

MELISSA H. PESPENI

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EDUCATION

2010 Ph.D., Biology, Stanford University
2002 B.S., Ecology, Behavior & Evolution, University of California, San Diego
2002 B.A., Critical Gender Studies, University of California, San Diego

PROFESSIONAL EXPERIENCE

2014-now Assistant Professor, Department of Biology, University of Vermont
2011-2014 National Science Foundation Postdoctoral Fellow in Biology, Indiana University
2010-2011 National Science Foundation-funded Postdoctoral Fellow, Stanford University
2006-2008 National Science Foundation Graduate Research Fellow, Stanford University
2002-2005 Research Scientist, University of California, San Francisco
2001-2002 Ronald E. McNair Fellow, University of California, San Diego

GRANTS & FELLOWSHIPS

2017-2022 National Science Foundation, “NRT: Quantitative & Evolutionary STEM Training (QuEST): An Integrative Training Program for Versatile STEM Professionals to Solve Environmental and Global Health Problems”, Principal Investigator, \$3,000,000

2016-2019 National Science Foundation, “Collaborative Research: Transgenerational phenotypic and genomic responses of marine copepods to the interactive effects of temperature and CO₂”, Principal Investigator (Collaborative with U. Conn.), \$886,917 total, \$377,233 to UVM

2016-2017 National Science Foundation, “RAPID: Investigation of natural selection and host-microbiome-virome interactions in an unprecedented and ongoing marine epidemic”, Principal Investigator, \$196,449 – in no cost extension through 2018

2013-2014 California State University Faculty Support Grant, “Environmental genomics in Oysters”, co-Principal Investigator with PI Tyler Evans, CSU East Bay, \$5,000

2011-2014 National Science Foundation, Postdoctoral Fellowship in Biology, \$189,000

2011-2014 National Institutes of Health, National Research Service Award (NRSA) Post-doctoral Fellowship, withdrew to accept NSF Postdoctoral Fellowship

2006-2008 National Science Foundation, Graduate Research Fellowship, \$123,000

2004 National Institutes of Health, Minority Grant, \$64,000

2003 Department of Surgery Research Grant, University of California, San Francisco, \$18,000

2001-2002 Ronald E. McNair Fellow, University of California, San Diego, \$5,500

Pending:

2017 National Science Foundation, IOS, Invited full proposal, “Genetic, epigenetic, and physiological mechanisms of resilience to ocean acidification in two sea urchin species”, Principal Investigator

HONORS & AWARDS

2016	Graduate Student Senate <i>Excellence in Teaching</i> Award Nomination, UVM
2015	Early Career Travel Award, Association for the Sciences of Limnology and Oceanography (\$500)
2013	Selected participant, National Science Foundation Workshop on Writing and Productivity for Young Investigators, Pembroke, VA
2009	Best Student Paper, Honorable mention, Western Society of Naturalists
2008	Jane Miller Scholars Award (\$1000)
2004	Graduate Student Highlights Poster Discussion, FASEB Experimental Biology

PUBLICATIONS

Journal articles:

