

# Alexandra E. Purdy

Department of Biology  
Program in Biochemistry and Biophysics  
Amherst College  
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<http://www.apurdylab.org>

## Education

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<b>Ph.D. Scripps Institution of Oceanography, Univ. of California San Diego</b> in Marine Biology	2007
<b>B.S. The College of William and Mary</b> in Biology and Chemistry <i>Summa cum laude</i> with Highest Honors in Biology	2000

## Appointments and Research Experience

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<b>Assistant Professor, Amherst College</b> Department of Biology Program in Biochemistry and Biophysics	2012 – present 2016 – present
<b>Postdoctoral Fellow, Division of Infectious Disease, Boston Children's Hospital</b> Discovery of <i>Vibrio cholerae</i> genes contributing to colonization of an arthropod host Advisor: Paula Watnick	2008 – 2012
<b>Predoctoral Fellow, Scripps Institution of Oceanography, Univ. of California San Diego</b> Exploring the pan-genome of environmental <i>Vibrio cholerae</i> and uncovering novel toxin-like genes Advisor: Douglas Bartlett	2001 – 2007
<b>Research Assistant, The Jackson Laboratory</b>	2000 – 2001
<b>Honors Thesis, Department of Biology, The College of William and Mary</b>	1998 – 2000

## Grants, Awards, and Fellowships

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### Grant Support

National Science Foundation RUI: Collaborative Research: Architecture and evolution of a conserved bacterial regulatory pathway that influences host and microbe carbon metabolism. Lead PI: Alexandra E. Purdy      Co-PI: Josh Sharp, Northern Michigan University Total costs: \$523,187	2017 – 2020
National Institutes of Health Individual Ruth L. Kirschstein Postdoctoral Fellowship (F32)	2009 – 2011
National Institutes of Health Institutional Ruth L. Kirschstein Postdoctoral Fellowship (T32)	2008 – 2009
Howard Hughes Medical Institute Predoctoral Fellowship	2001 – 2006

### Awards and Additional Fellowship Support

Amherst LEADS Student-Athlete Leadership Certificate of Recognition	2017
Sigma Xi Full Membership	2013
Peterson Fellowship, Scripps Institution of Oceanography	2007
Claude ZoBell Fellowship, Scripps Institution of Oceanography	2001
Charlotte P. Mangum Prize for Research in Biology, William & Mary	2000
Highest Honors in Biology awarded for quality of honors thesis, William & Mary	2000
Phi Sigma Outstanding Biology Senior Award, William & Mary	2000
William & Mary Howard Hughes Medical Institute Science Education Student Research Grant	2000
Phi Beta Kappa	1999
Dean's Tuition Award, Sea Education Association, Woods Hole, MA	1998
Environmental Research and Policy Summer Research Fellowship, William & Mary	1998
James Monroe Scholar, William & Mary	1996 – 2000

