

Vita for Forest Rohwer

San Diego State University
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Education

University of California San Diego/San Diego State University Joint Doctoral Program in Molecular Biology, 09/92-07/97 advisor: Kathleen McGuire
Doctoral dissertation: Interleukin-2 activation of intracellular signaling pathways: Effects on gene expression, proliferation, and apoptosis, pp. 1-174. 1997.
University of Idaho, Letters and Science, 09/91-05/92
College of Idaho, Gipson Scholar in Biology, Chemistry, and History, 09/87-05/91

Awards and Honors

List in The World's Most Influential Scientific Minds by Thomson Reuters. 2014.
Outstanding Faculty. College of Science. SDSU. 2014.
Teacher Scholar. SDSU Biology. 2014.
SDSU Phi Beta Kappa. 2013.
American Academy of Microbiology Fellow. 2013.
SDSU Alumni Association Award for Outstanding Faculty Contributions - "Monty". 2011.
Achievement Award. Sigma Xi. 2009.
International Society of Microbial Ecology Young Investigators Award. 2008.
Canadian Institute for Advanced Research (CIFAR) Fellow in Integrated Microbial Biodiversity Program. 2007.
American Academy for Advancement of Science (AAAS) Fellow. 2006.
SDSU Foundation Technology Transfer Office Honorable Mention of Inventorship. 2002.
ARCS. 1995 and 1996. Achievement award for young scientists. SDSU.
Sigma Xi. 1993. Grant-in-aid for graduate students. SDSU.
NSF Research Experience for Undergraduates (REU). 1991. University of Nevada, Reno.
Graduated *summa cum laude*. 1991. College of Idaho.
Gipson Scholar. 1988-1991. For academic scholarship. College of Idaho.

Professional Experience

San Diego State University. Professor. 2009-present
San Diego State University. Associate Professor. 2007-2008
San Diego State University. Assistant Professor. 2003-2007
San Diego State University. Adjunct Assistant Professor. 2001-2003
Scripps Institution of Oceanography. Postdoctoral researcher with Dr. Farooq Azam. 1997-2001

Current Funding

Gordon & Betty Moore Foundation. Marine Microbial initiative. 06/13 – 05/18. \$2,225,000. Rohwer (P.I.)
National Science Foundation. PIRE: Understanding marine biodiversity along geographic and anthropogenic stress gradients. 01/13 – 12/18. \$5,108,201. Rohwer (P.I.)
Canadian Institute for Advanced Research. 07/12–06/18 \$25,000 per year. Rohwer (P.I.)

Previous Funding

National Institute of Health. Fecal Phage: Exposing unknown in the dark matter of the human gut 08/12 – 08/13. \$381,688. Rohwer (P.I.)
National Institute of Health. Hydra as an antiviral innate immunity model system 04/11 – 03/13. \$411,125. Rohwer (P.I.)

> includes a Post-doc Fellowship for Juris Grasis
 National Science Foundation. Dimensions: Shedding light on viral dark matter – genetic, taxonomic and functional diversity of coral reef viromes. 10/10 – 9/14. \$2,999,784. Rohwer (P.I.)
 National Institutes of Health. Ecology of Cystic Fibrosis. 12/10 – 11/14. \$1,510,575 Rohwer (P.I.)
 > includes a re-entry NIH Post-doctoral Fellowship for Katrine Whiteson
 National Science Foundation. ETBC: The coupling between DOM, algae and microbes on coral reef platforms. 11/09 – 10/12. \$720,878. Rohwer (P.I.)
 National Institutes of Health. Metagenomic studies of gut phage diversity in twins. subcontract through Jeff Gordon (P.I.) at Washington University. 07/09–06/10 \$116,384
 Agouron Institute. Oxygen minimum zones viruses. 1/08-1/11. \$410,000. Rohwer (P.I.).
 Cystic Fibrosis Research Incorporated. Metagenomic analysis of viral and microbial communities in Cystic Fibrosis lungs \$150,000. Rohwer (P.I.)
 Conservation International. Biosensors: Rapid monitoring of coral reef microbes. 6/07-6/08. \$21,000. Rohwer (P.I.).
 Lawrence Livermore National Labs and UCSF. Shotgun sequencing of virus-like particles from nasopharyngeal samples. 7/07-12/08. \$110,000. Rohwer (P.I.).
 Gordon and Betty Moore Foundation. CAMERA Labs: Incorporation of functional and biodiversity models. 11/07-10/09. \$450,000. Rohwer (P.I.).
 NSF 0421955. NSF Directorate for Biological Sciences: Biocomplexity. Solar saltern extremophage: Genomics and population modeling. 10/04-9/08. \$1,579,123. Rohwer (P.I.).
 NSF MCB-0604191. Ecological and evolutionary studies of prokaryotes and their viruses in a modern evaporative basin: Salton Sea, CA (9/06-8/09). Dave Valentine at UCSB was P.I. Rohwer has a subcontract of \$39,786. NSF DEB 0316518.
 NSF. Aquatic phage diversity. 08/03-07/07. \$323,148. Rohwer (P.I.)
 Gordon and Betty Moore Foundation. Uncultured viral diversity. 11/04-10/07. \$1,000,000. Rohwer (P.I.)
 Department of Commerce. Advanced Technology Program (ATP). Targeted bacteriophage therapeutics as replacements for conventional antibiotics in aquaculture. 1/05-12/07. \$256,668. Rohwer (co-PI with Kent Sea Tech)
 DOC National Oceanic and Atmospheric Administration. Microbial ecology of deep-sea Corals. \$40,000. Rohwer (P.I.)
 NSF OCE 0137748. Stress-induced coral mortality: The role of opportunistic bacterial infections. 4/02-3/05. \$391,715. Rohwer (P.I.)
 Office of Naval Research through SPAWAR. Remote sensing of biological warfare agents using immunomagnetic microsphere-based optical sensors. 10/02-09/04. \$140,000 Rohwer (P.I.)
 NSF OCE 0116900. Genomic sequencing of uncultured marine phage. 5/01-4/02. \$70,000 Rohwer (Co-P.I. with Farooq Azam)

Previous Equipment Funding

NSF 0308029. New transmission electron microscope for a core EM facility. 05/03-04/05. \$388,009. Rohwer (Co-P.I. with Steven Barlow (P.I.), Anca Segall, Terrence Frey, Sanford Bernstein)
 NSF0421535. Acquisition of a fluorescence activated cell Sorter (FACS) for SDSU biology department. 09/01/04 - 08/31/07. \$325,097. (Co-P.I. with Kathie McGuire (P.I.), Anca Segall, David Lipson, Constantine Tsoukas)

Teaching Experience

Main courses: BIO567L (SDSU; formally CHEM467L and CHEM567L; Spring 2004, Spring 2005, Spring 2006, Spring 2007, Spring 2008, Spring 2009, Spring 2011, Fall 2011; Fall 2012); Classics of Biology (SDSU; Spring 2008, Spring 2009, Spring 2011, Fall 2011);

Other guest lecturer: Ecological Metagenomics (SDSU; Spring 2013); Section of BIO610 (SDSU; Spring 2004, 2005, 2006, 2011); Classical, Genomic, and Metagenomic approaches to Taxonomy. Petropolis, Brazil. 2008. Co-taught 1 week course with Fabiano Thompson and Tom Coenye.; Marine Ecological Processes for the CSU Ocean Studies Institute. Semester long field course for CSU students at the Wrigley Catalina field station with Veronica Casa; Edwin W. Pauley 2003 Summer Program: Assessing the Health of Pacific Corals. Intensive summer course at Coconut Island with Mya Breitbart;

Computational Biology session for COMP 600 Seminar: Problems in Computational Science (SDSU; Fall 2002 & 2003); Eukaryotic and Prokaryotic Molecular Biology (BIO550; SDSU Fall 1997); Independent Applied Research (IAR) and Naval Research Enterprise Intern Program (NREIP; SPAWAR; Point Loma; 2005); Biogeochemistry (Geology Dept.; Stanford; 2005, 2007); Marine Microbial Ecology (SIO; 1999, 2002, 2005, 2012); General Microbiology (BIO350, SDSU; 2001, 2003, 2005); Microbial Ecology (SDSU; 2002); Integrative Microbiology (UCSD; 2004, 2005, 2009, 2010, 2011, 2012); IGERT Conservation Biology (SIO; 2004, 2008, 2009, 2010); Marine Microbiology (UCSD; 2005, 2006, 2009, 2010); Marine Biology (SIO; 2006, 2007, 2008, 2010, 2011, 2012, 2014, 2015); Marine Microbiology (Hopkins Marine Station; Stanford; 2008, 2010); Earth Systems (UCSB; 2011), Marine Biology (Penn State University; 2012; 2013); Science Technology Engineering Mathematics (STEM) program (SDSU; 2012).

