

Rebecca J. Gast

Associate Scientist with Tenure
Biology
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EDUCATION

The Ohio State University, Microbiology, Bachelor of Science, 1987
The Ohio State University, Molecular Genetics, Ph. D., 1994

PROFESSIONAL EXPERIENCE

2001-present Associate Scientist, Biology Department, WHOI.
1997-2001 Assistant Scientist, Biology Department, WHOI.
1994-1997 Postdoctoral Scholar, Woods Hole Oceanographic Institution.
1993 Visiting scientist (March, 1993), Department of Parasitology,
National Institute of Health, Tokyo, Japan.
1993 Guest lecturer (June, 1993), "PCR, Sequencing and Systematics"
43rd Acarology Summer Program, Department of Entomology,
The Ohio State University.
1992-1994 Graduate Research Associate, The Ohio State University.
1990-1992 Graduate Administrative Associate, Office of the Associate
Dean, College of Biological Sciences, The Ohio State
University.
1989-1990 Graduate Research Associate, The Ohio State University.
1987-1989 Graduate Teaching Associate, The Ohio State University.

RESEARCH INTERESTS

My research has the overall theme of molecular protistan ecology. The main focus of my work includes analyses of the genetic diversity, detection, distribution and abundances of protists (algae and protozoa) in the marine environment. Currently my projects in this area include ones examining protistan and bacterial pathogens in the coastal marine environment, and protistan diversity in the extreme environments of the Antarctic and the Arctic. These polar studies have recently led to a project investigating tubulin protein adaptations associated with psychrophilic functions to better understand how organisms have evolved to operate in the extreme cold. I also pursue research projects on the photosymbiotic associations in foraminifera and radiolaria, including the natural distribution of free-living symbionts and algal gene expression in the symbiotic state. Websites: www.whoi.edu/science/B/protist and www.whoi.edu/people/rgast/index.html.

PUBLICATIONS IN REFEREED JOURNALS AND BOOKS

2013 Rose, JM, E Fitzpatrick, A Wang, RJ Gast and DA Caron. Low temperature constrains growth rate but not instantaneous grazing rate of Antarctic microzooplankton. *Polar Biology*.
2012 Sanders, R.W. and R.J. Gast. Bacterivory by phototrophic picoplankton and nanoplankton in Arctic waters. *FEMS Microbiology Ecology* 82(2):242-253.

- 2012 First, M.R. Park, N.Y., Berrang, M.E., Meinersmann, R.J., Bernhard, J.M., Gast, R.J. and J.T. Hollibaugh. Ciliate ingestion and digestion: Flow cytometric measurements and regrowth of a digestion-resistant *Campylobacter jejuni*. 2012. *Journal of Eukaryotic Microbiology* 59:12-19
- 2011 Kim D.Y., P.D. Countway, R.J. Gast and D.A. Caron. Rapid shifts in the structure and composition of a protistan assemblage during bottle incubations affect estimates of total protistan species richness. *Microbial Ecology* 62(2):383-398.
- 2011 Gast R.J., L. Gorrell, B. Raubenheimer and S. Elgar. Impact of erosion and accretion on the distribution of enterococci in beach sands. *Continental Shelf Research* 31:1475-61.
- 2011 Halliday, E. and R.J. Gast Bacteria in beach sand: An emerging challenge in protecting coastal water quality and bather health. *Environmental Science and Technology* 45(2):370-79.
- 2011 Gast, R.J., D.M. Moran, M.R. Dennett, W. Wurtsbaugh and L. Amaral-Zettler. Amoebae and *Legionella pneumophila* in coastal marine environments. *Journal of Water and Health* 9(1):37-52.
- 2011 Edgcomb V.P., D. Beaudoin, R.J. Gast, J.F. Biddle and A. Teske. Marine Subsurface Eukaryotes: The Fungal Majority. *Environmental Microbiology* 13(1):172-183.
- 2010 Schnetzer A, SD Moorthi, PD Countway, RJ Gast, IJ Gilg and DA Caron. Depth matters: Microbial eukaryote diversity and community structure in the eastern North Pacific revealed through environmental gene libraries. *Deep-Sea Research Part I* 58(1): 16-26.
- 2010 Halliday, E JF Griffith, and RJ Gast Use of an exogenous plasmid standard and quantitative PCR to monitor spatial and temporal distribution of *Enterococcus* spp. in beach sands *Limnology & Oceanography Methods* 8:146-154.
- 2009 Gast, RJ, R. W. Sanders and D. A. Caron. Ecological strategies of protists and their symbiotic relationships with prokaryotic microbes *Trends in Microbiology* 17:563-569.
- 2009 Moorthi, S, DA Caron, RJ Gast and RW Sanders. Mixotrophy: a widespread and important ecological strategy or planktonic and sea-ice nanoflagellates in the Ross Sea, Antarctica *Aquatic Microbial Ecology* 54:269-277.
- 2009 Caron, DA, PD Countway, P Savai, RJ Gast, A Schnetzer, SD Moorthi, MR Dennett, DM Moran and AC Jones Defining DNA-based operational taxonomic units for microbial eukaryote ecology *Applied and Environmental Microbiology* Vol. 75, No. 18, aem0298-09.
- 2009 Rose JM, Gast RJ, Bogomolni A, Ellis J, Lentell B, Touhey K and M Moore. Occurrence and patterns of antibiotic resistance in vertebrates off the Northeastern United States coast. *FEMS Microbiology Ecology* 67:421–431.
- 2008 Amaral-Zettler LA, Rocca JD, Lamotagne MC, Dennett MR and RJ Gast. Changes in microbial community structure in the wake of Hurricanes Katrina and Rita. *Environmental Science and Technology* 42:9072-9078.
- 2008 Stewart JR, Gast RJ, Fujioka RS, Solo-Gabriele HM, Meschke S, Amaral-Zettler LA, Del Castillo E, Polz MF, Collier TK, Strom MS, Sinigalliano CD, Moeller PDR and AF Holland. The coastal environment and human health: Microbial indicators, pathogens, sentinels and reservoirs. *Environmental Health* 7(Suppl 2):S3 doi:10.1186/1478-069X-7-S2-S3.
- 2008 Kite-Powell, HL, Fleming, LE, Backer, LC, Faustman, E, Hoagland, P, Tsuchiya, A, Younglove, L, Wilcox, BA, and Gast, RJ. Linking the oceans to public health: current efforts and future directions. *Environmental Health* 7(Suppl 2):S6 doi:10.1186/1476-069X-7-S2-S6.
- 2008 Gast RJ, Moran DM, Audemard C, Lyons MM, Defaveri J, Reece KS, Leavitt D and R Smolowitz. Environmental distribution and persistence of Quahog Parasite Unknown (QPX). *Diseases of Aquatic Organisms* 81(3):219-229.

