for intersectional identities.” The Michigan Daily. 128(10):1A. October 12 <sup>th</sup> .	2018
	“The Spell of <i>Coxiella</i> .” Small Things Considered. Blog post. July 10 <sup>th</sup> .	2017
	“Living in the Stomach of a Cell.” This Week in Microbiology. Podcast. #155. June 28 <sup>th</sup> .	2017
	“Portland State graduate student Jess Millar wins NSF GRFP award.” Portland State University News. Website feature. May 16 <sup>th</sup> .	2016
	“Jess Millar: Honors success.” Portland State University News. Website feature. December 4 <sup>th</sup> .	2013
	“Germs on wheels.” PSU Vanguard. 66(4):4. July 19 <sup>th</sup> .	2011
	“Riding TriMet? Plenty of bugs could be sharing your seat.” The Oregonian. Front page article. July 14 <sup>th</sup> .	2011
	“Study: TriMet bus seats tested for bacteria.” KGW News. TV interview. July 14 <sup>th</sup> .	2011
<b>MENTORED STUDENTS</b>	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 &amp; 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
<b>TEACHING ACTIVITIES</b>	<b>Assistant Grader</b> , University of Michigan Department of Biology Principles of Animal Physiology (Win. '18)	2018
	<b>Guest Lecturer</b> , Oregon Health & Science University Department of Public Health & Preventive Medicine Categorical Data Analysis (Spr. '17)	2017
	<b>Guest Lecturer</b> , Portland State University McNair Scholars Program “Preparing for Grad School.” McNair Seminar (Spr. '16, Spr. '17)	2015-2017



	<p>“Funding Outside of McNair.” McNair Seminar (Spr. ’15, Spr. ’16, Spr. ’17)</p> <p>Department of Mathematics and Statistics Applied Stats for Business (Sum. ’17) Statistical Consulting (Spr. ’17)</p>	
	<p><b>Teaching Assistant</b>, Portland State University Department of Mathematics and Statistics Intro to Probability &amp; Statistics I (Win. ’15, Fall ’16, Spr. ’17) Intro to Probability &amp; Statistics II (Spr. ’15, Win. ’17) Intro to Probability &amp; Statistics for Business II (Fall ’14)</p>	2014-2017
	<p><b>Teaching Assistant</b>, Portland Community College Department of Mathematics Calculus I (Spr. ’13, Sum. ’14)</p>	2013-2014
<b>PROFESSIONAL SERVICES</b>	<p>Science Communicator – “Ask a Scientist.” Engaging Scientists in Policy and Advocacy, UM.</p> <p>Journal Reviewer – Environmental Science &amp; Technology</p> <p>Abstract Reviewer – ASM Microbe Conference</p> <p>Application Mentor – Office of National Scholarships and Fellowships, UM</p> <p>Panelist – “NSF GRF Workshop.” Program in Biomedical Sciences, UM</p> <p>Panelist – “Research Methodology.” McNair Scholars Program, PSU</p> <p>Judge – Intel Northwest Science Expo Regional Science Fair</p> <p>Panelist – “Options After Undergrad.” TRiO Student Support Services, PSU</p> <p>Committee Member – Portland State Student Educational Travel Committee</p> <p>Conference Volunteer – XXXII Scientific Committee on Antarctic Research</p> <p>Website Developer – Portland State Biology Professor (Dr. Yeh)</p>	<p>2018</p> <p>2018</p> <p>2018</p> <p>2017-2018</p> <p>2017-2018</p> <p>2013-2017</p> <p>2016</p> <p>2015</p> <p>2013-2014</p> <p>2012</p> <p>2011</p>
<b>UNIVERSITY SERVICE</b>	<p>Committee Member – Bioinformatics Website Committee, UM</p> <p>Student Host – Program in Biomedical Sciences Interview Weekend, UM</p> <p>Symposium Volunteer – LGBTQ Inclusion as Researchers &amp; in Research, UM</p> <p>Committee Member – Teach-in for Freedom, Democracy, and Diversity, UM</p> <p>Panelist – Student Life Professional Development Conference, UM</p> <p>Secretary – Biology Investigation and Outreach, PSU Chapter</p> <p>Statistics Tutor – Math/Stats Dept., PSU</p> <p>Computer Lab Assistant – Math/Stats Dept., PSU</p> <p>Volunteer – Portland State Reuse Room</p> <p>Planning Member – National Residence Hall Honorary, PSU Viking Chapter</p> <p>Tech Chair – Golden Key International Honour Society, PSU Chapter</p> <p>Computer Lab Assistant – Graphic Design Dept., PSU</p>	<p>2018-2019</p> <p>2018-2019</p> <p>2018</p> <p>2018</p> <p>2017</p> <p>2016-2017</p> <p>2015-2017</p> <p>2014-2017</p> <p>2013-2014</p> <p>2013-2014</p> <p>2013</p> <p>2011-2012</p>
<b>COMMUNITY SERVICE</b>	<p>Volunteer – Free Geek, Portland, OR</p> <p>Archives Assistant – City of Portland Archives and Records Center</p> <p>Assistant Docent – 3D Center of Art and Photography</p> <p>Lab Assistant – Red Cross, Portland, OR</p>	<p>2012-2013</p> <p>2010-2011</p> <p>2010</p> <p>2006-2008</p>
<b>SHORT COURSES</b>	<p><b>University of Washington</b> 10<sup>th</sup> Annual Summer Institute in Statistics and Modeling in Infectious Diseases.</p>	2018