22. **Pespeni, M.H.**, Ladner, J.T. and A. P. Moczek. (2017) Signals of selection in conditionally expressed genes in the diversification of three horned beetle species. *Journal of Evolutionary Biology*, 30:9, 1644-1657.
21. Evans, T. G. *, **Pespeni, M.H.** *, G. E. Hofmann, S. R. Palumbi, E. Sanford. (2017) Transcriptomic responses to seawater acidification among sea urchin populations inhabiting a natural pH mosaic. *Molecular Ecology*, DOI: 10.1111/mec.14038. * Equal contributions.
20. Lloyd, M., Makukhov, A. and **Pespeni, M.H.** (2016) Loss of genetic diversity as a consequence of selection in response to high pCO_2 . *Evolutionary Applications*, 9:9, 1124-1132.
19. De Wit, P. *, **Pespeni, M.H.** *, & Palumbi, S. R. (2015) SNP genotyping and population genomics from expressed sequences—current advances and future possibilities. *Molecular ecology*, 24(10), 2310-2323. * Equal contributions.
18. Evans, T. G., J. L. Padilla-Gamiño, M. W. Kelly, **Pespeni, M.H.**, F. Chan, B. A. Menge, B. Gaylord, T. M. Hill, A. D. Russell, S. R. Palumbi, E. Sanford, G. E. Hofmann. (2015) Ocean acidification research in the ‘post-genomic’ era: roadmaps from the purple sea urchin *Strongylocentrotus purpuratus*. *Comparative Biochemistry and Physiology, Part B.*, 185:33-42.
17. Kijimoto, T., E.C. Snell-Rood, **Pespeni, M.H.**, G. Rocha, K. Kafadar, A.P. Moczek. (2014) The nutritionally responsive transcriptome of the polyphenic beetle *Onthophagus taurus* and the importance of sexual dimorphism and body region. *Proceedings of the Royal Society, B.*, 281:1797, 2014-2084.
16. **Pespeni, M.H.**, F. Chan, B. A. Menge, S. R. Palumbi. (2013) Signs of adaptation to local pH conditions across an environmental mosaic in the California Current Ecosystem. *Integrative and Comparative Biology*, 53:5, 857-870.
15. **Pespeni, M.H.**, E. Sanford, B. Gaylord, T. M. Hill, J. D. Hosfelt, H. Jaris, M. LaVigne, E. Lenz, A. D. Russell, M. K. Young, and S. R. Palumbi. (2013) Evolutionary change during experimental ocean acidification. *Proceedings of the National Academy of Sciences*, 110:17, 6937-6942.
[Press coverage by *Nature*, *Scientific American*, *New Scientist*, *Mother Jones*, *Science News for Kids*, and more.]
14. **Pespeni, M.H.** and S. R. Palumbi. (2013) Signals of selection in outlier loci in a widely dispersing species across an environmental mosaic. *Molecular Ecology*, 22:13, 3580-3597.

13. **Pespeni, M.H.**, B. Barney and S. R. Palumbi. (2013) Differences in the regulation of growth and biomineralization genes revealed through long-term common-garden acclimation and experimental genomics in the purple sea urchin. *Evolution*, 67:7, 1901-1914.
12. Kijimoto, T.,* **Pespeni, M.H.**,* O. Beckers,* and A. P. Moczek. (2012) Beetle horns and horned beetles: emerging models in developmental evolution and ecology. *WIREs Developmental Biology*, 2:3, 405-418. * Equal contributions.
11. De Wit, P.,* **Pespeni, M.H.**,* J. T. Ladner, D. J. Barshis, F. Seneca, H. Jaris, N. Overgaard Therkildsen, M. Morikawa, and S. R. Palumbi. (2012) The Simple Fool's Guide to population genomics: Gene expression and SNP data analysis in the age of high-throughput sequencing. *Molecular Ecology Resources*, 12, 1058-1067. * Equal contributions.
10. **Pespeni, M.H.**, D. A. Garfield, M. K. Manier, and S. R. Palumbi. (2012) Genome-wide polymorphisms show unexpected targets of natural selection. *Proceedings of the Royal Society, B.*, 279:1732, 1412-1420.
9. **Pespeni, M.H.**, T. A. Oliver, M. K. Manier, and S. R. Palumbi. (2010) Restriction Site Tiling Analysis: accurate discovery and quantitative genotyping of genome-wide polymorphisms using nucleotide arrays. *Genome Biology*, 11:R44.
8. Woodson, C. B., D. I. Eerkes-Medrano, A. Flores-Morales, M.M. Foley, S.K. Henkel, M. Hessing-Lewis, D. Jacinto, L. Needles, M.T. Nishizaki, J. O'Leary, C.E. Ostrander, **Pespeni, M.H.**, K.B. Schwager, J.A. Tyburczy, K.A. Weersing, A.R. Kirincich, J.A. Barth, M.A. McManus, L. Washburn. (2007) Local diurnal upwelling driven by sea breezes in northern Monterey Bay. *Continental Shelf Research*, 27:18, 2289-2302.
7. **Pespeni, M.H.**, M. Hodnett, K. S. Abayasiriwardana, J. Roux, M. Howard, V. C. Broaddus and J.F. Pittet. (2007) Sensitization of mesothelioma cells to tumor necrosis factor-related apoptosis-inducing ligand-induced apoptosis by heat stress via the inhibition of the 3-phosphoinositide-dependent kinase 1/Akt pathway. *Cancer Research*, 67, 2865-71.
6. Godzich, M., M. Hodnett, J. A. Frank, G. Su, **Pespeni, M.H.**, A. Angel, M. B. Howard, M. A. Matthay and J. F. Pittet. (2006) Activation of the stress protein response prevents the development of pulmonary edema by inhibiting VEGF cell signaling in a model of lung ischemia-reperfusion injury in rats. *The FASEB Journal*, 20, 1519-1521.
5. Roux, J., H. Kawakatsu, B. Gartland, **Pespeni, M.H.**, D. Sheppard, M.A. Matthay, C. Canessa, J.F. Pittet. (2005) Interleukin-1b decreases expression of the epithelial sodium channel aENaC in lung epithelial cells via a p38 MAP kinase-dependent signaling pathway. *Journal of Biological Chemistry*, 280, 18579-89.
4. **Pespeni, M.H.**, R.C. Mackersie, H. Lee, D. Morabito, M. Hodnett, M. Howard, and J.F. Pittet. (2005) Serum levels of Hsp60 measured early after injury correlate with the development of acute lung injury following severe trauma. *Journal of Surgical Research*, 126, 41-7.
3. **Pespeni, M.H.**, M. Hodnett, and J.F. Pittet. (2005) In vivo stress preconditioning. *Methods*, 35, 158-64.
2. Pittet, J.F.,* H. Lee,* **Pespeni, M.H.**,* A. O'Mahony, J. Roux, and W.J. Welch. (2004) Stress-induced inhibition of the NF- κ B signaling pathway results from the insolubilization of the I κ K complex following its dissociation from Hsp90. *Journal of Immunology*, 174, 384-94. * Equal contributions.
1. Lee, H.,* **Pespeni, M.H.**,* J. Roux, P.A. Dennery, M.A. Matthay, and J.F. Pittet. (2004) HO-1 induction restores c-AMP-dependent lung epithelial fluid transport following severe hemorrhage in rats. *The FASEB Journal*, 19, 287-9. * Equal contributions.