- 2008 Bogomolni A, Gast RJ, Ellis J, Dennett M, Pugliares K and M Moore. Vectors or Victims? Marine vertebrate zoonoses from coastal waters of the Northwest Atlantic. *Diseases of Aquatic Organisms* 81(1):13-38.
- 2008 Lasek-Nesselquist E, Bogomolni A, Gast RJ, Mark Welch D, Ellis J, Sogin ML and M Moore. Molecular characterization of *Giardia intestinalis* haplotypes in marine animals: variation and zoonotic potential. *Diseases of Aquatic Organisms* 81(1):39-51.
- 2008 Caron, DA and RJ Gast The diversity of free-living protists: seen and unseen, cultured and uncultured. In *Accessing Uncultured Microorganisms: From the Environment to Organisms and Genomes and Back*. Ed K Zengler ASM Press, Washington, DC, 320 pp.
- 2007 Caraguel, CGB, BM Depres, CJ O'Kelly, S Frasca Jr., RJ Gast, RJ Cawthorn and SJ Greenwood Microheterogeneity and coevolution: an examination of the relationship between *Neoparamoeba pemaquidensis* and its prokinetoplastid endosymbiont. *Journal of Eukaryotic Microbiology* 54(5):418-426.
- 2007 Shimeta, J., R.J. Gast and J.M. Rose. Community structure of marine sedimentary protists in relation to flow and grain size. *Aquatic Microbial Ecology* 48:91-104.
- 2007 Sinigalliano, CD, Gidley, ML, Shibata, T, Whitman, D, Dixon, TH, Laws, E, Hou, A, Bachoon, D, Brand, L, Amaral-Zettler, L, Gast, R, Steward, GF, Nigro, OD, Fujioka, R, Betancourt, WQ, Vithanage, G, Mathews, J, Fleming, LE and HM Solo-Gabriele. Impact of Hurricanes Katrina and Rita on the microbial landscape of the New Orleans area PNAS 104: 9029-9034.
- 2007 Moran, D.M., O.R. Anderson, M.R. Dennett, D.A. Caron and R.J. Gast. A description of seven Antarctic marine Gymnamoebae including a new subspecies, two new species and a new genus: *Neoparamoeba aestuarina antarctica* n. subsp., *Platyamoeba oblongata* n. sp., *Platyamoeba contorta* n. sp. and *Vermistella antarctica* n. gen. n. sp. *Journal of Eukaryotic Microbiology* 54(2):169-183.
- 2007 Countway, P.D., R.J. Gast, M.R. Dennett, P. Savai, J.M. Rose and D.A. Caron. Distinct protistan assemblages characterize the euphotic zone and deep sea (2500m) of the western North Atlantic (Sargasso Sea and Gulf Stream). *Environmental Microbiology* 9(5):1219-1232.
- 2007 Gast, R.J., D.M. Moran, M.R. Dennett and D.A. Caron. Kleptoplasty in an Antarctic dinoflagellate; caught in evolutionary transition? *Environmental Microbiology* 9(1):39-45.
- 2006 Gast, R.J., E. Cushman*, D.M. Moran, K. Uhlinger, D. Leavitt and R. Smolowitz. DGGE-based method for detection of Quahog Parasite Unknown (QPX) *Diseases of Aquatic Organisms* 70:115-122.
- 2006 Gast, RJ Molecular Phylogeny of a Dinoflagellate Parasite from the Solitary Radiolarian, *Thalassicolla nucleata* *Journal of Eukaryotic Microbiology* 53(1):43-45.
- 2006 Gast, R.J., D.J. Beaudoin, D.M. Moran, J.N. Blythe, M.R. Dennett and D.A. Caron. High abundance of a novel dinoflagellate phylotype in the Ross Sea, Antarctica. *Journal of Phycology* 42:233-242.
- 2006 Lyons, M.M., R. Smolowitz, K.R. Uhlinger, R.J. Gast and J.E. Ward. Lethal marine snow: pathogen of bivalve mollusk concealed in marine aggregates. *Limnology and Oceanography* 50(6):1983-1988.
- 2005 Mullen, T.E., K.R. Nevis, C.J. O'Kelly, R.J. Gast and S. Frasca Jr. Nuclear small-subunit ribosomal RNA gene-based characterization, molecular phylogeny and PCR detection of the *Neoparamoeba* from Western Long Island Sound lobsters. *Journal of Shellfish Research* 24(3):719-731.
- 2005 Frasca Jr., S., E.S. Weber, H. Urquhart, T. Wheeler, X. Liao, M. Gladd, K. Cecchini, P. Hudson, M. May, R.J. Gast, T.S. Gorton and S.J. Geary. Isolation and characterization of