01. **Purdy A**, L Case, M Duvall, M Overstrom-Coleman, N Monnier, A Chervovsky and T Golovkina. 2003. Unique resistance of I/LnJ mice to a retrovirus is due to sustained IFN- $\gamma$  dependent production of virus-neutralizing antibodies. *J Exp Med* 297:233–243.
02. **Purdy A**, F Rohwer, R Edwards, F Azam and DH Bartlett. 2005. A glimpse into the genome content of the *Vibrio cholerae* species through identification of genes present in environmental strains. *J Bacteriol* 187:2992-3001.
03. Valentine DL, M Kastner, GD Wardlaw, X Wang, **A Purdy** and DH Bartlett. 2005. Biogeochemical investigations of marine methane seeps, Hydrate Ridge, Oregon. *J Geophys Res* 110, G02005, doi:10.1029/2005JG000025.
04. Case LK, **A Purdy** and TV Golovkina. 2005. Molecular and cellular basis for the retrovirus resistance in I/LnJ mice. *J Immunology* 175:7543-7549.
05. Makri S, **AE Purdy**, D Bartlett and J Fierer. 2007. Pathogenicity of environmental isolates of *V. cholerae* in mice. *Microb Infect* 9:1351-1358.
06. Case LK, L Petell, L Yurkovestkiy, **A Purdy**, KJ Savage and TV Golovkina. 2008. Replication of beta- and gamma-retroviruses is restricted in I/LnJ mice via the same genetic mechanism. *J Virol* 82:1438-1447.
07. Jorgensen\* R, **AE Purdy\***, R Fieldhouse, M Kimber, DH Bartlett and AR Merrill. 2008. Cholix toxin, a novel ADP-ribosylating factor from *Vibrio cholerae*. *J Biol Chem* 283:10671-10678. \*These authors contributed equally.
08. **Purdy AE**, D Balch, ML Lizarraga-Partida, MS Islam, J Martinez-Urtaza, A Huq, RR Colwell and DH Bartlett. 2010. Diversity and distribution of cholix toxin, a novel ADP-ribosylating factor from *Vibrio cholerae*. *Environ Microbiol Rep* 2(1):198–207.
09. **Purdy AE** and PI Watnick. 2011. Spatially-selective colonization of the arthropod intestine through activation of *Vibrio cholerae* biofilm formation. *Proc Natl Acad Sci USA* 108:19737-19742
10. Wang Z, S Hang, **AE Purdy** and PI Watnick. 2013. Mutations in the IMD pathway and Mustard counter *Vibrio cholerae* suppression of intestinal stem cell division in *Drosophila*. *mBio* 4(3) e00337-13.
11. Hang S, **AE Purdy**, Z Wang, S Chang, WP Robins, JJ Mekalanos and PI Watnick. 2014. The acetate switch of an intestinal pathogen disrupts host insulin signaling and lipid metabolism. *Cell Host & Microbe* 16:592-604.
12. El-Bassoiony G, V Luizzi, D Nguyen, JG Stoffolano Jr. and **AE Purdy**. 2016. *Vibrio cholerae* laboratory infection of adult house fly *Musca domestica*. *Med Vet Entomol* 30:392-402.
13. Jacob K, A Rasmussen, P Tyler, MM Servos, M Sylla, C Prado, E Daniele, J Sharp and **AE Purdy**. 2017. Regulation of acetyl-CoA synthetase transcription by the CrbS/R two component system is conserved in genetically diverse environmental pathogens. *PLOS ONE* May.
14. Kamareddine L, ACN Wong, AS Vanhove, S Hang, **AE Purdy**, K Kierek-Pearson, JM Asara, A Ali, JG Morris Jr. and PI Watnick. 2018. Activation of *Vibrio cholerae* quorum sensing promotes survival of an arthropod host. *Nature Microbiology* 3:243-252.

Invited book chapter:

15. **Purdy AE**. 2018. "Fly models of *Vibrio cholerae* infection and colonization." *Methods in Molecular Biology*, special edition on *Vibrio cholerae*. Edited by Aleksandra Sikora. Humana Press: New York, NY.

Pending:

16. Liimatta K, E Flaherty, G Ro, DK Nguyen, C Prado, and **AE Purdy**. 2018. A putative acetylation system in *Vibrio cholerae* modulates virulence in arthropod hosts. Accepted for publication in *Applied and Environmental Microbiology*.

17. Flores Ramos S, S Nessen, A Mesfin, K Raines, S Wishloff, M Hauserman, MJ Mandel, and **AE Purdy**. The CrbS/R two-component system regulates the *Vibrio fischeri* acetate switch. Submitted. 2018.
18. Muzhingi I, C Prado, M Sylla, FF Diehl, DK Nguyen, MM Servos, S Flores Ramos and **AE Purdy**. Modulation of CrbS-dependent activation of the acetate switch in *Vibrio cholerae*. Minor revisions suggested; in revision for publication in *Journal of Bacteriology* 08/2018.