Refereed book chapters:

1. Moczek, A.P., Kijimoto, T., Snell-Rood, E., Rocha, G., **Pespeni, M.H.**, and Kafadar, K. (2014) Evolutionary and ecological genomics of developmental plasticity: novel approaches and first insights from the study of horned beetles. In: Ecological Genomics; edited by C. Landry and N. Aubin-Horth. Springer Verlag, Berlin, 127-148.

Manuscripts submitted, in revision, or *in prep*:

1. Lloyd, M.M. and **Pespeni, M.H.** (*submitted*) Microbiome shifts with onset and progression of Sea Star Wasting Disease revealed through time course sampling.
2. **Pespeni, M.H.** and A. P. Moczek. (*in prep*) Transcriptomics from common garden reveals genetic bases of rapid differentiation between recently colonized horned beetle populations.
3. Maynard, A., Bible, J.M., **Pespeni, M.H.**, Sanford, E., and Evans, T.G. (*in prep*) Transcriptomic responses to extreme low salinity among locally adapted populations of Olympia oyster.
4. **Pespeni, M.H.**, Garrett, A., Hargarten, H., Ashlock, L. (*in prep*) Targets of selection revealed in a single generation using pooled capture sequencing
5. Lloyd, M.M. and **Pespeni, M.H.** (*in prep*) Comparison of host transcription in sick and healthy stars through Sea Star Wasting Disease revealed limited immunological response.
6. Rose, N.H., Barney, B.T., Bay, R.A., De Wit, P., **Pespeni, M.H.**, and Palumbi, S.R. (*in revision*) Gene Regulatory Polymorphisms: A General Class of Functional Variants That Drive Local Adaptation

TEACHING

As a Professor

- 2016-2017 BIOL 381, BioLunch, Graduate student seminar, Co-Primary Instructor with Dr. Ogbunugafor (1 credit), University of Vermont; Organized professional development activities including discussion with external panelists on “Many Career Paths with your PhD/MS,” Time Management, “Storyboarding for Journal Article Writing,” and “Improv for Science Communication” with public, media, and reviewers.
- 2015-2017 BIOL 381, Ecological Genomics, an applied graduate course (4 credits), Co-Primary Instructor with Dr. Keller (Plant Biology), University of Vermont
- 2015-2017 BCOR 12, Exploring Biology, 2nd semester intro bio for science majors (4 credits), University of Vermont
- 2015 BIOL 381F, Hot Topics in Evolutionary and Ecological Genomics, graduate colloquium (2 credits), University of Vermont