- Mycoplasma sphenisci sp. nov., from the choana of an aquarium-reared jackass penguin (*Spheniscus demersus*) *Journal of Clinical Microbiology* 43(6):2976-2979.
- 2005 Countway, P.D., R.J.Gast, P. Savai and D.A. Caron. Protistan diversity estimates based on 18S rDNA from seawater incubations in the western N. Atlantic. *Journal of Eukaryotic Microbiology* 52(2): 95-106.
- 2004 Gast, R.J., M.R. Dennett and D.A. Caron. Characterization of Protistan Assemblages in the Ross Sea, Antarctica by Denaturing Gradient Gel Electrophoresis. *Applied Environmental Microbiology* 70:2028-2037.
- 2003 Gast, R.J., D.J. Beaudoin and D.A. Caron. Isolation of symbiotically expressed genes from the dinoflagellate symbiont of the solitary radiolarian *Thalassicolla nucleata* *Biological Bulletin* 204:210-214.
- 2001 Gast, R.J. and D.A. Caron. Photosymbiotic associations in planktonic foraminifera and radiolaria. *Hydrobiologia* 461:1-7.
- 2000 Gast, R.J., T.A. McDonnell* and D.A. Caron. srDNA-based taxonomic affinities of algal symbionts from a planktonic foraminifer and a solitary radiolarian. *J. Phycol.* 36:172-7.
- 1999 Caron, D.A., R.J. Gast, E.L.Lim and M.R. Dennett. Protistan community structure: molecular approaches for answering ecological questions. *Hydrobiologia*. 401:215-227.
- 1999 Caron, D.A., E.L. Lim, M. R. Dennett, R.J. Gast, C. Kosman and E.F. DeLong. Molecular phylogenetic analysis of the heterotrophic chrysophyte *Paraphysomonas*, and the design on rRNA-targeted oligonucleotide probes for two species. *J. Phycol.* 35:824-837.
- 1998 Stothard, D.R., J. Diedrich-Schroeder, M.H. Awwad, R.J. Gast, D.R. Ledee, S.R. Zaragoza, C. Williams, P.A. Fuerst and T.J. Byers. The evolutionary history of the genus *Acanthamoeba* and the identification of eight new 18S rRNA gene sequence types. *J. Euk. Microbiol.* 45(1):45-54.
- 1996 Gast, R.J. and D.A. Caron. Molecular phylogeny of symbiotic dinoflagellates from planktonic foraminifera and radiolaria. *Mol. Biol. Evol.* 13(9):1192-1197.
- 1996 Gast, R.J., D.R. Ledee, P.A. Fuerst and T.J. Byers. Subgenus Systematics of *Acanthamoeba*: Four Nuclear 18S rDNA Sequence Types. *J. Euk. Microbiol.* 43(6):498-504.
- 1995 Gast, R.J. and T.J. Byers. Genus- and subgenus-specific oligonucleotide probes for *Acanthamoeba*. *Mol. Biochem. Parasitol.* 71; 255-260.
- 1994 Gast, R.J., P.A. Fuerst and T.J. Byers. Discovery of group I introns in the nuclear small subunit ribosomal RNA genes of *Acanthamoeba*. *Nucleic Acids Res.* 22(4):592-596.
- 1994 Weekers, P.H.H., R.J. Gast, P.A. Fuerst and T.J. Byers. Sequence variations in small-subunit ribosomal RNAs of *Hartmannella vermiformis* and their phylogenetic implications. *Mol. Biol. Evol.* 11(4):684-690.
- 1992 Hugo, E.R., V.J. Stewart, R.J. Gast and T.J. Byers. Purification of amoeba mtDNA using the UNSET procedure. In: *Protocols in Protozoology* (J.J. Lee and A.T. Soldo eds.) D 7.1-7.2 Society of Protozoologists.
- * indicates undergraduate student involved in the research project and publication

OTHER PUBLICATIONS

- 1995 Caron, D.A. and R.J. Gast. "Probing biodiversity with molecular techniques" *Oceanus*, 38: 11-15.
- 1999 RJ Gast WHOI annual report "Antarctic Studies Illuminate Diversity in Extreme Environments"

- 2000 “The Good, the Bad and the Ubiquitous: Acanthamoeba in the Marine Environment” report written by Tracey Crago summarizing the Acanthamoeba research that I have accomplished with funding from WHOI Sea Grant (Sea Grant publication)
- 2000 RJ Gast “Detection and Quantification of Live Acanthamoeba in Natural Marine Ecosystems Using Molecular Genetic Methods” Sea Grant Program Guide.
- 2002 Fathom online feature about Antarctic Protistan Diversity
- 2004 Revealing the Ocean’s invisible Abundance: New instruments enable studies of diverse microbial communities at the center of the oceanic food web Oceanus.
- 2005 Protists in the Antarctic Antarctic Sun (Online publication)
- 2009 DA Caron, RJ Gast and PD Countway Microbial eukaryote ecology: Questions of diversity and biogeography Microbe (ASM)
- 2009 Caron, D. A. and RJ Gast Heterotrophic protists associated with sea ice. In Sea Ice, pp.327-356. 2nd Edition edited by D.N. Thomas and G.S. Dieckmann Wiley-Blackwell.
- 2013 Heliozoa chapter Handbook of the Protists submitted
- 2013 Acantharia chapter Handbook of the Protists submitted

AWARDS and HONORS

Theodore L. Jahn Award

Best Graduate Student Presentation (1992 - Society of Protozoologists)

Woods Hole Oceanographic Institution Postdoctoral Scholar (1994-1997)

WHOI Coastal Ocean Institute Fellow 2006-2009

Provost’s Distinguished Scholar, University of Texas at Austin (2008)

Seward Johnson Chair (Education Coordinator, 2013-2016)

PROFESSIONAL AFFILIATIONS

International Society of Protozoologists

American Society of Limnology and Oceanography

American Society for Microbiology

PROFESSIONAL ACTIVITIES

WHOI:

Reviewer for Draft of Handbook for New WHOI Scientists

Trustee Partnership Program

Co-chair Biology Department Seminar Series

Biology Department Hiring Committee

Scientific Staff Executive Committee

WHOI Womens Committee

Coastal Ocean Institute Advisory Committee

WHOI Biosafety Committee (Chair)

Outside WHOI:

Program Chair for Society of Protozoologists Annual Meeting 2002

Society of Protozoologists - member of the Education Committee for the (2000-2002),

Vice-president (2005), Member-at-large (2008-2013).

Coordinator for New England Molecular and Evolutionary Biology meeting November 2003, special session at the 2011 ASLO meeting (Mixotrophy), symposium at 2013 International Congress of Protistology (Nutritional Flexibility)

President-elect, President and Councilor for Division X American Society of Microbiology (2008-2010)

Editorial Board Member for the American Society of Microbiology, Society of Protistologists
Subject Editor for Diseases of Aquatic Organisms (zoonosis, microbial eukaryote ecology) and co-editor of special issue on marine animal health.

Reviewer for Journal of Phycology, Protist, Journal of Parasitology, Limnology and Oceanography, Biological Bulletin, Acta Protozoologica, Microbial Ecology, Journal of Clinical Microbiology, Marine Ecology and Progress Series, Aquatic Microbial Ecology, Estuarine Coastal and Shelf Science, FEMS Microbiology Ecology, Environmental Microbiology, Water Science and Technology, ISME Journal, Polar Biology, Journal of Applied Microbiology, Symbiosis, Journal of Plankton Research.

Proposal reviewer for National Science Foundation (Biological Oceanography, Polar Programs, Ecology Studies, Biotic Surveys & Inventories, Polar Programs, OPUS, CAREER, Genes and Genome Systems) National Environmental Research Council, NOAA ECOHAB.

