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RESEARCH INTERESTS:

My focus is on microbial community biodiversity and dynamics, bacteria-bacteria interactions and the biogeochemistry of the oceans. My long-term goal is to gain a mechanistic understanding of microbial interactions in the environment in a variety of biological, ecological and hierarchical contexts in direct pursuit of how these dynamic interactions ultimately affect oceanic and human health regionally and on the global scale. My approaches include field observations, field and laboratory experimental systems, (meta)genomic based approaches and modeling.

MANUSCRIPT IN REVISION

(Bold text indicates my students and myself)

- A) Franco SLM, Swenson GJ, Long RA.** Year round patchiness of *Vibrio vulnificus* in a temperate Texas bay. *Accepted with minor revision to Journal of Applied Microbiology.*
- B) Swenson GJ,** Stochastic J., Boland FF, **Long RA.** Elicitation of acid stress response in environmental and clinical strains of enteric bacteria. *Submitted to Frontiers in Biology.*

PUBLICATIONS, PEER REVIEWED

- 26) Xu C, Santschi PH, Hung C-C, Zhang S, Schwehr KA, Roberts KA, Guo L, Gong G-C, Quigg A, **Long RA**, Pinckney J, Duan S, Amon R, Wei C-L. 2011. Controls of ²³⁴Th removal from the oligotrophic ocean by polyuronic acids and modification by microbial activity. *Marine Chemistry* 123: 111-126.
- 25) Pinckney JL, **Long RA**, Paerl HW. 2011. Structural and functional responses of microbial mats to reductions in nutrient and salinity stressors in a Bahamian hypersaline lagoon. *Aquatic Microbial Ecology* 62: 289-298.
- 24) **Luo H**, Zhang H, **Long RA**, Benner R. 2011. Depth distributions of alkaline phosphatase and phosphonate utilization genes in the North Pacific Subtropical Gyre. *Aquatic Microbial Ecology* 62: 61-69.
- 23) Thornton DCO, **Kopac SM, Long RA.** 2010. Production and enzymatic hydrolysis of carbohydrates in intertidal sediment. *Aquatic Microbial Ecology* 60: 109-125.
- 22) Hung CC, Xu C, Santschi PH, Zhang S, Schwehr KA, Quigg A, Guo L, Gong G-C, Pinckney J, **Long RA**, Wei C-L. 2010. Comparative evaluation of sediment trap and (234)Th-derived POC fluxes from the upper oligotrophic waters of the Gulf of Mexico and the subtropical northwestern Pacific Ocean. *Marine Chemistry* 121: 132-144.

- 21) **Luo H**, Benner R, **Long RA**, Hu J. 2009. Subcellular localization of marine bacterial alkaline phosphatases. *Proceedings of the National Academy of Sciences of the United States of America* 106: 21219-21223.
- 20) Wigglesworth-Cooksey B, Cooksey KE, **Long R**. 2007. Antibiotic from the marine environment with antimicrobial fouling activity. *Environmental Toxicology* 22: 275-280.
- 19) Socha AM, **Long RA**, Rowley DC. 2007. Bacillamides from a hypersaline microbial mat bacterium. *Journal of Natural Products* 70: 1793-1795.
- 18) Hamasaki K, Taniguchi A, Tada Y, **Long RA**, Azam F. 2007. Actively growing bacteria in the Inland Sea of Japan, identified by combined bromodeoxyuridine immunocapture and denaturing gradient gel electrophoresis. *Applied and Environmental Microbiology* 73: 2787-2798.
- 17) **Long RA**, Rowley DC, Zamora E, Liu J, Bartlett DH, Azam F. 2005. Antagonistic Interactions among Marine Bacteria Impede the Proliferation of *Vibrio cholerae*. *Appl. Environ. Microbiol.* 71: 8531-8536.
- 16) Hamasaki K, **Long RA**, Azam F. 2004. Individual cell growth rates of marine bacteria, measured by bromodeoxyuridine incorporation. *Aquatic Microbial Ecology* 35: 217-227.
- 15) **Long RA**, Qureshi A, Faulkner DJ, Azam F. 2003. 2-n-pentyl-4-quinolinol produced by a marine *Alteromonas* sp and its potential ecological and biogeochemical roles. *Applied and Environmental Microbiology* 69: 568-576.
- 14) Bidle KD, Brzezinski MA, **Long RA**, Jones JL, Azam F. 2003. Diminished efficiency in the oceanic silica pump caused by bacteria-mediated silica dissolution. *Limnology and Oceanography* 48: 1855-1868.
- 13) Sheehan DP, Lawson J, Sosa M, **Long RA**. 2002. Simple, compact source for low-temperature air plasmas. *Review of Scientific Instruments* 73: 3128-3130.
- 12) Fuchs E, Jaffe JS, **Long RA**, Azam F. 2002. Thin laser light sheet microscope for microbial oceanography. *Optics Express* 10: 145-154.
- 11) **Long RA**, Azam F. 2001. Microscale patchiness of bacterioplankton assemblage richness in seawater. *Aquatic Microbial Ecology* 26: 103-113.
- 10) **Long RA**, Azam F. 2001. Antagonistic interactions among marine pelagic bacteria. *Applied and Environmental Microbiology* 67: 4975-4983.
- 9) Fandino LB, Riemann L, Steward GF, **Long RA**, Azam F. 2001. Variations in bacterial community structure during a dinoflagellate bloom analyzed by DGGE and 16S rDNA sequencing. *Aquatic Microbial Ecology* 23: 119-130.
- 8) Azam F, **Long RA**. 2001. Oceanography - Sea snow microcosms. *Nature* 414: 495-498.
- 7) Del Negro P, **Long RA**, Ramani P, Welker C, Puddu A, Fonda- Umani S, Azam F. 2000. Efficienza del circuito microbico in presenza di mucillagine. *Biol Mar Medit* 7: 214-221.
- 6) Zutic V, Ivosevic N, Svetlicic V, **Long RA**, Azam F. 1999. Film formation by marine bacteria at a model fluid interface. *Aquatic Microbial Ecology* 17: 231-238.
- 5) Pinhassi J, Azam F, Hemphala J, **Long RA**, Martinez J, Zweifel UL, Hagstrom A. 1999. Coupling between bacterioplankton species composition, population dynamics, and organic matter degradation. *Aquatic Microbial Ecology* 17: 13-26.