Teaching Assistantships: Microbiology (College of Idaho; 1989), Principles of Biology (College of Idaho; 1990), Botany (College of Idaho; 1990), Organic Chemistry (College of Idaho; 1991), Cell Biology (SDSU; 1992, 1993), and Recombinant DNA (SDSU; 1996, 1997)

Publications

Books

Life in Our Phage World. **Forest Rohwer**, Merry Youle, Heather Maughan, Nao Hisakawa. Illustrations by Leah Pantea and Ben Darby. 2015. Wholon.

Coral Reefs in the Microbial Seas. **Forest Rohwer** with Merry Youle. Illustrations by Derek Vosten. 2010. Plaid Productions.

Patent

High-throughput methods for quantifying cells in environmental and laboratory samples (October 2013)
US 8,563,251 B2.

In review/revision/preparation

Rohwer F, AK Gregg, L Coleman, S Freeman, B Bailey, K Barott, AM Friedlander, E Dinsdale, J Li, S Sandin, A Scotland, A Trindade, Mark Vermeij, RA Edwards (in prep) Remote imaging of five coral reefs in the Line Islands.

Seguritan V, T Craig, D Lorimer, A Raymond, K Barott, M Haynes, **F Rohwer**. A Burgin Jr., AM Segall (in prep) Evolutionary diversity of environmental viruses: structural conservation and a novel fold in a structural protein revealed by combining metagenomics, metaproteomics, artificial neural networks, and crystallography

Haas, AF, MFM Fairoz, Ben Knowles, N Hisakawa, O Pantos, M Hatay, N Kuntz, L Wegley-Kelly, L Dinsdale, **F Rohwer** (in prep) Algal dominance of tropical reefs is associated with depleted dissolved organic carbon and elevated bacterioplankton concentrations.

Hester E, J Nulton, **F Rohwer**, K Barott (in prep) The plasticity of bacterial communities associated with coral and algal holobionts.

Cuevas DA, D Garza, SE Sanchez, J Rostron, C Henry, V Vonstein, RA Overbeek, **F Rohwer**, EA Dinsdale, RA Edwards (in review) Elucidating genomic gaps using phenotypic profiles. F1000

Lorimer DD, TR Craig, V Seguritan, RA Edwards, AB Burgin, **F Rohwer**, AM Segall (in review) An unknown phage protein, VCID6010, from the marine environment. CASP11 competition.

Sandin SA, JE Smith, JE Caselle, EE DeMartini, AM Friedlander, JM Gove, SL Hamilton, **F Rohwer**, ID Williams, BJ Zgliczynski, E Sala (in prep) Bottom-up control among top-heavy coral reefs

Reyes A, LV Blanton, S Cao, G Zhao, MJ Manary, I Trehan, F Rohwer, D Wang, HW Virgin, JI Gordon (in prep) The gut DNA viromes of Malawian twins discordant for severe acute undernutrition

Smith J, R Brainard, A Carter, SDugas, C Edwards, J Harris, L Lewis, D Obura, **F Rohwer**, E Sala, P Vroom, S Sandin (in review) Re-evaluating the Health of Coral Reef Communities: Baselines & Evidence for Human Impacts across the Central Pacific. Proceeding of the Royal Society B

Published

Sanchez, SE, DA Cuevas, JE Rostron, TY Liang, CG Pivaroff, MR Haynes, J Nulton, B Felts, BA Bailey, P Salamon, RA Edwards, A Burgin, A Segall, **F Rohwer** (in press) Phage Phenomics: Physiological approaches to characterize novel viral proteins. JOVE.

- Quinn RA, K Whiteson, YW Lim, P Salamon, S Mienardi, D Blake, D Conrad **F Rohwer** (2014) A Winogradsky-based culture model of the Cystic Fibrosis microbial community reveals an association of microbial fermentation with pulmonary exacerbation. ISME.
- Hevroni G, H Enav, F Rohwer, O Béjà (2014) Diversity of viral photosystem-I psaA genes. ISME.
- Zarei S, A Mirtar, **F Rohwer**, P Salamon (2014) Stochastic tracking of infection in a CF lung. PLoS One. > Cystic Fibrosis New Today
- Grasis JA, T Lachnit, F Anton-Erxleben, YW Lim, R Schmieder, S Fraune, S Franzenburg, M Haynes, GM Machado, M Little, R Kimble, P Rosenstiel, **F Rohwer**, T Bosch (2014) Species-specific viromes in the ancestral holobiont Hydra. PLoS One.
- Lim YW, DA Cuevas, GGZ Silva, K Aguinaldo, E Dinsdale, AF Haas, M Hatay, SE Sanchez, L Wegley Kelly, BE Dutilh, TT Harkins, CC Lee, W Tom, SA Sandin, J Smith, B Zgliczynski, MJA Vermeij, **F Rohwer**, RA Edwards (2014) Sequencing at sea: Challenges and experiences in Ion Torrent PGM sequencing during the 2013 Southern Line Islands Research Expedition. PEERJ > top 20 papers in PEERJ for 2014
- Haas, AF, B Knowles, YW Lim, T McDole-Somera, L Wegley-Kelly, M Hatay, **F Rohwer** (in press) Unraveling the unseen players in the ocean - a field guild to water chemistry and marine microbiology. JoVE.
- Lim, YW, M Haynes, M Furlan, CE Robertson, JK Harris, **F Rohwer** (2014) Purifying the impure: Sequencing metagenomes and metatranscriptomes from complex animal-associated samples. JoVE.
- Maureen A. O'Malley, I Brigandt, AC Love, JW Crawford, JA Gilbert, R Rob Knight, SD Mitchell, **F Rohwer** (2014) Multilevel research strategies and biological systems
- Wegley Kelly, L, GJ Williams, KL Barott, CA Carlson, EA Dinsdale, RA Edwards, AF Haas, M Haynes, YW Lim, T McDole, CE Nelson, E Sala, SA Sandin, JE Smith, MJA Vermeij, M Youle, **F Rohwer** (2014) Local genomic adaptation of coral and algal-associated microbiomes to gradients of natural variability and anthropogenic stressors. PNAS.
- *150 publications
- Quistad SD, A Stotland, KL Barott, C Smurthweites, B Hilton, J Grasis, R Wolkowicz, **F Rohwer** (2014) The evolution of TNF-induced apoptosis reveals 550 million years of functional conservation. PNAS. > written up in the Scientist, Science Codex, National Geography > used to prove Intelligent Design in Evolution News & Views
- Garg NQ, C Kapon, YW Lim, N Koyama, MJA Vermeij, D Conrad, **F Rohwer**, PC Dorrestein (2014) Mass spectral similarity for untargeted metabolomics data analysis of complex mixtures. International Journal of Mass Spectrometry.
- Salamon, P, B Andersen, KH Hoffmann, K Schmidt, A Segall, **F Rohwer** (2014) Free energies of choreographing and perpetual motion machines of the third kind. put online by Salamon at http://sci.sdsu.edu/~salamon/Perp_Motion3posted.pdf. suppose to come out in volume 157 of Advances in Chemical Physics.
- Quinn R, YW Lim, H Maughan, D Conrad, **F Rohwer**, K Whiteson (2014) Biogeochemical forces shape the composition and physiology of polymicrobial communities in the Cystic Fibrosis lung. Molecular Microbiology. 5(2). 1-13. > highlighted in Nature Reviews Microbiology " A metabolic milieu"
- Freeman SE, **F Rohwer**, AK Gregg, L Coleman, AM Friedlander, MJ Buckingham (2014) The origins of ambient biological sound in shallow-water coral reef ecosystems: Not just snapping shrimp? > featured in CIFAR report
- Whiteson KL, S Meinardi, YW Lim, R Schmieder, H Maughan, DR Blake, D Conrad, **F Rohwer** (2014) Breath gas metabolites and bacterial metagenomes from Cystic Fibrosis airways indicate active pH neutral 2,3-butanedione fermentation. ISME. > Union Tribune video. <http://www.utsandiego.com/news/2014/feb/20/health-cysticfibrosis-SDSU/>
- Lim YW, JS Evangelista, R Schmieder, B Bailey, M Haynes, M Furlan, R Edwards, **F Rohwer**, D Conrad (2013) Clinical insights from metagenomic analysis of sputum samples from patients with Cystic Fibrosis. Journal of Clinical Microbiology.
- Kryshtafovych A, Moulton J, Bales P, Bazan JF, Biasini M, Burgin A, Chen C, Cochran FV, Craig TK, Das R, Fass D, Garcia-Doval C, Herzberg O, Lorimer D, Luecke H, Ma X, Nelson DC, van Raaij MJ,