Panelist for National Science Foundation - Major Research Instrumentation Program (2X), Microbial Observatories, Ecology Studies, Frontiers in Integrated Biological Research (FIBR), Ecology of Infectious Diseases, and Polar Programs Antarctic Biology and Medicine (2X).

Workshop participant for NOAA Arctic Exploration Planning Group (2001), Astrobiology Europa Focus Group (2001), Microbial Observatories/LExEN NSF workshopn (2002), WHOI Sensors workshop (2003), NSF workshop Frontiers in Genomics: Insights into Protists Evolutionary Biology (2004); meetings with aquaculturists and state legislators to identify issues for future QPX research (2005), Canadian Institute for Advanced Research Workshop on Microbial Biodiversity (2007), Gulf of Maine Seals Workshop (2009, 2011).

Elected member of the American Institute of Biological Sciences Infrastructure for Biology at Regional to Continental Scales Working Group (2002-2004), that helped prepare a final document in support of NSF NEON program.

Participant in the New England COSEE Ocean Science Education Institute (2004-2005).

Participant in the teacher program “Living in the Microbial World” (1998, 1999, 2000, 2003); the Single Cell Analysis Workshop AWI Bremerhaven, Germany (2002); advisor to summer students each year, and to a high school science fair project (2005 – third place at state level), collaborating with Zephyr Education Foundation to develop grade 6-8 plankton educational unit.

Northwest Atlantic Seal Research Consortium member.

PARTICIPATION IN EDUCATION AT WHOI

Graduate Level Courses Initiated and Taught

Oceans and Human Health 2007, 2010

Symbiosis 2001, 2004, 2007

Biological Oceanography Sampling and Laboratory 2003

Marine Genomics 2003 (collaborative teaching effort)

Student Mentoring

Supervision of joint program student Elizabeth Halliday (Biology, graduated 2012)

Sponsored 16 Summer Student Fellows/REUs/undergraduates

Chair for thesis defense (4) and thesis proposal defense (3)

General Exam Committee (2011)

Summer Student Fellow Biology Department Representative (2001-2003)
Postdoctoral Scholar Biology Department Representative (2008-2010)

Elizabeth Halliday – Joint Program Graduate Student (2007- 2012)
Julie M. Rose – OPP Postdoctoral Fellow
Matthew First – WHOI Postdoctoral Scholar in G&G; coadvise with Bernhard
Harrison Walker - Part-time Helper (2002)
Holly McFadden - Part-time Helper (2003)
Nina Kanin – High school science fair project (2005)
Yvonne Campbell - Guest Student from Scotland (6 mo, 2000)
Sandra Cortes-Perez – WHOI Guest Student from University of Mexico (summer 2012)
Anthony Dvarkas – SSF (1998)
Zobeida Cruz – SSF (1999)
Sun Hur – SSF (2000)
Jonathan Blythe – SSF (2001)
Kristin Henderson – Boston University REU (2003)
Elizabeth Cushman – SSF (2004)
Elizabeth Halliday – MBL REU (2005)
Benjamin Tully – WHOI COHH REU (2006)
Christine Blachly – MBL REU (2007)
Jennifer Cutler – MBL REU/WHOI Guest Student/COHH REU (2008)
Bridget Sarpu – MBL intern (2008)
Jonathan Viola – MBL intern (2009)
Cynthia McElvey – WHOI Guest Student/MBL intern (2010)
Eden Maloney – WHOI Guest Student (2010)
Allison Jones – WHOI SSF (2011)
Megan May – Undergrad Intern January 2013

CRUISE and FIELDWORK PARTICIPATION

Cruises

RVIB Nathaniel B Palmer; December 1998 – February 1999 (NBP 99-01); October 2003 – November 2003 (NBP 03-05); October 2005 – December 2005 (NBP 08-05); January 2011 – February 2011 (NBP 11-01)
RV Endeavor (EN 343); August 15 – 29, 2000
RV Weatherbird; September 26 – October 3, 1994 (BATS validation) & June 8 – 9, 2000 (BATS)
RV Sea Watch (USC Microbial Observatory cruise); March 18, 2001
RV Point Sur (USC Microbial Observatory cruise); June, 2001
Extreme 2001 cruise (9N East Pacific Rise, Dr. Craig Cary Chief Scientist)
RV John Dempsey - Monthly trips into Long Island Sound 2001-2003
USCG Healy – September 6 – October 1, 2008.

Fieldwork at Marine Stations

Bermuda Biological Station for Research; 1994, 1995, 1997
Caribbean Marine Research Station; 1998
Catalina Island; 2001

PUBLISHED ABSTRACTS, PAPERS PRESENTED AT MEETINGS, POSTERS (since 1996)

Meeting Participation

- 1996 ASLO/AGU Ocean Sciences Meeting; RJ Gast, DA Caron and TA McDonnell "Molecular Characterization of the Symbionts from Planktonic Sarcodines Based upon srDNA Analysis" (Presented paper)
- 1996 Gordon Conference on Molecular Evolution; RJ Gast and DA Caron "SrDNA-based Phylogeny of the Symbiotic Algae from Planktonic Sarcodines" (Poster)
- 1996 Second International Congress on Symbiosis; RJ Gast and DA Caron "Photosymbiotic Associations in Planktonic Foraminifera and Radiolaria" (Poster)
- 1997 ASLO Aquatic Sciences Meeting; RJ Gast and DA Caron "Development of a Reverse Dot-blot Method for Acanthamoeba" (Presented paper)
- 1997 32nd Annual Regional Meeting of the American Society of Microbiology (Invited speaker); RJ Gast "Detection of Potentially Pathogenic Acanthamoebae from Marine Sediments Using Reverse Dot-Blots" (Presented paper)
- 1998 Annual Meeting of the Society of Protozoologists; RJ Gast and DA Caron "Reverse Dot blot Detection of Acanthamoebae and Application of the Method to Environmental Samples" (Presented paper)
- 1998 NASA Astrobiology meeting; RJ Gast and DA Caron "Symbiosis and the Evolution of Organelles" (Invited speaker and poster)
- 1999 Microbial Aquatic Symbiosis Meeting in Oban, Scotland; RJ Gast "Photosymbiotic Associations in Planktonic Sarcodines" (Presented paper)
- 1999 ASM Conference on Microbial Biodiversity (Invited speaker); RJ Gast, MR Dennett, RW Sanders and DA Caron "Protistan Biodiversity in Antarctic Marine Ecosystems" (Short presentation and poster)
- 2000 ASLO Annual Aquatic Sciences Meeting in Denmark; Z Cruz-Monserrate* and RJ Gast "Detection and Identification of Acanthamoebae from Natural Samples" (Poster) * denotes undergraduate student presentation
- 2000 NASA Astrobiology Institute Annual Meeting; DJ Beaudoin, RJ Gast, DA Caron and MR Dennett "Protistan Communities of Extreme Marine Environments" (Poster)
- 2000 Society of Protozoologists Annual Meeting; RJ Gast and Z Cruz-Monserrate "New Acanthamoeba Ribotypes Identified by Reverse Dot Blot" (Presented paper and published abstract)
- 2001 ASLO Annual Aquatic Sciences Meeting; RJ Gast, DJ Beaudoin, MR Dennett, DM Moran and DA Caron "Genetic Diversity of Protists in Antarctic Marine Environments" (Presented paper)
- 2001 ASLO Annual Aquatic Sciences Meeting; PD Countway, DA Caron, RJ Gast, MR Dennett "Terminal Restriction Fragment Length Polymorphism (TRFLP) Analysis of Protistan Assemblages of the North Atlantic"
- 2001 NASA Astrobiology Annual Meeting; RJ Gast, DJ Beaudoin and DA Caron "Genes Involved in Photosymbiotic Interactions" (Poster)
- 2001 East Coast Protozoology Meeting; Gast, RJ, Beaudoin, DJ, Dennett, MR, Moran, DM and DA Caron. "Genetic Diversity of Protists in Antarctic Marine Environments." (Presented paper)
- 2001 East Coast Protozoology Meeting; Moran, DM*, Gast, RJ and DA Caron. "The Isolation, Maintenance and Identification of an Antarctic Protist Culture Collection." * denotes undergraduate student presentation