- 4) Krembs C, Juhl AR, **Long RA**, Azam F. 1998. Nanoscale patchiness of bacteria in lake water studied with the spatial information preservation method. *Limnology and Oceanography* 43: 307-314.
- 3) Azam F, Fandino LB, Grossart H-P, **Long RA**. 1998. Microbial Loop: Its significance in oceanic productivity and global change. *Rapp. Comm. Int. Mer. Medit* 35: 2-3.
- 2) **Long RA**, Azam F. 1996. Abundant protein-containing particles in the sea. *Aquatic Microbial Ecology* 10: 213-221.
- 1) Smith DC, Steward GF, **Long RA**, Azam F. 1995. Bacterial mediation of carbon fluxes during a phytoplankton bloom in a mesocosm. *Deep-Sea Research Part II-Topical Studies in Oceanography* 42: 75-97.

BOOK CHAPTERS, PEER REVIEWED

- 2) Cooksey KE, Wigglesworth-Cooksey B, **Long RA**. 2009. A strategy to pursue in selecting a natural antifoulant: a perspective. Pages 165-178 in Flemming et al., eds. *Marine and Industrial Biofouling*, vol. 4 Springer.
- 1) Azam F, Smith DC, **Long RA**, Steward G. 1995. Bacteria in Oceanic Carbon Cycling as a Molecular Problem. Pages 39-54 in Joint I, ed. *Molecular Ecology of Aquatic Microbes*, vol. 38 Springer.

PUBLICATIONS NOT PEER REVIEWED

- 1) Azam F, Catalano G, Celio M, Cozzi S, Del Negro P, De Vittor C, Falconi C, Fandino L, Fonda-Umani S, Lipizer M, **Long RA**, Mozetič P, Puddu A, Ramani P, Steward G, Welker C, Zaccone R. 1999. Ruolo dei batteri eterotrofi nella trasformazione della sostanza organica essudata dalla frazione microftoplanctonica. Pages 127-153 in Funari E, ed. *Alcuni studi su problematiche sanitarie per la salvaguardia del Mare Adriatico, Prima fase*. Roma: Istituto Superiore di Sanita.

TEACHING RESOURCES PUBLISHED

- 2) **Hyatt M, Swenson G, Long R. 2011.** Molecular Analysis of Bacterial Isolates used as Unknowns in a Bacteriology Laboratory Exercise. Visual Resources. American Society for Microbiology, Washington DC. www.microbelibrary.org (PEER REVIEWED).
- 1B) **Long, R.** 2011. *Microbiology Lab Manual 2.0*. Person Custom Publishing, New City. Pp 336. (Includes original content, NOT PEER REVIEWED).
- 1A) **Long, R.** 2009. *Microbiology Lab Manual*. Person Custom Publishing, New City. Pp 298. (No original content, NOT PEER REVIEWED).