- Rohwer F**, Segall A, Seguritan V, Zeth K, Schwede T (2013) Challenging the state-of-the-art in protein structure prediction: Highlights of experimental target structures for the 10th Critical Assessment of Techniques for Protein Structure Prediction Experiment CASP10. *Proteins*, accepted.
- Reyes A, M Wu, N McNulty, **F Rohwer**, JI Gordon (2013) A gnotobiotic mouse model of phage-bacterial host dynamics in the human gut. *PNAS*.
- Barr JJ, M Youle, F Rohwer (2013) Innate and acquired bacteriophage-mediated immunity. *Bacteriophage*. > opinion piece
- Haas AF, CE Nelson, **F Rohwer**, L Wegley-Kelly, S Quistad, Mark Hatay, CA Carlson, JJ Leichter, JE Smith (2013) Influence of coral and algal exudates on microbially mediated reef metabolism. *PEERJ*.
> part of Line Islands series
- Gregg AK, M Hatay, AF Haas, K Barott, MJA Vermeij, K Marhaver, P Meirelles, F Thompson, **F Rohwer** (2013) Biological oxygen demand optode analysis of coral reef-associated microbial communities exposed to algal exudates. *PeerJ*.
> part of Line Islands series
- Haas AF, A Gregg, M Hatay, JE Smith, **F Rohwer** (2013) Visualization of dissolved oxygen distribution patterns generated by coral reef algae. *PeerJ*.
> part of Line Islands series
- Barr JJ, R Auro, M Furlan, KL Whiteson, ML Erb, J Pogliano, A Stotland, R Wolkowicz, AS Cutting, KS Doran, P Salamon, M Youle, **F Rohwer** (2013) Bacteriophage adhering to mucus provide a non-host-derived immunity. *PNAS*. 110 (26) 10771–10776, doi: 10.1073/pnas.1305923110
> Nature, The Economist, RedditBio, Spectrum, National Geographic, Science Magazine, Science News, The Tree of Life, Imperial Valley News, BioTechniques, BioSpectrum Asia, Daily Me, Bioscience Technology, Edit Hot, Southwest Riverside County News, Medill Reports, BioSpace, FOX5 San Diego & other FOX affiliates around the country, The Scientist, Science/AAAS - News, MediLexicon, Medical Xpress, Science News, The Times of Northwest Indiana, Digital Journal, Giz Mag, Democratic Underground, Before It's News, Medical News Today, Small Things Considered, Faculty of 1000, NPR
- Lim YW, R Schmieder, M Furlan, M Haynes, TD Matthews, K Whiteson, D Conrad, RE, **F Rohwer** (2013) Mechanistic model of *Rothia mucilaginosa* adaptations towards persistence in CF lung through a genome reconstructed from metagenomic data. *PLoS One*.
- Mokili JL, BE Dutilh, YW Lim, BS Schneider, T Taylor, MR Haynes, WK Bergman, D Metzgar, C Myers, PJ Blair, B Nosrat, ND Wolfe, **F Rohwer** (2013) Identification of a novel human papillomavirus by metagenomic analysis of samples from patients with febrile respiratory illness. *PLoS One*.
- Gordon J, N Knowlton, DA Relman, **F Rohwer**, M Youle (2013) Superorganisms and Holobionts. *Microbe*.
>letter
- Conrad D, M Haynes, P Salamon, PB Rainey, **F Rohwer** (2013) Cystic Fibrosis therapy: a community ecology perspective. *American Journal of Respiratory Cell and Molecular Biology*.
- Frank JA, D Lorimer, M Youle, P Witte, T Craig, J Abendroth, **F Rohwer**, RA Edwards, AM Segall, AB Burgin Jr (2013) Structure and function of a cyanophage-encoded peptide deformylase. *ISME Journal*.
> Faculty of 1000
> Small Things Consider <http://schaechter.asmblog.org/schaechter/2013/03/when-a-good-peptide-deformylase-gets-better.html>
- Nelson, CE, SJ Goldberg, LW Kelly, AF Haas, JE Smith, **F Rohwer**, and CA Carlson (2012) Coral and macroalgal exudates vary in neutral sugar composition and differentially enrich reef bacterioplankton lineages. *ISME Journal*. 1-17.
- Youle, M, M Haynes, **F Rohwer** (2012) Scratching the surface of biology's dark matter. In *Viruses: Essential Agents of Life*. Springer (Ed. G. Witzany).
>book chapter
- Rohwer F**, K Barott (Halloween 2012; hard copy in 2013) Viral information. *Biology and Philosophy*. 28 (2). 283-297.