### **Training, Courses, Research Cruises and Internships**

NSF ADVANCE NIFP Workshop at Rice University, Houston, TX	2011
TIGR (now JCVI) Prokaryotic Annotation and Analysis Training Course, Rockville, MD	2006
Advanced Bacterial Genetics Course, Cold Spring Harbor Laboratory, NY	2003
Research cruise aboard R/V Atlantis: Hydrate Ridge and the Cascadia Margin	2002
Sea Education Association/Boston University Summer Semester, Woods Hole, MA	1999
Bermuda Biological Station for Research (now BIOS), summer research internship	1998

### **Research Seminars and Invited Talks**

*Presenting author in bold; Amherst College students are underlined*

#### Since arrival at Amherst College:

**Purdy AE**. Conserved aspects of acetate metabolism in *Vibrio* and *Pseudomonas*. Department of Biology, Northern Michigan University. Invited for Fall 2018.

**Purdy AE**. Bacterial regulatory networks controlling both host and microbial metabolism: a tale in two Vibrios. Biology Program, Bard College. Invited for September, 2018.

**Purdy AE**. Bacterial regulatory networks controlling acetate metabolism in pathogenic and symbiotic interactions. Biological Sciences Department, State University of New York Old Westbury. 2018.

**Purdy AE**. Bacterial regulatory networks controlling both host and microbial metabolism: a tale in two Vibrios. Department of Biology, Bowdoin College. 2018.

**Nessen S**, **S Flores-Ramos**, **K Raines**, **A Mesfin**, C Prado, MJ Mandel, and AE Purdy. Regulatory mechanisms affecting consumption of a short chain fatty acid that mediates symbiosis in *Vibrio fischeri*. American Society for Microbiology Conference on Vibrio2017: The Biology of Vibrios. Chicago, IL. 2017.

- *Sole talk presented by an undergraduate student at this international conference.*
- *Recipient of American Society for Microbiology Travel Award*

**Flores Ramos S**, **S Wishloff**, MJ Mandel, and AE Purdy. What's flipping the acetate switch? Looking for regulators of acetate uptake in the *Vibrio fischeri*/*Euprymna scolopes* symbiotic system. Pioneer Valley Microbiology Symposium. UMass Amherst. 2017.

- *One of two talks presented by undergraduate students at this regional conference.*

**Purdy AE**. Acetate as a key regulator of *Vibrio cholerae* interactions with the model host, *Drosophila melanogaster*. Department of Biology, Smith College. 2015.

**Purdy AE**. *Drosophila* as a model organism to study the genetic basis of *Vibrio cholerae* interactions with environmental hosts. Department of Microbiology, University of Massachusetts Amherst. 2013.

#### Prior to Amherst College:

**Purdy AE**. Biofilms contribute to *Vibrio cholerae* colonization of arthropods. Harvard Medical School Department of Microbiology Research-in-Progress "Monday Talks" Series. 2010.

**Purdy AE**. Fly fishing for virulence genes: The search for genes contributing to *Vibrio cholerae* virulence in *Drosophila melanogaster*. Children's Hospital Boston Division of Infectious Disease. 2010.

**Purdy AE**, R Fieldhouse, AR Merrill, and DH Bartlett. Discovery of a novel toxin in *Vibrio cholerae*. San Diego Microbiology Group Annual Meeting. 2007.

**Purdy AE**, R Fieldhouse, D White, AR Merrill, and DH Bartlett. Description of a novel eukaryotic specific ADP-ribosylating toxin present in environmental *Vibrio cholerae*: A role in survival in aquatic ecosystems? International Symposium on Microbial Ecology (ISME-11). 2006.

**Purdy A**, M Miller, S Makri, G Schoolnik, J Fierer, and DH Bartlett. Genomic variation, novel toxin-like genes, and virulence properties of environmental strains of *Vibrio cholerae* from southern California. International Symposium on Microbial Ecology (ISME-10). 2004.

**Purdy A**, F Rohwer, R Edwards, F Azam and DH Bartlett. Suppressive subtractive hybridization studies reveal additional loci present in environmental *Vibrio cholerae*. West Coast Bacterial Physiologists Meeting, Asilomar Conference Center. 2003.