As a Postdoc

- 2011 Population genomics using next-generation sequencing, Intensive graduate course, Co-Instructor, Stanford University

As a Teaching assistant

- 2007, 2009 Molecular Ecology, Discussion and laboratory leader, Stanford University
- 2005 Genetics, Biochemistry and Molecular Biology, Section leader, Stanford University

As a Guest lecturer

- 2015-2017 BCOR 102, Ecology and Evolution, University of Vermont
- 2007-2009 Molecular Ecology, Stanford University

Advancement of pedagogy

- 2016 Workshop on “Mentoring the Writing of Emerging Scientists”, University of Vermont

- 2015 Faculty training on “Undergraduate STEM Research Mentoring”, 8 week program, part of the NIH National Research Mentoring Network, University of Vermont
- 2014 Multiple workshops on active learning, effective teaching, establishing, meeting and assessing learning objectives, Center for Teaching and Learning, University of Vermont
- 2012 Active learning roundtable, “From Note-taking to Knowledge-making: Engaging Students in Scientific Inquiry,” Indiana University
- 2012 Workshop on active learning and increasing minority representation in STEM fields, led by Dr. Scott Freeman of University of Washington, Indiana University
- 2005 Inquiry-based learning semester-long course with practice, Stanford University

MENTORSHIP

As a Professor

- 2017-now Reid Brennan, National Science Foundation-funded Postdoctoral Fellow
- 2016-now Lauren Ashlock, PhD student
- 2016-now Kaitlin Huber, UVM undergraduate thesis advisor
- 2016 Ryan Tartre, UVM Honors College, undergraduate thesis co-advisor
- 2015-now Rebecca Nesnech, Awarded APLE for research in Pespeni lab, UVM Honors College undergraduate thesis advisor
- 2015-now April Garrett, National Science Foundation Graduation Research Fellow
- 2015-2016 Heidi Hargarten, Research technician
- 2015-now Melanie Lloyd, National Science Foundation-funded Postdoctoral Fellow

Graduate Student Thesis Committees:

- Aayudh Das (2017-now, Ph.D., Plant Biology, UVM)
- Hannah Lachance (2017-now, M.S., Rubenstein School, UVM)
- Susan Fawcett (2017-now, Ph.D., Plant Biology, UVM)
- Laura Caicedo-Quiroga (2017-now, Ph.D., Biology, UVM)
- Jennifer Hoey (2017-now, Ph.D., Rutgers University)
- François Olivier Hébert (2017, Ph.D., outside examiner, Université Laval)
- Brittany Verrico (2017-now, Ph.D., Plant Biology, UVM)
- Karl Fetter (2016-now, Ph.D., Plant Biology, UVM)
- Korin Eckstrom (2016-now, M.S., Animal Sciences, UVM)
- Judith Keller (2015-now, Ph.D., Biology, UVM)
- Kristian Brevik (2015-now, Ph.D., Plant and Soil Sciences, UVM)

Undergraduate Thesis Committees:

- Heather Schuettner (2017-now, Honors College, UVM)
- Murisa Malagic (2016-2017, Biology, UVM)
- Marisa Ng (2015, Honors College, UVM)

Undergraduate advising: Meet and correspond with 54 advisees from diverse backgrounds and four majors each semester to chart their 4-year plan, discuss course options, major and minor requirements, and career, internship, and study abroad opportunities. I also write many letters of recommendation and direct students in need to learning and social/emotional resources. I meet with most advisees 1-2 times per semester for 15-60 minutes each.

As a Postdoc

- 2014 Hannah Busey, Indiana University, High school student, Mentored research on effects of Argos expression on horn development in the horned beetle, *Onthophagus taurus*.

- 2013 Jacob Shields, Indiana University, Ph.D. student in Statistics, Identification of time course patterns in transcriptome-wide gene expression patterns using RNA-seq data from eight developmental stages in horned beetles, Indiana University

As a Graduate student

- 2010 Annabel Beichman, Harvard University undergraduate, summer internship, Independent study on dispersal patterns along the purple sea urchin species range, Stanford University
- 2010 Kara Yeung, Crystal Springs Uplands School student, summer internship, Independent study on patterns of natural selection and gene flow in the cubilin gene across the purple sea urchin species range, Stanford University
- 2009 William Moller, Stanford University undergraduate, 275H Research course, Independent study on the genetics and protein biochemistry of the pyruvate kinase enzyme in the purple sea urchin, Stanford University
- 2009 Christa Morris, Stanford University undergraduate, 275H Research course, Independent study on the patterns of gene flow in the Southern California Bight and Baja California, Mexico regions of the purple sea urchin species range, Stanford University