- Zarei S, A Mirtar, **F Rohwer**, DJ Conrad, RJ Theilmann, P Salamon (2012) Mucus distribution model in a lung with cystic fibrosis. *Computational and Mathematical Methods in Medicine*. 1-8.
doi:10.1155/2012/970809
- Cassman N, A Prieto-Davó, K Walsh, GGZ Silva, F Angly, S Akhter, K Barott, J Busch, T McDole, JM Haggerty, D Willner, G Alarcón, O Ulloa, EF DeLong, B Dulith, **F Rohwer**, EA Dinsdale (2012) Oxygen minimum zones harbor novel viral communities with low diversity. *Environmental Microbiology*. 14(11) 3043-3065.
- Barott KL, **F Rohwer** (2012) Unseen players shape benthic competition on coral reefs. *Trends in Microbiology*. <http://dx.doi.org/10.1016/j.tim.2012.08.004>.
> cover
- Janouškovec J, A Horák, KL Barott, **F Rohwer**, PJ Keeling (2012) Environmental distribution of coral-associated relatives of apicomplexan parasites. *ISME Journal*. 1-12.
- Reyes A, NP Semenkovich, K Whiteson, **F Rohwer**, JI Gordon (2012) Going viral: Next-generation sequencing applied to phage populations in the human gut. *Nature Reviews Microbiology*. 10: 607-617.
- Lim YW, R Schmieder, M Haynes, M Furlan, D Willner, K Abbott, R Edwards, J Evangelista, D Conrad, **F Rohwer** (2012) Analysis of metagenomic and metatranscriptomic approaches for cystic fibrosis-associated viral and microbial communities. *Journal of Cystic Fibrosis*.
- McDole T, J Nulton, K Barrott, B Felts, C Felts, M Hatay, H Lee, M Nadon, B Nosrat, P Salamon, SA Sandin, B Vargas-Angel, M Youle, B Zgliczynski, RE Brainard, **F Rohwer** (2012) Assessing coral reefs on a pacific-wide scale using the microbialization score. *PLoS One*. 7(9): e43233.
- Marhaver KL, MJA Vermeij, **F Rohwer**, SA Sandin (2012) Janzen-Connell effects in a broadcast-spawning Caribbean coral: Distance-dependent survival of larvae and settlers. *Ecology*.
<http://dx.doi.org/10.1890/12-0985.1>
> Faculty of 1000
- Youle M, **F Rohwer**, M Whitely, BC Steel, NJ Delalez, AL Nord, RM Berry, JP. Armitage, S Kamoun, S Hogenhout, SP. Diggle, J Gurney, EJG Pollitt, A Boetius, SC Cary (2012) The 100 Meter Sprint section of *The Microbial Olympics*. *Nature Reviews Microbiology*. 10(8): 583-588.
>a parody on a Perspectives article
- Barott KL, GJ Williams, MJA Vermeij, J Harris, JE Smith, **F Rohwer**, S Sandin (2012) Natural history of coral-algae competition across a gradient of human activity in the line islands. *Marine Ecology Progress Series*. 460: 1-12.
> featured article in *Marine Ecology Progress Series*
- Janouškovec J, A Horák, KL Barott, **F Rohwer**, PJ Keeling (2012) Global analysis of plastid diversity reveals apicomplexan-related lineages in coral reefs. *Current Biology*. 22(13): R518-R519.
- Angly F, D Willner, **F Rohwer**, P Hugenholtz, G Tyson (2012) Grinder: A versatile sequence amplicon and shotgun sequence simulator. *Nucleic Acids Research*. 40(12): e94.
- Djamali E, J Nulton, P Turner, **F Rohwer**, P Salamon (2012) Heat output by marine microbial and viral communities. *Journal of Non-Equilibrium Thermodynamics*. 37(3): 291-313.
- Dutilh BE, **F Rohwer**, J Mokili (2012) Metagenomics and future perspectives in virus discovery. *Current Opinion in Virology*. 2(1): 63-77.
- Rohwer F** (2012) Phage An Important Evolutionary Force Darwin Never Knew. In *Microbes and Evolution: The World That Darwin Never Saw*. ASM Press (Eds. Maloy S, R Kolter)
doi:10.1128/9781555815400ch9.
> book chapter
- Barott KL, B Rodriguez-Brito, M Youle, KL Marhaver, MJA Vermeij, JE Smith, **F Rohwer** (2011) Microbial to reef scale interactions between the reef-building coral *Montastraea annularis* and benthic algae. *Proceedings of the Royal Society B*. 279(1733): 1655-1664.
- Pride DT, J Salzman, M Haynes, **F Rohwer**, C Davis-Long, RA White III, P Loomer, GC Armitage, DA Relman (2011) Evidence of a robust resident bacteriophage population revealed through analysis of the human salivary virome. *The ISME Journal*. 6: 915-926.
- Haas AF, CE Nelson, L Wegley Kelly, CA Carlson, **F Rohwer**, JJ Leichter, JE Smith (2011) Effects of coral reef benthic primary producers on dissolved organic carbon and microbial activity. *PLoS One*. 6(11): e27973.

- Ghai R, L Pasic, AB Fernandez, AB Martin-Cuadrado, CM Mizuno, KD McMahon, RT Papke, R Stepanauskas, B Rodriguez-Brito, **F Rohwer**, C Sanchez-Porro, A Ventosa, F Rodriguez-Valera (2011) New abundant microbial groups in aquatic hypersaline environments. *Scientific Reports*. 1: 135. doi:10.1038/srep00135
- Willner D, MR Haynes, M Furlan, N Hanson, B Kirby, YW Lim, PV Rainey, R Schmieder, M Youle, D Conrad, **F Rohwer** (2011) Case studies of the spatial heterogeneity of DNA viruses in the cystic fibrosis lung. *American Journal of Respiratory Cell and Molecular Biology*. 46(2): 127-131.
> ASM's blog, Small Things Considered.
<http://schaechter.asmblog.org/schaechter/2011/10/bacteria-living-without-phages.html>
> <http://www.mdlinx.com/internal-medicine/news-article.cfm/3783403>
- Wegley Kelly L, KL Barott, E Dinsdale, B Nosrat, D Obura, S Sandin, JE Smith, D Willner, **F Rohwer** (2011) Black reefs: Iron-induced phase shifts on coral reefs. *The ISME Journal*. 6(3): 638-649.
> highlight in *Nature* (September 15, 2011)
> National Geographic <http://newswatch.nationalgeographic.com/2011/09/01/black-reefs-when-the-ship-hits-the-reef/>
> Jonathan Eisen's blog, The Tree of Life. <http://phylogenomics.blogspot.com/2011/09/forest-rohwer-that-is-on-black-reefs.html>
> ASM's blog, Small Things Considered.
<http://schaechter.asmblog.org/schaechter/2011/10/shipwreck-microbiology.html>
> <http://reefbuilders.com/2011/09/15/iron-black-reefs/>
> <http://www.cmas.org/114-38854.php>
> <http://uwtreasures.wordpress.com/2011/09/02/black-reefs%E2%80%93when-the-ship-hits-the-reef/>
- Willner D, MR Haynes, M Furlan, R Schmieder, YW Lim, PB Rainey, **F Rohwer**, D Conrad (2011) Spatial distribution of microbial communities in the cystic fibrosis lung. *The ISME Journal*. 6: 471-474.
- Ng TFF, D Willner, YW Lim, R Schmieder, B Chau, C Nilsson, S Anthony, Y Ruan, **F Rohwer**, M Breitbart (2011) Broad surveys of DNA viral diversity obtained through viral metagenomics of mosquitoes. *PLoS One*. 6 (6): e20579.
- Rohwer F**, M Youle (2011) Consider something viral in your research. *Nature Reviews Microbiology*. 9(5): 308-309.
- Barott KL, B Rodriguez-Brito, J Janouškovec, P Keeling, **F Rohwer** (2011) Microbial diversity associated with four functional groups of benthic reef algae and the reef-building coral *Montastraea annularis*. *Environmental Microbiology*. 13(5): 1192-1204.
- Sharon I, N Battchikova, E Mi Aro, C Giglione, T Meinel, F Glaser, RY Pinter, M Breitbart, **F Rohwer**, O Beja (2011) Comparative metagenomics of microbial traits within oceanic viral communities. *The ISME Journal*. 5(7): 1178-1190.
- Desnues CG, B Rodriguez-Brito, S Rayhawk, S Kelley, T Tran, M Haynes, H Liu, M Furlan, L Wegley, B Chau, Y Ruan, D Hall, FE Angly, RA Edwards, L Li, RV Thurber, P Reid, J Siefert, V Souza, DL Valentine, BK Swan, M Breitbart, **F Rohwer** (2011) Biodiversity and biogeography of phages in modern stromatolites and thrombolites. In *Handbook of Molecular Microbial Ecology II. Metagenomics in Different Habitats*. Wiley. (Ed. FJ de Bruijn) Wiley.
> book chapter
- Haynes M, **F Rohwer** (2011) The human virome. In *Metagenomics of the Human Body*. Springer. (Ed. KE Nelson).
> book chapter
- *100th publication**
- Dinsdale EA, **F Rohwer** (2011) Fish or germs? Microbial dynamics associated with changing trophic structures on coral reefs. In *Coral Reefs: An Ecosystem in Transition*. Springer (Eds. Dubinsky Z, N Stambler).
> book chapter
- Willner D, C Desnues, **F Rohwer** (2011) Viral metagenomics: From fish slime to the world. In *Metagenomics and its Applications in Agriculture, Biomedicine and Environmental Studies*. Nova Science Publishers (Ed. RW Li).
> book chapter