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**Conference Abstracts/Poster Presentations**      *Presenting author in bold; Amherst College students are underlined*

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Since arrival at Amherst College:

Nessen S, S Flores Ramos, K Raines, A Mesfin, S Wishloff, C Prado, MJ Mandel, and **AE Purdy**. 2018. *Vibrio fischeri* regulators controlling consumption of a symbiosis-determining metabolite. Gordon Research Conference on the Microbial Stress Response. Mount Holyoke College. *Accepted*.

**Muzhingi I**, C Prado, F Diehl, and AE Purdy. 2018. Regulatory domains in the hybrid sensor kinase CrbS modulate direct activation of acetyl-CoA synthetase transcription in the pathogen *Vibrio cholerae*. Dartmouth College Microbiology & Molecular Pathogenesis Program Retreat.

Flores Ramos S, S Nessen, M Mandel, and **AE Purdy**. 2018. Regulatory mechanisms affecting consumption of a short chain fatty acid that mediates symbiosis in *Vibrio fischeri*. Dartmouth College Microbiology & Molecular Pathogenesis Program Retreat.

**Mesfin A**, **K Raines**, **S Wishloff**, C Prado, M Mandel and A Purdy. 2018. Investigating genetic regulation of acetyl-CoA synthetase in *Vibrio fischeri*. Pioneer Valley Microbiology Symposium. UMass Amherst.

**Muzhingi I**, C Prado, F Diehl, and AE Purdy. 2018. Regulatory domains in the hybrid sensor kinase CrbS modulate direct activation of acetyl-CoA synthetase transcription in the pathogen *Vibrio cholerae*. Pioneer Valley Microbiology Symposium. UMass Amherst.

Flores Ramos S, **S Nessen**, M Mandel, and A Purdy. 2018. Regulatory mechanisms affecting consumption of a short chain fatty acid that mediates symbiosis in *V. fischeri*. Pioneer Valley Microbiology Symposium. UMass Amherst.

**Muzhingi I**, C Prado, F Diehl, and AE Purdy. 2017. Regulatory domains in the hybrid sensor kinase CrbS modulate direct activation of acetyl-CoA synthetase transcription in the pathogen *Vibrio cholerae*. American Society for Microbiology Conference on Vibrio2017: The Biology of Vibrios. Chicago, IL.

- Won "Best Poster for Omics and Regulation" amongst all graduate student posters.

Liimatta K, E Flaherty, G Ro, C Prado, and **AE Purdy**. 2017. Protein acetylation alters metabolite-dependent virulence of *Vibrio cholerae* in a *Drosophila* model of infection. American Society for Microbiology Conference on Vibrio2017: The Biology of Vibrios. Chicago, IL.

**Flores Ramos S**, S Wishloff, M Mandel, and AE Purdy. 2017. What's flipping the acetate switch? Looking for regulators of acetate uptake in the *Vibrio fischeri/Euprymna scolopes* symbiotic system. American Society for Microbiology Microbe. New Orleans, LA.

**Nguyen D** and AE Purdy. 2017. Studying regulation of a virulence factor in *Vibrio cholerae* using genetic reporter assays and Hybridization Chain Reaction–Fluorescent *in situ* Hybridization (HCR-FISH) to label bacterial mRNA in *Drosophila*. Pioneer Valley Microbiology Symposium. UMass Amherst.

Flaherty E, K Liimatta, and **AE Purdy**. 2017. Regulation of acetyl-CoA synthetase by acetylation in *Vibrio cholerae*. Pioneer Valley Microbiology Symposium. UMass Amherst.

**Prado C**, J Kim, and AE Purdy. 2017. Defining the two component signal transduction pathway that activates acetyl-CoA synthase expression in the pathogen *V. cholerae*. Pioneer Valley Microbiology Symposium. UMass Amherst.