ACADEMIC SERVICES

- 2014-now Graduate student Affairs Committee, Department of Biology, University of Vermont
- 2015-2016 BCOR Learning Objectives Assessment Group, University of Vermont
- 2010 Graduate student participant, Center for Ocean Solutions Faculty Search, Stanford University
- 2009 Search committee member, Marine Cell Biologist Faculty Search, Stanford University
- 2007 Lead organizer, Graduate student invited Fall Seminar Series, Stanford University

Reviewer for: *Nature Ecology & Evolution, Nature Climate Change, PLoS Genetics, Proceedings of the National Academy of Sciences, Molecular Biology & Evolution, Genome Biology & Evolution, Molecular Ecology, PLoS ONE, Evolutionary Applications, Annals of Applied Statistics, Polar Biology, Marine Ecology Progress Series, The American Naturalist, Biology Letters*

Grant reviewer for: *National Science Foundation, Natural Environment Research Council (NERC, leading UK funding agency), Fonds de recherche du Québec (Canadian state funding agency), National Geographic Society, CA Sea Grant*

Society memberships: Society for the Study of Evolution, Society for Integrative and Comparative Biology, Western Society of Naturalists, Association for the Sciences of Limnology and Oceanography

SEMINARS & PRESENTATIONS

Invited

- 2018 Gordon Research Symposium, Ocean Global Change Biology, Keynote speaker. Waterville, NH. (*upcoming*)
- 2017 Stony Brook University, Departmental Seminar. Long Island, NY. (*upcoming*)
- 2017 Brown University, Departmental Seminar. Providence, RI. (*upcoming*)
- 2017 Vermont Advanced Computing Core meeting presentation. Burlington, VT.
- 2017 Université Laval, IBIS Departmental Seminar. Quebec City, Canada.
- 2016 CNRS Evolutionary Genomics Conference (invited from abstract). Roscoff, France.
- 2016 Université Brest, Departmental Seminar. Brest, France.

- 2016 Rutgers University, Departmental Seminar. New Brunswick, NJ.
- 2016 University of Chicago, Department of Ecology and Evolution Seminar. Chicago, IL.
- 2016 Bowdoin College, Departmental Seminar. Brunswick, ME.
- 2016 Marvin Lecture, Plant Biology Departmental Seminar. University of Vermont, Burlington, VT.
- 2015 Ecological Genomics Symposium, Keynote speaker. Manhattan, KS.
- 2015 Developmental Biology of the Sea Urchin XXIII, Symposium speaker and session organizer. Woods Hole, MA.
- 2015 Association for the Sciences of Limnology and Oceanography, Symposium speaker. Granada, Spain.
- 2015 Complex Systems Research Group Seminar, University of Vermont. Burlington, VT.
- 2014 University of Connecticut, Department of Marine Sciences Seminar. Groton, CT.
- 2014 McGill University, Department of Biology Seminar. Montreal, Canada.
- 2014 National Academy of Sciences Kavli Symposium on the Genetics of Adaptation. Invited, but session did not occur.
- 2014 Harvard University. Cambridge, MA.
- 2014 Swarthmore College. Philadelphia, PA.
- 2014 University of Oregon, Oregon Institute of Marine Biology. Coos Bay, OR.
- 2014 Washington State University, St. Louis. St. Louis, MO.
- 2014 University of Georgia, Athens. Athens, GA.
- 2013 University of Vermont. Burlington, VT.
- 2013 Sonoma State University. Rohnert Park, CA.
- 2013 University of Central Florida. Orlando, FL.
- 2013 University of South Carolina. Columbia, SC.
- 2013 Georgia Institute of Technology. Atlanta, GA.
- 2013 University of Wyoming. Laramie, WY.
- 2013 Society for Integrative and Comparative Biology, Symposium speaker. San Francisco, CA.
- 2010 Bauer Forum Seminar, Harvard University. Cambridge, MA. Postdoc fellowship offered.
- 2009 Genomic Variation Lab, University of California, Davis. Davis, CA.
- 2007 Partnership for Interdisciplinary Studies of Coastal Oceans. Santa Barbara, CA.
- 2004 FASEB Experimental Biology, Graduate Student Highlights Discussion. Washington D.C.