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General Write-ups of the Lab/Interviews/Documentaries/Outreach

- Year of the Phage Meeting. SDSU. 2015.
> phage2015.org
> <http://www.newyorker.com/tech/elements/phage-killer-viral-dark-matter>
- Nat Geo for the Franz Josef Land expedition. 2014.
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- In Defense of Viruses. *BioBriefs*. 2014.
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- Shark Eden. National Geographic documentary 2010.
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http://www.comedycentral.com/motherload/index.jhtml?ml_video=89057)
- The Coral Reef Multimedia Project booth at International Society for Coral Reefs conference 2008.
- Smithsonian's Ocean Hall project (2008)
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- Live Science (June 2007; http://www.livescience.com/environment/070620_microbes_corals.html)
- Science News (June 2, 2007)
- Cosmos Online (February 2007; <http://www.cosmosmagazine.com/node/1024>)
- Nature (May 2007, vol 447)
- Genome Technology (May 2006)
- Nature (June 2006, vol 441)
- First Phage Art Show
- American Society of Microbiology. 2005.
- National Science Foundation. 2007-2009.
- The Phage Arboretum (<http://salmonella.utmem.edu/phage/tree/>). This is a website for phage genome analyses and comparisons designed by Rob Edwards and myself.
- FastGroup II (<http://phage.sdsu.edu/project1/fastgroup.html>): This website dereplicates large libraries of 16S rDNAs and provides statistics on the microbial community. It is based on an algorithm developed in Seguritan and Rohwer (2001) *FastGroup: A program to dereplicate libraries of 16S rDNA sequences*. *BMC Bioinformatics*. 2 (9).

PHACCS

Department, COS and University Service

Immunologist Search Committee (2014-)
VII Search Committees (2014-)
Conflict of Interest Committee (2012-2014)
Retention, Tenure, Promotion (Fall 2012)
Combined Innate Immunologist & Virology Search Committee (2006)
Microbiologist Search Committee (2007)
Biomathematician Search Committee (2006)
CMB Master's Student Admission Committee (2003-2009)
Joint Doctoral Program Executive Committee (2004-2008)
Radiation Safety Committee (2005-2008)

Presentations, Meetings and External Service

Moss Marine Research Station. Moss Landing, CA. 2015. invited speaker.
SDSU. Year of the Phage. 2015. meeting organizer.
SIO. Marine Ecology. 2015. invited speaker.
SDSU Research Foundation Board meeting. 2014. invited speaker.
The Institute for Advance Studies. Princeton, NJ. 2014. chalk talk to Stanislas Leibler's group.
Point Loma Nazarene. Perspectives on Science. 2014. invited speaker.
U Nebraska, Lincoln. 2014. invited speaker.
Isaac Newton Institute. 2014. two talks.
Federal University Rio de Janeiro. 2014. two invited talks.
Gordon and Betty Moore Foundation. Palo Alto, CA. 2014. speaker.
California Academy of Sciences. San Francisco, CA. 2014. invited speaker.
Renaissance Weekend. Monterey, CA. 2014. speaker, panelist, led a microbiology tour of the aquarium
CIFAR annual meeting. Czech Republic. 2014. speaker.
ASM meeting workshop on viromic methods. Boston, MA. 2014. invited speaker.
NSF Post-doctoral panel. Ocean Sciences. 2014. panelist.
UGA. 2014. Athens, GA. invited speaker.
CMIL Open House. San Diego, CA. 2014. invited speaker.
UW at Madison. 2014. Darwin Days. invited speaker.
Lucigen. 2014. Madison. invited speaker.
Stanford. 2014. Quantitative Biology. invited speaker.
Annual Reviews in Microbiology annual meeting. San Diego. 2014. guest.
SDSU. Arctic and Southern Line Islands talks by Yanwei and Steve. 2013.
SDMG. San Diego, CA. 2013. invited speaker.
Microbiome/Microbiota R&D Business Collaboration Forum. San Diego, CA. 2013. invited speaker.
MEBSA at CMIL. San Diego, CA. 2013. invited speaker.
Stanfest. San Diego, CA. 2013.
Australian Society of Microbiology. 2013. plenary speaker and 3 other talks.
Hopkins Marine Microbiology Course. Hopkins Marine Station. 2013. invited speaker.
III Summit on Evolution. San Cristobal Island, Galapagos. 2013. invited speaker.
Sample Prep. San Diego, CA. 2013. invited speaker.
NOVA Southeastern University. Fort Lauderdale, FL. 2013. invited speaker.
National Research Council. Washington, DC. 2013. invited speaker.
Philosophy of Science Association. San Diego, CA. 2012. invited speaker.
UC Riverside. Riverside, CA. 2012. invited speaker.
Vertex. San Diego, CA. 2012. invited speaker.
Oregon Health Sciences University. Portland, OR. 2012. invited speaker.
Portland State University. Portland, OR. 2012. invited speaker.
Centro de Investigación Científica y de Educación Superior de Ensenada (CICESE). Baja, CA.
SDSU/CICESE joint meeting. Ensenada, Mexico. 2012. invited speaker.
19th Annual International Meeting on Microbial Genomics. Lake Arrowhead, CA. 2012. invited speaker.
Syracus University Medical School annual meeting. Syracus, NY. 2012. invited speaker.

International Society Microbial Ecology (ISME). Copenhagen, Denmark. 2012. invited speaker and session organizer with Nancy Moran.

Cystic Fibrosis meeting. Copenhagen, Denmark. 2012. organizer with Sorin Molin.

Viruses of Microbes. Brussels, Belgium. 2012. invited speaker.

International Coral Reef Society (ICRS). Cairns, Australia. 2012. speaker.

American Society for Microbiology. San Francisco, CA. 2012. invited speaker.

American Thoracic Society. San Francisco, CA. 2012. invited speaker.

CIFAR. Quebec City, Canada. 2012. participant.

Frontiers in Metagenomics. Columbia, MO. 2012. invited speaker.

Symbiofest. Athen, GA. 2012. plenary speaker.

West Coast Biological Sciences Undergraduate Research Conference. Loyola Marymont University. 2012. plenary speaker.

TriBeta. Alamosa, CO. 2012. plenary speaker.

Keystone Microbiome meeting. 2012. invited speaker.

SDSU Biomedical Technology Students Association. 2012. invited speaker.

AAAS Annual meeting. Vancouver, BC. 2012. invited speaker.

SIO. San Diego, CA. 2012. invited speaker.

UCSB. Santa Barbara, CA. 2012. invited speaker.

CSUBERB. San Clara, CA. 2012. invited speaker.

NOAA planning meeting. 2011. Charleston, SC. invited speaker and participant.

USC. Los Angeles, CA. 2011. invited speaker.

Carmona, Spain. Analytical Genetics. 2011. speaker.

Marseille, France. Human virome. 2011. invited speaker.

Roscoff, France. Environmental Genomics. 2011. invited speaker.