- Liimatta K** and AE Purdy. 2016. Post-translational modification by acetylation regulates *Vibrio cholerae* virulence in a *Drosophila melanogaster* model of infection. American Society for Microbiology Microbe. Boston, MA.
- Sylla M, P Tyler, M Cesinger, F Diehl, M Servos, A Rasmussen, E Daniele, and AE Purdy.** 2016. Characterizing signaling pathways that control *Vibrio cholerae* virulence in a *Drosophila* model of infection through manipulation of a shared metabolite. Dartmouth College Microbiology & Molecular Pathogenesis Program Retreat.
- Liimatta K** and AE Purdy. 2016. Regulation of *Vibrio cholerae* virulence in *Drosophila melanogaster* via post-translational modification of a key enzyme involved in central metabolism. Pioneer Valley Microbiology Symposium. UMass Amherst.
- Sylla M, P Tyler, M Cesinger, F Diehl, M Servos, A Rasmussen, E Daniele, and AE Purdy.** 2016. Characterizing signaling pathways that control *Vibrio cholerae* virulence in a *Drosophila* model of infection through manipulation of a shared metabolite. Pioneer Valley Microbiology Symposium. UMass Amherst.
- Servos\* M, P Tyler\*, M Sylla\*, and A Rasmussen and AE Purdy.** 2015. Investigating the regulation of host-microbe interactions mediated by the *Vibrio cholerae* acetate switch. 49<sup>th</sup> U.S.-Japan Conference on Cholera and Other Enteric Bacterial Infections. Gainesville, FL. \*These authors contributed equally.
- Purdy AE, WP Robins, A Rasmussen and PI Watnick.** 2014. A conserved two component phosphorelay system mediates virulence of *Vibrio cholerae* in a *Drosophila* model of infection. 114<sup>th</sup> General Meeting of the American Society for Microbiology. Boston, MA.
- Jacob KM, M Sylla, A Purdy and JS Sharp.** 2014. Deletion of a conserved two-component system in *Pseudomonas entomophila* results in altered pigment production and reduced virulence in a *Drosophila* model of infection. 114<sup>th</sup> General Meeting of the American Society for Microbiology. Boston, MA.
- Jacob K, A Purdy and JS Sharp.** 2013. Gene regulation by a novel two component system in *Pseudomonas entomophila*. Michigan Branch of the American Society of Microbiology Fall Meeting.

Prior to Amherst College:

- Purdy AE, S Chang and PI Watnick.** 2011. *Vibrio cholerae* colonization of the arthropod intestine requires activation of biofilm formation. Vibrio2011. Santiago de Compostela, Spain.
- Purdy AE, S Chang and PI Watnick.** 2011. Spatially-selective colonization of the arthropod intestine through activation of *Vibrio cholerae* biofilm formation. Gordon Research Conference on Microbial Adhesion. Newport, RI.
- Purdy AE, S Chang and PI Watnick.** 2011. Biofilms contribute to *Vibrio cholerae* colonization of arthropods. Boston Bacterial Meeting. Harvard University.
- Purdy AE, S Chang, C Capitolin and PI Watnick.** 2010. *Drosophila* as a model of cholera: Identification of *Vibrio cholerae* genes important for virulence in *Drosophila melanogaster*. *Drosophila* Research Conference. Washington, D.C.
- Berkey CD, AE Purdy, N Blow and PI Watnick.** 2009. *Vibrio cholerae* virulence in *Drosophila melanogaster*: random screens reveal host and bacterial factors affecting pathogenesis. U.S.-Japan Cooperative Medical Science Program 13<sup>th</sup> International Conference on Emerging Infectious Diseases (EID) in the Pacific Rim – Focused on Enteric Diseases. Kolkata, India.
- Purdy AE, D Balch and DH Bartlett.** 2008. Diversity and distribution of cholix toxin, a novel ADP ribosylating toxin present within the *Vibrio cholerae* pan-species genome. 108<sup>th</sup> General Meeting of the American Society for Microbiology. Boston, MA.
- Purdy AE, F Rohwer, R Fieldhouse, AR Merrill and DH Bartlett.** 2006. A subtractive hybridization study of *Vibrio cholerae* environmental strains reveals the presence of a novel toxin-like enzyme with ADP-ribosylation activity. Metagenomics. San Diego, CA.
- Purdy AE and DH Bartlett.** 2004. Novel toxin-like genes in environmental strains of *Vibrio cholerae* from southern California. 104<sup>th</sup> General Meeting of American Society for Microbiology. New Orleans, LA.
- Purdy AE, F Rohwer, R Edwards, F Azam and DH Bartlett.** 2003. Suppressive subtractive hybridization studies reveal additional loci present in environmental *Vibrio cholerae*. 103<sup>rd</sup> General Meeting of the American Society for Microbiology. Washington, D.C.