- 2002 ASLO Annual Aquatic Sciences Meeting; PD Countway, DA Caron, RJ Gast, MR Dennett, DM Moran “Molecular Analyses of Protistan Assemblages from the Sargasso Sea Suggest Radical Community Shifts in Nutrient-amended Bottle Incubation and Throughout the Water Column” (Published abstract)
- 2002 ASLO Annual Aquatic Sciences Meeting; Rose, JM, Moran, DM, Gast, RJ, Dennett, MR, Schaffner, RA & DA Caron “Do growth rates of Antarctic protists compensate for low temperature?” (Published abstract)
- 2002 Long Island Sound Lobster Health Symposium; Gast, RJ “Oligonucleotide-based Detection of Pathogenic *Paramoeba* Species” (Presented paper)
- 2002 ASLO Summer Meeting; Gast, RJ & DJ Beaudoin “Isolation and characterization of genes potentially involved in phosymbiotic associations” (Paper presentation and published abstract)
- 2002 ASLO Summer Meeting; Dennett, MR, Gast, RJ, Contway, PD, Caron, DA & DM Moran. “Analysis of containment effects on the diversity of protistan assemblages from the Sargasso Sea and San Pedro Channel by denaturing gradient gel electrophoresis” (Poster and published abstract)
- 2002 Society of Protozoologists Annual Meeting; Moran, DM*, Gast, RJ, Dennett, MR, & DA Caron “The identification of a new dinoflagellate from the Ross Sea, Antarctica” (Published abstract) *denotes undergraduate student presentation
- 2003 Long Island Sound Lobster Health Symposium; Gast, R.J. “Oligonucleotide-based Detection of Pathogenic *Neoparamoeba* Species” (Presentation; published abstract)
- 2003 ASLO Annual Aquatic Sciences Meeting; Caron, D.A., Gast, R.J., Countway, P.D., Schnetzer, A., Moran, D.M., Dennett, M.R., Travao, M. “Unicellular eukaryotic biodiversity in environmental samples from the Western North Atlantic and Eastern North Pacific” (Poster and published abstract)
- 2003 ASLO Annual Aquatic Sciences Meeting; Gast, R.J., Moran, D.M., Dennett, M.R., Rose, J.M., Caron, D.A. “Linking protistan genotype, morphology and physiology from ice and water samples of the Ross Sea, Antarctica” (Presentation and published abstract)
- 2003 ASLO Annual Aquatic Sciences Meeting; Countway, P.D., Caron, D.A., Gast, R.J., Schnetzer, A., Travao, M.J., Dennett, M.R., “Community Fingerprints of Eukaryotic Marine Microbes at a Coastal Time-Series Station” (Poster and published abstract)
- 2003 IAAAM Meeting; Thomas E. Mullen, Kathleen R. Nevis, Salvatore Frasca Jr., Rebecca J. Gast, Micheal T. Peglar, Patrick M. Gillevet, Charles J. O’Kelly “Characterization of the amoeba associated with paramoebiasis in the American lobster (*Homarus americanus*) by small subunit ribosomal gene analysis” (Presentation and published abstract)
- 2003 International Symbiosis Society Meeting in Halifax, Nova Scotia (Invited speaker); Gast, R. J., Beaudoin, D. J. “Isolation of genes potentially involved in regulating and establishing photosymbiotic associations” (presentation and published abstract)
- 2004 Lobster Research Initiative Meeting; Gast, R.J. and D.M. Moran. “Detection of *Neoparamoeba* species in Long Island Sound” (Platform presentation and published abstract)
- 2004 Society of Protozoologists Annual Meeting; Gast, R.J., Moran, D.M., Dennett, M.R., Rose, J.M. and D.A. Caron. “Protistan diversity in the Ross Sea, Antarctica: Linking genotype, morphology and physiology.” (Platform presentation and published abstract).
- 2004 Society of Protozoologists Annual Meeting; Moran, D.M., Anderson, O.R., Gast, R.J., Caron, D.A. and M.R. Dennett. “Antarctic Amoebae Adventures.” (Platform presentation and published abstract).