Curacao. Town talk to SCUBA diving group with Mark Vermeij. 2011. speaker.

Telluride Town Talk with Paul Rainey. 2011. invited speaker.

Cystic Fibrosis: Ecology, Evolution, and Eradication. Telluride. 2011. meeting organizer.

Scripps Birch Aquarium. San Diego. 2011. invited speaker.

Presentations to staffers from appropriations and natural resources committees in US Congress. Washington, DC. 2011. with Emily Douce from Marine Conservation Institute.

Forum on Microbial Threats. Washington, DC. 2011. invited speaker.

CIFAR Biodiversity program review. Toronto, Canada. 2011. mini-presentation on research.

Hopkins Marine Station. Environmental Microbiology course. 2011. invited speaker.

Willow's Kindergarten class. Sharks, viruses, SCUBA:) Bernie Elementary. San Diego. 2011. career day.

UC Irvine. 2011. invited speaker.

Symbiosis. Yosemite, CA. 2011. speaker.

U of Wisconsin, Madison. 2011. invited speaker.

Bat Sheva meeting on the Holobiont. Ein Geta, Israel. 2011. two invited talks.

University of Lausanne, Switzerland. Department of Fundamental Microbiology. 2011. invited speaker.

Kavli Institute for Theoretical Physics. UCSB. Santa Barbara, CA. 2011. invited speaker.

UBC. Vancouver, BC. Canada. 2011. invited speaker.

NIH panel on Microbial Communities. Bethesda, MD. 2011. panel member.

NSF Biological Oceanography panel. Arlington, VI. 2011. panel member.

SDSU Biology Department. 2010. invited speaker.

Emerald Biosystems. Bainbridge, WA. 2010. seminar.

Canadian Institute for Advance Research (CIFAR). Seattle, WA. 2010. invited speaker.

Ecology Society of America. Pittsburgh, PA. 2010. speaker.

CFRI annual meeting. San Francisco, CA. 2010. invited speaker.

Hopkins Marine Station. Monterey, CA. 2010. invited speaker.

Australian Society of Microbiology. Sydney, Australia. 2010. invited speaker and panelist.

Halophiles. Beijing, China. 2010. invited speaker.

Viruses of Microbes. Paris, France. 2010. invited speaker.

Aged Anca: Celebrating 50 Years of Ancaness and the Advancement of Science. San Diego. 2010. (dis)organizer.

ASM General meeting. San Diego. 2010. invited speaker.

ASM Conference for Undergraduate Educators. San Diego. 2010. plenary speaker.
 U of Illinois. Chancellors Colloquium on Evolution: Biology and Beyond. Urbana-Champaign, IL. 2010. invited speaker.
 JGI Users Meeting. Walnut Creek, CA. 2010. invited speaker.
 U of Washington. Seattle, WA. 2010. invited speaker.
 Michigan State University. Lansing, MI. 2009. invited speaker.
 Sackler Colloquia. Microbes and Health. Irvine, CA. 2009. invited speaker.
 Symposium on Aquatic Microbial Ecology. Piran, Slovenia. 2009. keynote speaker.
 American Academy of Microbiology colloquium on "Microbial Evolution: The Earth and Its Oceans". Galapagos. 2009. participant.
 Centro Nacional de Biotecnologia. Madrid, Spain. 2009. invited speaker.
 X Congreso S. E. Virologia. Salamanca, Spain. 2009. keynote speaker.
 CIFAR. Asilomar, CA. 2009. participant.
 Sigma Xi. San Diego. 2009. invited speaker.
 UC Santa Barbara. 2009. invited speaker.
 Washington University. St. Louis, MO. 2009. invited speaker.
 Harvard Medical School. Boston. 2009. invited speaker.
 Gordon and Betty Moore Foundation. Phage, Virus and Virome Sequencing Selection Committee. 2008-2009.
 National Institute of General Medical Sciences (NIGMS). NIH. participant to write white paper on dynamics of the human microbiome. 2008.
 ASM Bioinformatics Colloquium. Baltimore. participant. 2008.
 Pennsylvania State University. State College. 2008. invited speaker.
 University of Pennsylvania. Philadelphia. 2008. invited speaker.
 University of Pittsburg. 2008. invited speaker.
 Harvard University. Systems Biology. Cambridge. 2008. invited speaker.
 West Virginia University. Morgantown. 2008. invited speaker.
 ASM Beneficial Microbes. San Diego. 2008. invited speaker.
 Colorado State University. Boulder. 2008. invited speaker.
 Montana State University. Bozeman. 2008. invited speaker.
 MITRE. Washington, DC. 2008. invited speaker.
 International Society of Microbial Ecology (ISME). Cairns, Australia. 2008. invited speaker, Young Investigator Award, and organizer of 2 sessions.
 LNCC General Meeting on Computation and Modeling/CMGT. Petropolis, Brazil. 2008. invited speaker.
 International Society for Coral Reefs. Fort Lauderdale, FL. 2008. invited speaker and poster.
 16th Intergalactic Phage Meeting. Vinalhaven, ME. 2008. speaker.
 New England Biolabs. Ipswich, MA. 2008. invited speaker.
 Hollins Marine Laboratory. Charleston, SC. 2008. invited speaker.
 Canadian Institute for Advanced Research. Microbial Diversity. Montreal. 2008. invited speaker.
 Hopkins Marine Lab. 2008. invited speaker.
 U of Utah. Salt Lake City. 2008. invited speaker.
 UCLA. 2008. invited speaker.
 Advances in Genome Biology and Technology. Marco Island, FL. 2008. invited speaker.
 Duquesne University. Pittsburgh, PA. 2008. invited speaker.
 Viral Paradigms. Atlanta, GA. 2008. invited speaker.
 UC Berkley. 2007. invited speaker.
 Auburn University. 2007. invited speaker.
 Microbial Genomics. College Park, ME. 2007. invited speaker.
 Analytical Genetics. Sweden. 2007. speaker.
 Gordon Research Conference. Functional and structural genomics. Cambridge, UK. 2007. invited speaker.
 Gordon Research Conference. Microbial populations. Proctor Academy. 2007. invited speaker.
 Gordon and Betty Moore Foundation. San Francisco, CA. 2007. invited speaker.
 Metagenomics. 2007. CallT2. San Diego, CA. invited speaker.
 Marine Biology Laboratory in Woods Hole. 2007. invited speaker for Microbial Diversity course.