## Teaching

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<b>Amherst College</b>	<b>Department of Biology, Assistant Professor</b>	Year (20-) & Semester
	<i>Organized by course, with iterations and semester provided:</i>	Fall (F) or Spring (S)
<b>Biology 110</b>	Contagion [ <i>New course for non-science majors</i> ]	13S, 14S, 17F
<b>Biology 191</b>	Molecules, Genes and Cells [ <i>Intro course for majors/premed students</i> ]	14F, 16F, 17F
<b>Biology 271</b>	Microbiology with Laboratory [ <i>Advanced course with lab</i> ] <i>Lab includes major independent research component</i>	12F, 13F, 15S, 17S, 18S
<b>Biology 270</b>	Microbiology [ <i>Identical syllabus as Biol-271 without lab</i> ]	18S
<b>Biology 390</b>	Special Topics in Biology: Medical Writing	17F
<b>Biology 390</b>	Special Topics in Biology: Biological Effects of Ocean Acidification	18S
<b>Biology 414</b>	Seminar in Microbiology: Host-Microbe Interactions	14S
<b>Biology 498/9</b>	Honors in Biology	12F – 18S
<b>Neur 498/9</b>	Honors in Neurobiology	14F – 15S
<b>BCBP 498/9</b>	Honors in Biochemistry/Biophysics	17F – 18S
		Year (20-) & Semester
<b>Bard College, Faculty Member of the Citizen Science Program</b>		Fall (F) or Spring (S)
<b>CitSci</b>	Citizen Science [3-week course on science literacy and infectious disease]	11 & 12 January
<b>Simmons College, Department of Biology, Lecturer</b>		
<b>Biology 123</b>	Principles of Microbiology, Laboratory instructor	10F
<b>Biology 221</b>	Microbiology, Guest lecturer	10S
<b>University of California, San Diego Department of Biology</b>		
<b>BIMM120</b>	Bacteriology, Graduate student teaching assistant	04F, 06F

## Research Mentorship

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### Honors Thesis Students, Amherst College

- 14 honors thesis students mentored 2012 - 2019
- Of those who graduated >2 years ago, 4/7 are pursuing PhDs (MIT, Stanford, Washington, and Yale), 2/7 are pursuing MDs (Dartmouth and Harvard), 2/7 won National Science Foundation Graduate Research Fellowships

### Heejin (Gabby) Ro '19 (Biology)

Regulation of acetate metabolism in *Vibrio fischeri*: a role for catabolite repression?

### Emily Flaherty '19 (Chemistry)

ChIP-Seq to analyze the evolution of the CrbR regulon in *Vibrio cholerae* and *Pseudomonas*

### Elisa Bello '19 (Biochemistry and Biophysics)

Host-specific signals that modulate CrbSR-dependent gene expression in *Vibrio cholerae*

### Sarah Nessen '18 (Biology)

"Integrating nutrient and quorum-sensing regulation of the *Vibrio fischeri* acetate switch"

### Itai Muzhingi '18 (Biochemistry and Biophysics) Recipient of the Best Thesis in Biochemistry/Biophysics Prize

"Dissecting the regulation and environment-specific expression of acetyl-CoA synthetase in *V. cholerae* with qRT-PCR"

### Stephany Flores Ramos '17 (Biology)

"What's flipping the switch? Investigating regulators of acetate uptake in the *Vibrio fischeri*-*Euprymna scolopes* symbiotic system."

### Duy Nguyen '17 (Biology)

"Studying regulation of a virulence factor in *Vibrio cholerae* using genetic reporter assays and hybridization chain reaction-fluorescent *in situ* hybridization (HCR-FISH) to label bacterial mRNA in *Drosophila*."

### Kalle Liimatta '16 (Biology)

"Modulation of *Vibrio cholerae* acetate metabolism and virulence in *Drosophila melanogaster* via post-translational modification."