Contributed

- 2017 Society for the Study of Evolution. Portland, OR.
- 2014 Ecology, Evolution, and Environmental Biology, University of Vermont. Burlington, VT.
- 2014 Gordon Research Conference, Ocean Global Change Biology. Waterville Valley, NH.
- 2013 Ecology and Evolution Brown Bag Seminar, Indiana University. Bloomington, IN.
- 2013 Society for the Study of Evolution. Snowbird, UT.
- 2012 Ecology and Evolution Brown Bag Seminar, Indiana University. Bloomington, IN.
- 2011 Society for the Study of Evolution. Norman, OK.
- 2010 Society for the Study of Evolution. Portland, OR.
- 2010 Society for Integrative and Comparative Biology. Seattle, WA.
- 2009 Western Society of Naturalists. Seaside, CA.
[Best Student Paper, Honorable mention]
- 2008 Society for the Study of Evolution. Minneapolis, MN.
- 2007 Western Society of Naturalists. Santa Barbara, CA.
- 2006 Western Society of Naturalists. Seattle, WA.
- 2006 Ecology and Evolution Group Seminar. Stanford, CA.
- 2005 Lung Biology Conference, UC, San Francisco. San Francisco, CA.
- 2002 Penn State Summer Research Conference. State College, PA.

OUTREACH & COMMUNICATION EXPERIENCE

- 2017 GRE Alternatives Workshop, Invited participant to improve models for graduate admissions processes that increase retention and diversity in STEM fields. Organized by Northeast Alliance for Graduate Education and the Professoriate (NEAGEP). University of Massachusetts, Amherst, MA
- 2017 Faculty profile video with UVM University Communications. Burlington, VT
- 2017 Organized campus visit to UVM for all K-5 students from a local school to learn about invertebrate diversity, molecular biology, microscopy, and data collection at four hands-on stations. Burlington, VT
- 2014 Graduate recruitment event to increase diversity in STEM. Organized by Northeast Alliance for Graduate Education and the Professoriate (NEAGEP). University of Massachusetts, Amherst, MA
- 2014 Phone interview on “Life and Life Functions” with high school student from Orchard View Alternative High School in Dutchess County, NY
- 2013 Science communication with the public and media regarding my work on the ability of urchins to evolve in response to ocean acidification; more than 10 interviews with local, national and international magazines, newspapers, and radio stations including *Scientific American*, *New Scientist*, *Science News for Kids*, *Mother Jones*, *Yale Environment 360*, *LiveScience.com*, *TakePart.com*, and more.
- 2013 Jim Holland Summer Science Research Program, Helped mentor a college-bound, underrepresented minority high school student in a weeklong intensive research experience. Bloomington, IN
- 2013 Science Olympiad, Developed and led hands-on entomology lab experiences and laboratory tour for middle school students. Bloomington, IN
- 2013 Washington Elementary, Developed and led arthropod diversity hands-on laboratory experience. Bloomington, IN
- 2012-2014 Martin Luther King Jr. Day Diversity in Science at WonderLab, “Real Life Science: Anyone can be a scientist!” Developed beetle diversity outreach program for underrepresented minorities in the sciences. Bloomington, IN
- 2010-2011 McNair Fellow Panelist, Outreach for underrepresented minorities in graduate education. California State University, Monterey Bay, CA
- 2007 Science Communication with Policy Makers Workshop, Hopkins Marine Station of Stanford University, Pacific Grove, CA
- 2007 Science Communication with the Public and Media Workshop, COMPASS, University of California, Santa Cruz, CA
- 2006 Job Shadow Program, Outreach to minority female high school students. Hopkins Marine Station of Stanford University, Pacific Grove, CA
- 2005-2006 Diversity outreach in STEM, BioAIMs, Stanford University, Stanford, CA
- 2005-2006 Teaching Assistant, Ocean Science, Escondido Elementary School, Stanford, CA
- 2000-2002 Teaching Assistant, Physical Sciences, Armstrong Elementary School, Diamond Bar, CA
- 1998-1999 President, Science and Social Responsibility, Student Pugwash USA, University of California, San Diego
- 1997-1999 Chair, Muir Environmental Corps, University of California, San Diego