	Seattle, WA. July 9 <sup>th</sup> -25 <sup>th</sup> . Simulation-based Inference for Epidemiological Dynamics Evolutionary Dynamics and Molecular Epidemiology of Viruses Spatial Statistics in Epidemiology and Public Health	
	<b>Duke University</b> Introduction to Programming in C Specialization. Coursera. Programming Fundamentals ( <i>in progress</i> ) Writing, Running, and Fixing Code in C ( <i>in progress</i> ) Pointers, Arrays, and Recursion ( <i>in progress</i> ) Interacting with the System and Managing Memory ( <i>in progress</i> )	2018
	<b>University of Michigan</b> 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> )	2016-2018
	<b>Emory University</b> 12 <sup>th</sup> Annual Summer School on Modeling Immunology. Atlanta, GA. May 21 <sup>st</sup> -24 <sup>th</sup> . Infectious Diseases, Immunology, and Within-Host Models Spatial Spread of Virus Infections and Immunity Using Agent-Based Models Pathogen Evolution, Selection, and Immunity	2017
	<b>Portland Community College</b> Introduction to Perl Programming. Community Education Online Learning. Perl Programming Level I	2012
<b>CONFERENCES, SEMINARS, &amp; WORKSHOPS ATTENDED</b>	Tools & Technology Seminar Series. University of Michigan, Ann Arbor, MI. Bioinformatics Student Research Hour. University of Michigan, Ann Arbor, MI. LGBTQ Inclusion as Researchers & in Research Symposium. University of Michigan, Ann Arbor, MI. September 6 <sup>th</sup> . Mentoring Others Results in Excellence Mentoring Plan Workshop. University of Michigan, Ann Arbor, MI. May 8 <sup>th</sup> . Mentorship and Professional / Personal Support Program. University of Michigan, Ann Arbor, MI. Microbiology Career Choices: What's Available and How to Succeed Workshop; American Society for Microbiology. New Orleans, LA. June 1 <sup>st</sup> . Lester Newman Seminar Series. Portland State University, Portland, OR. All-levels Career Development Workshop: Moving Forward in the Professional Public Health Field. Oregon Public Health Association. Portland OR. May 22 <sup>nd</sup> . Data After Dark - BD2K Data Science Workshop. Oregon Health Science University, Portland, OR. January 13 <sup>th</sup> -14 <sup>th</sup> . Maseeh Mathematics & Statistics Colloquium Series. Portland State University, Portland, OR. SIAM Student Chapter Seminar. Portland State University, Portland, OR. Microbiology Career Choices: What's Available and How to Succeed Workshop; American Society for Microbiology. Boston, MA. May 17 <sup>th</sup> .	2017-2019 2017-2019 2018 2018 2018 2017 2011-2017 2016 2016 2014-2016 2012-2016 2014

ASM Research Capstone Institute; American Society for Microbiology. Boston, MA. May 16 <sup>th</sup> -17 <sup>th</sup> .	2014
Studying Whole-Genome Microbial Epigenetics Workshop; American Society for Microbiology. Denver, CO. May 18 <sup>th</sup> .	2013
America's Next Top Infectious Disease Model: HIV and Influenza Conference; Center for Communicable Disease Dynamics. Chicago, IL. April 21 <sup>st</sup> -22 <sup>nd</sup> .	2013
10th Western Regional International Health Conference. Portland, OR. April 5 <sup>th</sup> -7 <sup>th</sup> .	2013
XXXII Scientific Committee on Antarctic Research Conference. Portland, OR. July 16 <sup>th</sup> -19 <sup>th</sup> .	2012

**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

**CITATION METRICS**

<b>ORCiD</b>	0000-0001-8945-3396
<b>ResearcherID</b>	J-6736-2014
<b>Citations</b>	93
<b>h-index</b>	7
<b>i10-index</b>	4
<b>Erdős number</b>	4 (Kirschner DE, van den Driessche P, Moon JW, Erdős P)

**TECHNICAL SKILLS**

<b>Computer Languages</b>	Shell script, Python, Perl, SQLite, LaTeX, HTML, CSS
<b>Statistical Software</b>	R, SAS, MATLAB, Minitab, Maple, SPSS
<b>Statistics/Machine Learning Techniques</b>	Logistic Regression, Classification Trees, Random Forrest, Boosting, SVM, Naïve Bayes, Bayesian Networks, LDA, QDA, KNN, K-means, EM algorithm, Survival analysis, ARIMA, Experimental design
<b>Bioinformatics Software</b>	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