**Mariame Sylla '15** (Neuroscience) *Co-recipient of Best Thesis in Neuroscience Prize*  
“Investigating the catabolite-mediated regulation of acetyl-CoA synthase and the acetate switch in *Vibrio cholerae*.”

**Monica Cesinger '15** (Biology)  
“Feeding the quorum: An examination of cell-to-cell communication and metabolism in *Vibrio cholerae*.”

**Frances Diehl '15** (Biology)  
“Molecular signaling mechanisms of the sensor kinase CrbS in *Vibrio cholerae*.”

**Mariah Servos '14** (Biology)  
“Investigating the effect of the acetate switch on *Vibrio cholerae* virulence in the model host *Drosophila melanogaster*.”

**Paul Tyler '14** (Biology) *Co-recipient of Oscar E. Schotté Best Thesis Prize in Biology*  
“Investigating CrbS-mediated signaling in two non-O1/O139 strains of *Vibrio cholerae*.”

**Anna Rasmussen '13** (Biology)  
“Investigating the role of a two component pathway in two non-pathogenic strains of *Vibrio cholerae* using *Drosophila melanogaster* as a model host.”

### **Research Assistants and Summer Research Fellows, Amherst College**

Donna Roscoe '21	Research Assistant	2018 – present
Rachel Seifert '19	Research Assistant	2017 – 2018
Heejin (Gabby) Ro '19	Research Assistant	2017 – present
Kyra Raines '20	Summer Undergrad Research Fellow/Research Assistant	2017 – present
Abigail Mesfin '20	Summer Undergrad Research Fellow/Research Assistant	2017 – present
SabriAnan Micha '19	Research Assistant	2016 – 2017
Angelika Hirsch '19	Research Assistant	2016 – 2017
Sarah Wishloff '19	Research Assistant	2016 – present
Itai Muzhingi '18	Research Assistant	2016 – 2017
Emily Flaherty '19	Summer Undergrad Research Fellow/Research Assistant	2016 – 2017
Jenny Kim '19	Research Assistant	2016 – 2017
Duy Nguyen '17	January Interterm Researcher	2016
Victoria Luizzi '17	January Interterm Researcher	2016
Stephany Flores Ramos '17	Summer Undergrad Research Fellow/Research Assistant	2015 – 2016
Azka Javaid '17	Research Assistant	2014 – 2015
Kalle Liimatta '16	Summer Undergrad Research Fellow/Research Assistant	2014 – 2015
Lucy Xu '14	Research Assistant	2013 – 2014
Catherine Choi '15	Summer Academic Intern	2013
John Kim '15	Summer Academic Intern	2013
Mariame Sylla '15	HHMI Summer Research Fellow/Research Assistant	2012 – 2014

### **Boston Children's Hospital**

Niroshe Seratne	Harvard Medical School, rotation graduate student	2010
Cindy Capitolin	University of Massachusetts Boston student	2009
Sarah Chang	Research Assistant	2008 - 2010

## **Memberships and Service to the Community**

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### **Professional Memberships**

American Society for Microbiology	2001 – present
Association for Women in Science	2011 – 2012; 2015 – present
Faculty of 1000 Associate Member	2011 – 2012

### **Reviewer for Journals**

Scientific Reports; PLOS ONE; Infection and Immunity; Environmental Microbiology Reports;  
Molecular Microbiology; Frontiers in Microbiology; Journal of Visualized Experiments (JoVE)

## **Institutional Service at Amherst College and The Five College Consortium**

Faculty Escort for Amherst College Honorary Degree Recipient Dr. Philip Landrigan	2018
First Year Seminar May Workshop Planning Committee	2018
Advisor in the Enhanced Advising for Transfer Students Program	2017 – present
Five College Coastal and Marine Sciences Program Steering Committee	2017 – present
Being Human in STEM Faculty Advisory Group	2016 – present
Five College Culture, Health, and Science Certificate Program Steering Committee	2016 – present
First Year Seminar Committee	2016 – present
Association for Women in Science Student Peer-Mentoring Program Faculty Leader	2016 – present
Association for Women in Science Amherst College Chapter Board Member	2015 – present
Amherst College Institutional Biosafety Committee	2013 – present
Orientation and College Advisor	2013 – 2015; 2016 – present
Health Professions Committee	2013 – 2015
Search Committees for Biology Personnel (Faculty and Staff), Dept. of Biology	2012 – 2014; 2017 – 2018
3+4 Faculty and Student Liason Committee, Dept. of Biology	2012 – 2015; 2017 – present