- 2005 ASLO Annual Aquatic Sciences Meeting; Lyons, M.M., Uhlinger, K.R., Ward, J.E., Gast, R.J., and R. Smolowitz. "Quahog parasite unknown (QPX) and its association with marine aggregates." (Platform presentation and published abstract).
- 2005 ASLO Annual Aquatic Sciences Meeting; Gast, R. J., Moran, D. M., Beaudoin, D. J., Blythe, J. N., Dennett, M. R., and D.A. Caron. "Identification, distribution and abundance of a novel bloom-forming dinoflagellate in the Ross Sea, Antarctica. (Platform presentation and published abstract.)
- 2005 ASLO Annual Aquatic Sciences Meeting; Caron, D. A., Gast, R. J., Countway, P.D., Savai, P., Schnetzer, A. and S. Moorthi. "Protistan DNA sequence information and the species concept: defining taxa for ecological studies." (Platform presentation and published abstract.)
- 2005 ASLO Annual Aquatic Sciences Meeting; Rose, JM, Caron, DA, Gast, RJ, Moran, DM, Vora, N.M. and V. Sippel. "Temperature effects on micrograzer control of algal and bacterial assemblages in the Ross Sea, Antarctica." (Platform presentation and published abstract.)
- 2005 National Shellfish Association; M.M. Lyons, J.E. Ward, R.J. Gast, K.R. Uhlinger and R. Smolowitz. "Quahog Parasite Unknown (QPX) concealed in Marine Aggregates: What is the link with Macrophytes?" (Platform presentation and published abstract.)
- 2006 Ocean Sciences Recovery of Legionella species from the Marine Environment Using Molecular Methods. Elizabeth Halliday, University of Maryland and Rebecca Gast, WHOI (Poster presented by Halliday in REU special session and published abstract
- 2006 Ocean Sciences Amoebae and Legionella species in Mt Hope Bay Gast, RJ, Halliday E, Dennett MR, Rocca J, Laatsch A and Amaral-Zettler, L (Poster and published abstract)
- 2006 Ocean Sciences Community Structure of Marine Sedimentary Protists in Relation to Flow Regime and Grain Size; Application of Denaturing Gradient Gel Electrophoresis (DGGE) Jeff Shimeta, Franklin and Marshall and Rebecca Gast, WHOI (Poster and published abstract)
- 2006 Ocean Sciences Protistan Diversity in the Sargasso Sea and Gulf Stream (N. Atlantic Ocean): A Comparison of Euphotic Zone and Deep-Sea (2500 m) Protistan Assemblages Pete Countway, Pratik Savai, Dave Caron (University of Southern California) and Rebecca Gast (WHOI) (Platform talk given by Countway and published abstract)
- 2006 Ocean Sciences A Microbial Diversity Survey of a Sewage- and Thermally-Impacted Estuary: Mt. Hope Bay, Massachusetts Linda Amaral Zettler, Abby Laatsch, J Rocca (MBL), Mark Dennett and Rebecca Gast (WHOI) (Poster and published abstract)
- 2006 National Shellfisheries Association Detection and distribution of Quahog Parasite Unknown in the Coastal Marine Environment Gast, RJ, Moran, DM, Uhlinger, KR, Leavitt, DR and Smolowitz, R (Invited talk and published abstract)
- 2006 International Society of Protistologists Detection and persistence of Quahog Parasite Unknown in the Coastal Marine Environment. RJ GAST¹, DM MORAN¹, KR UHLINGER², DR LEAVITT³ and R SMOLOWITZ² (Platform presentation and published abstract)
- 2006 International Society of Protistologists Studies of Protistan Diversity in Antarctica. RJ GAST¹, DM MORAN¹, MR DENNETT¹, DJ BEAUDOIN¹ and DA CARON² Vice President's Address – invited talk and published abstract
- 2006 5th Aquatic Animal Health symposium IDENTIFICATION OF Neoparamoeba pemaquidensis FROM WESTERN LONG ISLAND SOUND LOBSTER USING NUCLEAR SMALL-SUBUNIT RIBOSOMAL RNA GENE-BASED SEQUENCE ANALYSIS, MOLECULAR PHYLOGENY AND PCR DETECTION FROM

- INFECTED TISSUES Thomas E. Mullen, Kathleen R. Nevis, Charles J. O'Kelly, Rebecca J. Gast and Salvatore Frasca Jr. (Platform talk given by Frasca)
- 2006 OCEANS 2006 IEEE Emerging Zoonoses in Marine Mammals and Sea Birds in the Northeast US A. Bogomolni, M. Dennett, J. Ellis, R. Gast, B. Harris, M. Pokras, K. Touhey and M. Moore Oral presentation by Bogomolni.
- 2007 ASLO Ocean Sciences Environmental distribution of Quahog Parasite Unknown in the coastal marine environment Gast, R.J., Moran, D.M., Uhlinger, K.R., Leavitt, D.R., and Smolowitz, R. Oral presentation by Gast.
- 2007 ASLO Ocean Sciences Legionella species, including the human pathogen Legionella pneumophila, in Mout Hope Bay Gast, R. J., Moran, D. M., Dennett, M.R., Rocca, J., and Amaral-Zettler, L. Poster presented by Moran.
- 2007 National Shellfish Association Growth of the hard clam pathogen Quahop Parasite unknown (QPX) on seaweed and seagrass detritus. M. Maille Lyons*, Rebecca J. Gast, Steven B. Roberts, Roxanna Smolowitz, J. Evan Ward Oral presentation by Lyons (Graduate student at Univ. of Connecticut).
- 2007 AAAS Zoonotic Disease Surveillance: Using Seabirds and Marine Mammals To Detect Health Threats Michael Moore, A. Bogomolni, M. Dennett, J. Ellis, R. Gast, B. Harris, M. Pokras, K. Touhey Oral presentation by Moore.
- 2007 American Society for Microbiology Zoonotic Pathogens in Marine Vertebrates on the Northeast Coast A Bogomolni, MR Dennett, JC Ellis, RJ Gast, MA Pokras, K. Touhey, F Tseng, M Moore Poster presentation by Bogomoli.
- 2007 Impacts of Hurricane Floodwater on Lake Pontchartrain Microbes R.J. Gast, C.D. Sinigalliano, M.L. Gidley, T. Shibata, D. Whitman, T.H. Dixon, E. Laws, A. Hou, D. Bachoon, L. Brand, L. Amaral-Zettler, G. F. Steward, O. D. Nigro, R. Fujioka, W.Q. Betancourt, G. Vithanage, J. Mathews, and H. M. Solo-Gabriele Poster presentation by Gast.
- 2007 APMBC meeting A comparative study of microbial populations in sewage-impacted estuarine environments: Mt. Hope Bay, Massachusetts and Lake Pontchartrain, Louisiana Linda Amaral-Zettler, Abby Laatsch, Jennifer Rocca, Leslie Graham, Benjamin Tully, Mark Dennett, and Rebecca Gast Oral presentation by Amaral-Zettler.
- 2007 Massachusetts Shellfish Officers meeting Update on environmental persistence of Quahog Parasite Unknown Oral presentation by Gast.
- 2007 International Society of Protistologists Amoebae from saline environments harbor Legionella species Gast, R. J., Moran, D. M., Dennett, M.R., Rocca, J., Amaral-Zettler, L. Oral presentation by Gast.
- 2007 International Free-Living Amoeba Meeting Legionella species in amoebae isolated from saline environments Gast, R. J., Moran, D. M., Dennett, M.R., Rocca, J., Amaral-Zettler, L. Oral presentation by Gast.
- 2007 17th Biennial Conference on the Biology of Marine Mammals Zoonotic Disease Surveillance and Antibiotic Resistance Patterns in Marine Mammals and Seabirds on the Northeast United States Coast Bogomolni, Andrea; Ellis, Julie; Gast, Rebecca; Dennett, Mark, Lentell, Betty Pokras, Mark; Touhey, Kathleen; Moore, Michael Poster presentation by Bogomolni.
- 2008 ASLO Zoonotic Pathogens in Marine Vertebrates of the coastal Northeast U.S. A Bogomolni¹, RJ Gast¹, MR Dennett¹, C Blachly⁵, JC Ellis⁴, MA Pokras², K. Touhey³, F Tseng², M Moore¹ (oral presentation by R Gast)
- 2008 ASLO Patterns of antibiotic resistance in northeastern coastal vertebrates Julie M. Rose¹, Andrea Bogomolni¹, Rebecca J. Gast¹, Julie C. Ellis², Michael Moore¹ (oral presentation by J Rose)

