Krista Longnecker

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Education

Ph.D. Oregon State University, 2004, Oceanography

Bacterioplankton in the Oregon upwelling system: Distribution, cell-specific leucine incorporation, and diversity. Advisors: Barry and Evelyn Sherr

M.Sc. Oregon State University, 2001, Oceanography

Microbial diversity of sulfide structures from hydrothermal vent sites at 9°North, Guaymas Basin, and the Juan de Fuca Ridge. Advisor: Anna-Louise Reysenbach

B.S. Yale University, 1993, Biology

Effect of disturbance and competition on the ecology of hydroids and fucoids. Advisors: Leo Buss and Neil Blackstone

Professional experience

Research Specialist. Woods Hole Oceanographic Institution, Marine Chemistry and Geochemistry (2011 to present).

Research Associate III. Woods Hole Oceanographic Institution, Marine Chemistry and Geochemistry (2009 to 2011).

Postdoctoral Investigator. Woods Hole Oceanographic Institution, Marine Chemistry and Geochemistry (2006 - 2009).

Research Associate (Postdoc). Oregon State University, College of Oceanic and Atmospheric Sciences (2004 - 2006).

Graduate Research Assistant. Oregon State University (1999 - 2004).

Graduate Research Assistant. Rutgers University, NJ. (1998)

Technology Manager. Gulf of Maine Aquarium, now known as the Gulf of Maine Research Institute (1993-1997).

Undergraduate Researcher. Marine Biological Laboratory (Summer 1991,1993).

Workshop on Respiration and Planktonic Food Webs, Vigo Spain (2005).

Workshop on Molecular Evolution, Marine Biological Laboratory (2001).

Honors and awards

Invited Participant. DIALOG VII Symposium, Dauphin Island Sea Lab (2005)

Top professor award, from Mortar Board - Oregon State University's undergraduate senior honor society, to honor dedication to students and student success (2004)

First place in the oral presentation for Natural Sciences, Oregon State University Graduate Conference (2002)

NASA Space Grant Fellowship (2000-2001)

NSF REU Fellowship, Marine Biological Laboratory (Summer 1992)

Teaching and mentoring experience

Rutgers University:

Teaching assistant: General Biology, 1998.

Oregon State University:

Teaching assistant: Biological Oceanography, 2001

Guest lecturer: Biological Oceanography, "Applications of molecular techniques in biological oceanography", one lecture, 2001, 2002, and 2003

Guest lecturer: Marine Microbial Processes, "Molecular approaches to marine microbial ecology", two lectures, 2003 and 2005

Guest lecturer: Marine Zooplankton Ecology, "Zooplankton ecology: New approaches using molecular techniques", one lecture, 2004

Mentor to three undergraduates, 2004 to 2007

Woods Hole Oceanographic Institution:

Mentor to undergraduate student fellow, summer 2007

Communicating Ocean Sciences workshop, 2007

Service and professional memberships

Service: Co-organizer, WHOI Postdoctoral Symposium, 2007

Outreach: Invited and worked with two adult education teachers from the Science and Numeracy Special Collection project during RV *Wecoma* cruise, 2004

Outreach: 'On Location' researcher for the Gulf of Maine Aquarium, now known as the Gulf of Maine Research Institute, 1999

Volunteer: National Ocean Sciences Bowl – Oregon division, 2001, 2002, 2005, 2006

Student representative: College of Oceanic and Atmospheric Sciences computer committee, 2001-2003

Reviewer for: *Aquatic Microbial Ecology*, *Biogeosciences*, *Deep-Sea Research*, *Environmental Microbiology*, *Environmental Science & Technology*, *FEMS Microbiology Ecology*, *Limnology and Oceanography*, *Marine Ecology Progress Series*, *Microbial Ecology*, *Progress in Oceanography*, and the National Science Foundation.

Member: International Society for Microbial Ecology, American Society of Limnology and Oceanography, American Geophysical Union

Publications

Minor, E. C., C. J. Steinbring, **K. Longnecker**, E. B. Kujawinski (2012). Characterization of dissolved organic matter in Lake Superior and its watershed using ultrahigh resolution mass spectrometry. *Organic Geochemistry* 43: 1-11.