Cold Spring Harbor Laboratory. 2007. invited speaker for Advanced Microbial Genetics.
Mel Simon's 70th Birthday meeting. San Diego, CA. 2007. participant.
American Museum of Natural History. Center for Biodiversity and Conservation. New York, NY. 2007.
invited speaker.
Cornell University. Ithaca, NY. 2007. invited speaker.
UC Riverside. Environmental sciences. Riverside, CA. 2007. invited speaker.
Next Generation Sequencing. San Diego, CA. 2007. invited speaker.
Mesa College. San Diego, CA. 2007. invited speaker.
Portland State University. Portland, OR. 2007. invited speaker.
University of South Florida. St. Petersburg, FL. 2007. invited speaker.
Georgia Tech. Atlanta, GA. 2007. invited speaker.
Statistically Speaking. 2007. interviewee.
NSF Genomic Symbiosis Panel. 2007. panel member.
National Institutes of Health. Human Microbiome Project. participant. 2007.
Lawrence Livermore National Laboratory. Scientific advisor for biodefense program. 2007.
UC Irvine. 2006. invited speaker.
Maine ScienceCorps Astrobiology. University of Southern Maine. 2006. invited speaker.
Princeton University. Princeton, NJ. 2006. invited speaker.
Metagenomics meeting at CallT2. San Diego, CA. 2006. short talk and session leader.
OBC Terra Microbiology. Okazaki, Japan. 2006. invited speaker.
International Society of Microbial Ecology. Vienna, Austria. 2006. invited speaker, session organizer,
roundtable presenter.
Gordon and Betty Moore Foundation. San Francisco, CA. 2006. invited speaker.
MSI CyberInfrastructure Conference. UCSD Supercomputer Center. 2006. invited speaker.
NASA Astrobiology Virus Focus Group. Lassen Volcanic National Park, CA. 2006. invited speaker.
Cold Spring Harbor Laboratory. 2006. invited speaker for Advanced Sequencing Technologies and
Advanced Microbial Genetics.
Texas/Evergreen Phage Meeting. Kingsville, TX. 2006. invited speaker and roundtable organizer.
National Center for Ecological Analyses and Synthesis (NCEAS). Santa Barbara, CA. 2006. invited
speaker.
Lawrence Livermore National Laboratory. Livermore, CA. 2006. invited speaker.
AbSciCon for Astrobiology. Washington, DC. 2006. keynote & one other talk.
Loyola University. Chicago, IL. 2006. invited speaker.
ACSESS. Computational Sciences SDSU. 2006. invited speaker.
Scripps Institution of Oceanography. Farooq Azam Symposium. San Diego, CA. 2006. invited speaker.
Keystone Conference. Microbial community genomics in animals and in the environment. Tahoe, CA.
2006. invited speaker.
Focus DX. Long Beach, CA. 2006. invited speaker.
Cyberinfrastructure for Advanced Marine Microbial Ecology Research and Analysis (CAMERA) at UCSD
Calit2. San Diego, CA. 2006-2007. Scientific Advisory Board member.
NSF Genomic Sequencing Panel. 2006. panel member.
Sackler National Academy conference series. Tapestry of Life. Irvine, CA. 2005. invited speaker.
University of Pennsylvania Medical School. Philadelphia, PA. 2005. invited speaker.
Agouron Institute: Microbial Mats. San Diego, CA. 2005. invited speaker.
Genomes, Medicine, and the Environment. Hilton Head, SC. 2005. invited speaker.
Analytical Genetics. San Diego, CA. 2005. speaker.
International Union of Microbiological Societies. San Francisco, CA. 2005. keynote speaker.
Gordon and Betty Moore Foundation. San Francisco, CA. 2005. invited speaker.
American Society of Microbiology. Atlanta, GA. 2005. invited speaker (2 talks) and "Phage Art Show"
Canadian Institute for Advanced Research. Vancouver, BC. 2005. invited speaker.
Alfred P. Sloan Foundation International Census of Marine Microbes (ICoMM) conference. Honolulu, HI.
2005. invited speaker, participant, and organizing committee.
The Future of Marine Biodiversity: The Known, Unknown, and Unknowable (KUU) conference. SIO. San
Diego, CA. 2005. participant.
Marine Microbial Diversity Colloquium. American Academy of Microbiology. San Francisco, CA. 2005.

Biocomplexity Pls meeting. Washington, DC. 2005. participant.
 National Oceanography Partnership Program. Monitoring and Measurement of the Ocean "Genome".
 Washington, DC. 2005. participant and focus group leader.
 Scripps Institution of Oceanography. 2005. invited speaker.
 Deep Underground Science and Engineering Laboratory (DUSEL) workshop. Boulder, CO. 2005. invited
 participant.
 Alfred P. Sloan Foundation International Census of Marine Microbes (ICoMM) conference. Honolulu, HI.
 2005. invited speaker, participant, and organizing committee.
 The Future of Marine Biodiversity: The Known, Unknown, and Unknowable (KUU) conference. SIO. San
 Diego, CA. 2005. participant.
 National Oceanography Partnership Program. Monitoring and Measurement of the Ocean "Genome".
 Washington, DC. 2005. participant.
 Marine Microbial Diversity Colloquium. American Academy of Microbiology. San Francisco, CA. 2004.
 ASM Conference on the New Phage Biology. Miami, FL. 2004. Session organizer for "Phage Ecology and
 Taxonomy".
 American Society of Limnology and Oceanography Annual Meeting. Honolulu. 2004. Session organizer
 for "Marine Viromics".
 CoML Coral Workshop planning committee (2004); Planning meeting August 2004 on Coconut Island.
 Hopkins Marine Station. Monterey, CA. 2004. invited speaker.
 USC. Marine Biology Dept. 2004. invited speaker.
 CSU Long Beach. Biology Dept. 2004. invited speaker.
 UMass Amherst. Microbiology Dept. 2004. invited speaker.
 Canadian Institute for Advanced Research. Evolutionary Biology Program. 2004. invited speaker.
 University of Arizona. Tucson. 2004. invited speaker.
 University of Illinois, Champaign-Urbana. 2004. invited speaker.
 ASM Conference on Extremophiles. Cambridge, MD. 2004. invited speaker.
 ASM Conference on the New Phage Biology. Miami, FL. 2004. invited speaker and session organizer.
 10th International Coral Reef Symposium. Okinawa, Japan. 2004. speaker and session leader.
 NASA Astrobiology Institute-Viral Focus Group workshop. Mono-Mammoth Lakes. 2004. invited speaker.
 Horizontal Gene Transfer workshop. Washington, DC. 2004. invited speaker.
 American Society of Microbiology. New Orleans, LA. 2004. invited speaker.
 San Diego Microbiology Group Annual Meeting. San Diego. 2004. speaker.
 University of Minnesota. 2004. invited speaker.
 American Society of Limnology and Oceanography Annual Meeting. Honolulu. 2004. invited speaker and
 session organizer.
 UW, Seattle. 2004. invited speaker.
 SUNY Albany. 2004. invited speaker.
 Genomics Institute of Singapore. 2003. invited speaker.
 NASA Astrobiology Institute Virus focus group workshop. Portland, OR. 2003. keynote speaker.
 UT Austin. 2003. invited speaker.
 Roseophage annotation seminar. The Institute for Genomic Research. Rockville, MD. 2003. invited
 participant.
 Illeme Cycle Romand en Sciences Biologiques. War and Peace Between Kingdoms: Interaction Between
 Micro and Macro Organisms. 2003. Villars-sur-Ollon, Switzerland. invited speaker.
 Oceans 2003. San Diego, CA. speaker.
 SDSU Biosymposium. 2003. invited speaker.
 Molecular Genetics of Bacteria and Phages. Madison, WI. 2003. speaker.
 Lucigen Corp., Madison, WI. 2003. invited speaker.
 Maloy Fest. Madison, WI. 2003. speaker.
 Gordon Conference on Microbial Populations. 2003. invited speaker.
 Metagenomics 2003: from microbial diversity to function. 2003. speaker.
 American Society of Microbiology. Washington DC. 2003. invited speaker.
 San Diego Microbiology Group Annual Meeting. San Diego. 2003. speaker.
 Coral Reef Health Meeting. Eliat, Israel. 2003. invited speaker.
 Los Angeles County Museum. 2003. invited speaker.