- 2008 America Society for Microbiology invited presentation Marine parasites – the dark side of microbial eukaryotes. (oral presentation by RJ Gast)
- 2008 Gordon Research Conference Marine Microbes invited presentation Intracellular bacteria, amoebae and the ocean (oral presentation by RJ Gast)
- 2008 National Shellfisheries Association An epizootiological approach to the study of bivalve diseases such as QPX M. Maille Lyons, Roxanna Smolowitz, Marta Gomez-Chiarri, J. Evan Ward, Rebecca J. Gast (oral presentation by M Lyons)
- 2008 Distribution of Quahog Parasite Unknown in the coastal marine environment RJ Gast, DM Moran, C Audemard, MM Lyons, J DeFavari, KR Uhlinger, KS Reece, DF Leavitt, R Smolowitz (oral presentation by R Gast)
- 2008 International Society of Protistologists Molecular characterization of Neoparamoeba pemaquidensis, a parasite implicated in the mass mortality of Long Island Sound lobsters in 1999. Charles G.B. Caraguel^{1,2}, Charles J. O’Kelly³, Pierre Legendre⁴, Salvatore Frasca Jr.⁵, Rebecca J. Gast⁶, Béatrice Després², Nathanaelle Donay^{1,2}, Richard J. Cawthorn^{1,2}, Spencer J. Greenwood^{1,2} (poster presentation by S Greenwood)
- 2009 ASLO A Schnetzer, SD Moorthi, PD Countway, IC Gilg, RJ Gast and DA Caron: DEPTH MATTERS: MICROBIAL EUKARYOTE DIVERSITY AND COMMUNITY STRUCTURE IN THE WESTERN NORTH PACIFIC AS INDICATED BY ENVIRONMENTAL GENE LIBRARIES (Poster presentation by Schnetzer)
- 2009 ASLO E Halliday and RJ Gast QUANTIFICATION AND DISTRIBUTION OF ENTEROCOCCUS SPP. IN WET AND DRY BEACH SAND OVER SPACE AND TIME (poster presentation by Halliday)
- 2009 ASM Philadelphia – Polar Plants and Animals? Mixotrophic Protists in the Beaufort Sea Rebecca J Gast and Robert W Sanders (poster presentation by Gast)
- 2009 International Marine Conservation Congress - Anthropogenic Environmental Degradation Exposes Marine Organisms to New Microbes Rebecca Gast (Invited talk)
- 2009 ICoMM - Global Protistan Survey: Comparison of High-Throughput '454' Pyrosequencing vs. 'Deep' Sanger Sequencing of 18S rRNA genes in Arctic (Chukchi Sea) and Antarctic (Ross Sea) ecosystems Countway, P.D., Amaral-Zettler, L.A., Gast, R.J., Sherr, B.F., Sherr, E.B. and Caron, D.A. (poster presentation by Countway)
- 2010 Legionella in the marine environment R.J. Gast, D.M. Moran, E. Halliday, M.R. Dennett and L. Amaral-Zettler COHH PI meeting poster
- 2010 Elizabeth poster. COHH PI meeting poster co-author
- 2010 Antibiotic resistant bacteria in stranded, bycaught and live marine mammals R.J. Gast, A. Bogomolni, M. Moore. Invited talk NOAA OHHI PI meeting.
- 2010 Rapid shifts in protistan community structure and composition during bottle incubations. D.Y. Kim, P.D. Countway, R.J. Gast and D.A. Caron. Marine Microbes Gordon Conference poster co-author
- 2010 Legionella in the marine environment R.J. Gast, D.M. Moran, E. Halliday, M.R. Dennett and L. Amaral-Zettler Ocean and Human Health Gordon Conference Poster
- 2011 Separation of eukaryotic bacterivore DNA from environmental samples Scott Fay, Sarah DeVaul, Elizabeth Halliday, Rebecca Gast, and Robert Sanders ISOP/PSA presentation.
- 2012 Mixotrophic protists in the Ross Sea, Antarctica and the Arctic Ocean. Gast, R. J., McKie-Krisberg, Z. M., and R.W. Sanders SCAR meeting. Poster; Primary presenter
- 2012 QPCR-based abundances of mixotrophic protest species in the Ross Sea, Antarctica and the Beaufort Sea. Gast, R. J., McKie-Krisberg, Z. M., and R.W. Sanders. Ocean Sciences meeting. Poster; primary presenter

- 2012 Changes in latitude – bacterivory by mixotrophic protists in the Ross and Beaufort Seas. Sanders, R.W. and Gast, R. J. Ocean Sciences meeting. Oral presentation; co-author.
- 2012 Studying trophic compartments of eukaryotic microbial food webs using a thymidine analog and environmental DNA sequencing. Fay, S., Sanders, R.W. and R.J. Gast Ocean Sciences meeting. Oral presentation; co-author.
- 2012 Caron D.A., Fitzpatrick, E. Rose, J.M., and R.J. Gast. Low temperature constrains growth rate but not growth efficiency or instantaneous grazing rate of Antarctic microzooplankton. Ocean Sciences meeting. Oral presentation; co-author.
- 2012 Halliday, E. and R. J. Gast. Digging into dry-weather bacterial violations at recreational beaches. EPA & New England Association of Environmental Biologists Annual Meeting Falmouth, MA Oral presentation, co-author.
- 2012 Halliday, E. and R. J. Gast. Calculating a site-specific single sample maximum for fecal indicator bacteria (*Enterococcus*) at Provincetown beaches. EPA & New England Association of Environmental Biologists Annual Meeting Falmouth, MA Poster presentation, co-author.