## **Outreach and Community Service at Amherst College and Beyond Campus**

Invited speaker, Amherst College Faculty Colloquium “Listening to our microbial partners: lessons from bacterial pathogens and beneficial symbionts.”	Invited for Fall 2018
Invited panelist, Panel on Scientific Communication for the Summer Undergraduate Research Fellow Program, organized by the Amherst College Writing Center	2018 July; 2017 July
Invited speaker, Amherst College Women’s and Gender Center “The F Word: No apologies” monthly event during which feminists on campus share stories of growth and success	Invited for Spring 2018; rescheduled
Invited speaker, Amherst College Teaching and Learning Collaborative “Food for Thought” Lunch Series: “Tales from the front: Enhancing the Learning Environment of Large Introductory STEM Courses with Team-Based Learning” <i>with Caroline Goutte, Amherst College</i>	2018 April
Faculty mentor for elementary school outreach student group for Being Human in STEM, as part of Broader Impacts for recent National Science Foundation grant	2017 Sept - present
Invited speaker, Amherst College Teaching and Learning Collaborative Course Design Workshop on Group Learning <i>with Caroline Goutte, Amherst College</i>	2017 Jan
Interviewed for article on probiotics, appearing in the <i>Daily Hampshire Gazette</i> on 9/30/16	2016 July
Invited panelist, Amherst College Diversity Open House, “Introduction to the Liberal Arts”	2016 Sept
Invited speaker, Summer Undergraduate Research Fellowship Program at Amherst	2016 July
Invited speaker, Grand Rounds, Baystate Hospital, Springfield, MA, “What is Zika virus?” <i>with Andy Anderson, Amherst College and Lynne Morgan, Mount Holyoke College</i>	2016 June
Invited panelist, Project Salud, Amherst College “What is Zika virus?” <i>with Andy Anderson, Amherst College and Lynne Morgan, Mount Holyoke College</i>	2016 April
Invited panelist, Boston Children’s Hospital Postdoctoral Association “Careers in Teaching and Research at Undergraduate Institutions”	2016 Feb
Invited discussion leader on Ebola outbreak, Public Health Collaborative, Amherst College	2014 Sept
Invited discussion leader on cholera, GlobeMed, Amherst College	2013 Dec
Invited speaker, Howard Hughes Medical Institute Summer Research Program at Amherst	2013 July
Invited speaker, Howard Hughes Medical Institute High School Teachers Program at Amherst	2012 July
Science Night Out, Bard College Citizen Science Program	2011
Harvard Microbial Sciences Initiative Multitalented Microbes Outreach Event Microbial Marketplace: Marine Microbes	2009

Scripps Institution of Oceanography Open House	2003
Acadia National Park, Interpretive Division, AmeriCorps summer internship	2000

**Speakers and Visitors Hosted on Campus**

Vaughn Cooper, Department of Microbiology & Molecular Genetics, University of Pittsburgh	2018 Feb
Stefan Pukatzki, Department of Immunology & Microbiology, University of Colorado Denver	2017 April
Jason Harris, Mass General Hospital, Harvard Medical School	rescheduled
Amy Vollmer, Department of Biology, Swarthmore College	2016 Dec
Katherine Lemon, Forsyth Institute, Harvard Medical School	2016 Feb
Peter Chien, Department of Biochemistry and Molecular Biology, UMass-Amherst	2015 Nov
Amy Hitchcock Camp, Department of Biology, Mount Holyoke College	2014 Feb
Erik Zettler, Sea Education Association-Woods Hole	2013 Oct