San Diego State University. Biology Department. 2003. invited speaker.
American Society of Limnology and Oceanography Annual Meeting. Salt Lake City. 2003. speaker.
San Diego Microbiology Group. San Diego. 2002. invited speaker.
University of South Florida. College of Marine Sciences. St. Petersburg. 2002. invited speaker.
Analytical Genetics Workshop. Santorini, Greece. 2002. invited speaker.
National Environmental Research Institute. Dept. of Environmental Chemistry and Microbiology.
Denmark. 2002. invited speaker.
Kalmar University. Sweden. 2002. invited speaker.
International Society of Reef Studies European Meeting. Cambridge. 2002. speaker.
American Society for Microbiology General Meeting. Salt Lake City. 2002. poster.
San Diego Microbiology Group Annual Meeting. 2002. speaker.
CSU Fullerton. Biology Dept. 2002. invited speaker.
American Society of Limnology and Oceanography Annual Meeting. Honolulu. 2002. speaker.
University of Puerto Rico, Mayaguez. Marine Biology. 2002. invited speaker.
Texas A&M University. Biology Dept. 2001. invited speaker.
Texas A&M University. Oceanography Dept. 2001. invited speaker.
American Society for Microbiology - General Meeting. Orlando. 2001. invited speaker.
San Diego Microbiology Group. Annual Meeting. 2001. speaker.
Third Intergalactic Conference on Bacteriophage Evolution. 2001. invited speaker.
San Diego State University. Biology Dept. 2001. invited speaker.
University of Hawaii, Manoa. Microbiology Dept. 2001. invited speaker.
University of Massachusetts, Amherst. Microbiology Dept. 2001. invited speaker.
American Society of Limnology and Oceanography. 2001. speaker.
ASM and TIGR Conference on Microbial Genomes. Monterey, CA. 2001. poster.
NSF Marine Genomics White Paper committee (2000). member.
Scripps Institution of Oceanography. Marine Biology Dept. 2000. invited speaker.
Small Genomes Conference, sponsored by DOE. Arlington, Virginia. 1999. poster.
American Society of Limnology and Oceanography Annual Meeting. Santa Fe, NM. 1999. poster.
American Hematology Society. San Diego, CA. 1998. poster.
Advanced Molecular Biology Lab Manual for Defense Conversion Program at SDSU (1997-1998).
Lymphocyte Activation, Keystone Symposium. Hilton Head, SC. 1996. poster & invited speaker.
Molecular Basis of Transcription Meeting. San Diego, CA. 1995. poster.
Western Conference on Immunology. Berkeley, CA. 1993. poster.

Mentoring

Post-docs

Juris Grasis (2010-), Jeremy Barr (2011-), Katrine Whiteson (2012-), Robby Quinn (2012-), Andi Hass (2013-), Jeremy Frank (2011-2013), Rebecca Vega Thurber (2005-2008; professor at OSU), Elizabeth Dinsdale (2006-2009; professor at SDSU), Christelle Duesnes (2006-2007; professor in Marseille), Linlin Li (2005-2007; researcher at UCSF), Olga Pantos (2004-2006), Cynthia Steiner (2004)

Doctoral Students

Cynthia Sandi Calhoun (CMB; 2013-), Ty Roach (Evolution; 2012-), Steve Quistad (CMB; 2011-), Nate Robinett (Evolution; 2011-), Jamie Zlamal (CMB; 2011; rotation), Yanwei Lim (CMB; 2012-), Ben Knowles (CMB; 2012-), Linda Wegley (CMB; 2008-2013), Dana Willner (CMB; 2007-2010), Katie Barott (CMB; 2008-2012), Tracey McDole (CMB; 2008-2012), Angela Cone (CMB; moved to Zeller lab; Fall 2001), Florent Angly (Comp Sci; 2005-2010), Steve Rayhawk (Comp Sci; 2005-2008; dropped out), Daniel Pick (Comp Sci; 2010-2011; dropped out), Beltran Rodriguez Brito (Comp Sci; 2003-2009), Veronica Casas (CMB; 2003-2005; moved to Maloy lab), Mya Breitbart (CMB; 2001-2006; professor at USF); Davey Kline (Marine Bio; SIO; 2001-2005 with Nancy Knowlton)

Master's Students

Emma George (CMB; 2014-), Mark Little (CMB; 2014-), Lance Boling (CMB; 2012-), Savannah Sanchez (CMB; 2011-), Natasha Talago (CMB; 2012-), Eric Hester (Bioinformatics; 2012-), Allison Gregg (CMB; 2011-2013), Mike Furlan (CMB; 2005-2010), Yanwei Lim (CMB; 2008-2012; moved to PhD program),

Shailaja Srinagesh (CMB; 2003-2006), Srividya Dasari (CMB; 2005-2007), Tuong Tran (CMB; 2005-2007), Yanan Yu (Comp Sci; 2002-2005), Kerrilynn Yaali-Benson (CMB; 2003-2004), Pat McNairnie (Comp Sci; 2003-2005), Steve Leeds (CMB; 2001-2003), Linda Wegley (CMB; 2004-2008; moved to PhD), Veronica Casas (CMB; 2001-2003; moved to PhD with Maloy)

Undergraduates

Mark Little (CMB; 2011-2014; moved to Masters), Rita Auro (CMB; 2012-2014), Cat Aivati (CMB; 2012), Laura Coleman (CMB; 2012-2013), Tracey Tran (CMB; 2012), Victoria Hosford (City Community College; 2011-2013), Gemma Koor (2010-2011), Katelynn Abbott (2011), Savannah Sanchez (2011; moved to Masters), Robert Kimble (2010-2012), Cullen Pivaroff (2010-2012), Allison Gregg (2009-2010), AJ Shepard (UCSD; 2010), Alejandro Ramirez (2010-2001), Bryant Esquejo (2010), Karen Zablen (2008-2009), Jesimel "Jesi" Marcelo (CMB; 2006-2007), Natalie Katz (2007), Ben Tambaschi (2007), Anne Costanzo (Summer 2008), Nicole Hanson (2008-2009), Lance Boling (2009-2010), Marc Matanza (CMB; Fall 2003), David Bangor (Math; 2003-2005), Marina Teissere (CMB; 2004), Morrigan Shaw (Bridges Program, 2004-2005), John Boreham (CMB; 2005), Tuong Tran (CMB; 2005), Betty Chau (CMB; 2005-2006), Maren Spillane (CMB; Summer 2002-Spring 2003), Serena Telles (CMB; Spring 2003), Heather Balsley (CMB; Spring & Summer 2003), Gina Stanton (CMB; Spring 2003), Suzanne Carlson (CMB; Spring 2003), Talisha Allen-Nelson (CMB; Spring 2003), Danielle Augustin (CMB; Spring 2003), Julie Roark (CMB; Summer 2003), Emiko Sano (CMB; 2003-2004), Masturah Mojadedi (CMB; Spring 2002), Linda Wegley (CMB; 2001-2003; moved to Masters and PhD in CMB), Mike Parks (CMB; Fall 2001), Fernando Ivan Zurito (CMB; Fall 2001), Adrienne Holman (CMB; Fall 2001), Joanalyn Barcas (CMB; Fall 2001), Regina Hernandez (CMB; Fall 2001), Gordafaried Deyanat-Yazdi (CMB; 2001)

High School (starting in 2014)

Cecilia Gonzalez (2014; High Tech High), Zachary Nunn (2014; Telluride)

Researchers and Technicians

Mike Furlan (2010-; tech), Allison Gregg (2011-2012; tech), Nao Hisakawa (2010-2011; computer tech), John Mokili (2008-2011; researcher), Bahador Nosrat (2008-2010; 2011; computer tech), Linda Wegley (2003-2008; tech), Neilan Kuntz (2003-2006; tech), Essmail Djamali (2005-2006; researcher), Matthew Haynes (2003-2012; tech), Jennifer Mueller (2005-2006; tech), Selina Liu (2005-2006; computer tech), Jon Miyake (2003-2004; researcher)

Outside PhD and Masters Committees (starting in 2014)

Marcy Erb (Poligano lab; UCSD; graduated 2013), Byron Pedlar (Azam lab; SIO; graduated 2014), Juan Ugalde (Allen lab; SIO; graduated 2014), Katy Furby (Sandin lab; SIO), Maggie Johnson (Smith lab; SIO), Lee Wang (SDSU Chemistry)