Invited Presentations, Guest Lectures and Workshop Participation

- 1998 Invited instructor; Workshop on Techniques for in situ Hybridization at University of Cincinnati; gave lecture and ran laboratory exercise
- 1998 Invited speaker; University of Connecticut; Department of Marine Sciences Seminar Series
- 1998 Guest Lecture; “Living in the Microbial World: A Teacher Enhancement Workshop on Microbiology and Microbial Diversity” talked titled “Protists in the Marine Environment”
- 1999 Guest Lecture; “Living in the Microbial World: A Teacher Enhancement Workshop on Microbiology and Microbial Diversity” RJ Gast presentation on Photosymbiotic Associations in Planktonic Sarcodines and Diversity of Protists in Antarctic Marine Environments
- 2000 Guest Lecture; “Living in the Microbial World” Supplemental Workshop on Biology of Foraminifera (February 2000) RJ Gast presentation on Photosymbiotic Associations in Planktonic Foraminifera
- 2000 Invited speaker; University of California Santa Barbara; Department of Ecology, Evolution and Marine Biology Seminar Series Spoke on molecular assessment of protistan diversity
- 2001 Participant in NOAA Arctic Exploration Planning Workshop.
- 2001 Video interview for Astrobiology Program. Discussed evolution of life.
- 2001 Participant in NASA Astrobiology Europa Workshop. Short presentation on detection of protists in Antarctic marine environment.
- 2002 Invited Speaker; Sea Grant Luncheon Spoke on the detection of pathogenic protists in the marine environment.
- 2002 Participant in the NASA Astrobiology sponsored Genome-genome Interaction Workshop in Woods Hole, MA; published abstract
- 2002 Invited speaker to the Committee on the Origins and Evolution of Life; presented Astrobiology associated work on photosymbiotic relationships (Symbiotic protist made the cover of “Life in the Universe” publication from the National Research Council)
- 2002 Microbial Observatories Workshop; Gast, RJ, Caron, DA, Moran, DM, Rose, JM, Dennett, MR, Schaffner, RA, & DJ Patterson. “Protistan Molecular Ecology and Physiology in Antarctic Waters” (Poster and published abstract.)
Co-leader for discussion forum “Advances and New Applications of Molecular Tools”
- 2002 Single Cell Analysis Workshop in Bremerhaven, Germany; Gast, RJ, Dennett, MR, Moran, DM, Olson, RJ, Sosik, HM, & A Shalapyonok. “Detection, Identification and Enumeration

- of Protists in the Marine Environment using Ribosomally-based oligonucleotides” (Short presentation, poster and published abstract)
- 2002 Invited Speaker; University of Rhode Island School on Oceanography Seminar Series “My Antarctic Summer Vacation”
- 2002 Invited Speaker; Sea Education Association “My Antarctic Summer Vacation”
- 2003 Invited Speaker; Sea Education Association “Topics in Protistan Molecular Ecology”
- 2003 Invited Speaker; University of Connecticut “Topics in Protistan Molecular Ecology”
- 2003 Invited Speaker; MBL Ecosystems Center “Topics in Protistan Molecular Ecology”
- 2003 Guest Lecture; “Living in the Microbial World” MBL Astrobiology Teacher’s Workshop “Symbiotic Associations”
- 2003 Invited Speaker; Science and Engineering Briefs, WHOI Women’s Committee, “Antarctic Protistan Ecology”
- 2003 Sensors Workshop WHOI; Gast, R. J., Dennett, M. R. “Detection of Protistan Genomes in the Environment” (Presentation)
- 2004 Guest Lecture; Marine Biological Laboratory Elderhostel Program, presentations on adaptation to life in the extreme cold and the development of novel life detection strategies.
- 2004 Participant in NSF sponsored workshop “Frontiers in genomics: insights into protist evolutionary biology”.
- 2004 Science Enabling Human Exploration, MBL Astronaut Education Program “Cold Protists”
- 2004 Guest Lecture: Stony Brook University Marine Sciences Research Center, “Topics in Protistan Molecular Ecology: Life in the Extreme Cold”.
- 2005 Invited Speaker; CIAR workshop on Microbial Diversity, “Protistan Molecular Ecology; linking genotype with physiology”
- 2007 Invited lecture; Microbial Diversity Course MBL also participated in laboratory exercise.
- 2008 Invited seminar at Columbia/LDEO (May 2008)
- 2008 CIFAR meeting on Integrated Microbial Diversity Vancouver, Oct 10-12, 2007
Presentation
- 2008 Workshop on Molecular Evolution, invited lecture
- 2008 Invited speaker at American Society of Microbiology Symposium “Microbial Eukaryotes in Aquatic Environments” (June 2008)
- 2008 Invited speaker at Marine Microbes Gordon Conference (July 2008)
- 2008 Evergreen WHOI Planned Gift and Bequest Society (Zoonoses in marine animals)
- 2008 Invited speaker at University of Miami Oceans and Human Health Center
- 2009 Invited speaker at International Marine Conservation Congress in Washington DC
- 2009 Workshop on Molecular Evolution, invited lecture
- 2010 Invited speaker, NOAA OHHI PI meeting
- 2010 Invited speaker, I-RICH Symposium, University of Connecticut
- 2012 Gast, R.J., Bogomolni, A. and M. Moore. Giardia and Cryptosporidium in Cape Cod Seals. Atlantic Research Center Seashore Research Symposium. Wellfleet, MA invited speaker.
- 2012 Gast RJ, Rhode Island College guest speaker “Bacteria in Beach Sand”
- 2013 Gast, RJ. Interviewed on local public radio station (WMVY) “The Point” with Mindy Todd (February 8, 2013) Seals and water quality on Cape Cod
- 2013 Cape Cod Natural History Conference invited speaker on seals and water quality
- 2013 Friends of Pleasant Bay invited speaker on seals and water quality