Edwards, B.R., C.M. Reddy, R. Camilli, C.A. Carmichael, **K. Longnecker**, B.A.S. Van Mooy (2011). Rapid microbial respiration of oil from the Deepwater Horizon spill in

offshore surface waters of the Gulf of Mexico. *Environmental Research Letters* 6:035301.

Longnecker, K. and E.B. Kujawinski (2011). Composition of dissolved organic matter in groundwater. *Geochimica et Cosmochimica Acta* 75: 2752-2761.

Kujawinski, E.B., M.C. Kido Soule, D.L. Valentine, A.K. Boysen, **K. Longnecker**, M.C. Redmond (2011). Fate of dispersants associated with the Deepwater Horizon oil spill. *Environmental Science & Technology* 45: 1298-1306.

del Giorgio P.A., R. Condon, T. Bouvier, **K. Longnecker**, C. Bouvier, E.B. Sherr, J.M. Gasol (2011). Coherent patterns in bacterial growth, growth efficiency, and leucine metabolism along a northeastern Pacific inshore-offshore transect. *Limnology and Oceanography* 56: 1-16.

Longnecker, K., M.W. Lomas, and B.A.S. Van Mooy (2010). Abundance and diversity of heterotrophic bacterial cells assimilating phosphate in the subtropical North Atlantic Ocean. *Environmental Microbiology* 12: 2773-2782.

Kido Soule, M.C., **K. Longnecker**, S.J. Giovannoni, and E.B. Kujawinski (2010). Impact of instrument and experiment parameters on reproducibility and repeatability of peaks within ultrahigh resolution ESI FT-ICR mass spectra of natural organic matter. *Organic Geochemistry* 41: 725-733.

Bhatia, M.P., S.B. Das, **K. Longnecker**, M.A. Charette, and E.B. Kujawinski (2010). Molecular characterization of dissolved organic matter associated with the Greenland ice sheet. *Geochimica et Cosmochimica Acta*. 74: 3768-3784.

Longnecker, K., M.J. Wilson, E.B. Sherr, and B.F. Sherr (2010). Effect of top-down control on cell-specific activity and diversity of active marine bacterioplankton. *Aquatic Microbial Ecology*. 58:153-165.

Longnecker, K., A. Da Costa, M. Bhatia, and E.B. Kujawinski (2009). Effect of carbon addition and predation on acetate-assimilating bacterial cells in groundwater. *FEMS Microbiology Ecology*. 70: 456-470.

Kujawinski, E.B., **K. Longnecker**, N.V. Blough, R. Del Vecchio, L. Finlay, J.B. Kitner, and S.J. Giovannoni (2009). Identification of possible source markers in marine dissolved organic matter using ultrahigh resolution mass spectrometry. *Geochimica et Cosmochimica Acta*. 73: 4384-4399.

Longnecker, K., B.F. Sherr, and E.B. Sherr (2006). Variation in cell-specific rates of leucine and thymidine incorporation by high and low nucleic acid content marine bacteria off the Oregon coast. *Aquatic Microbial Ecology*. 43: 113-125.

Longnecker, K., D.S. Homen, E.B. Sherr and B.F. Sherr (2006). Similar community structure of biosynthetically active prokaryotes across a range of ecosystem trophic states. *Aquatic Microbial Ecology*. 42: 265-276.

Morris, R.M., **K. Longnecker** and S.J. Giovannoni (2006). *Pirellula* and OM43 are among the dominant lineages identified in an Oregon coast diatom bloom. *Environmental Microbiology*. 8: 1361-1370.

Sherr, E.B., B. F. Sherr, and **K. Longnecker** (2006). Distribution of bacterial abundance and cell-specific nucleic acid content in the Northeast Pacific Ocean. *Deep-Sea Research I*. 53: 713-725.

Longnecker, K., B. F. Sherr and E. B. Sherr (2005). Activity and phylogenetic diversity of bacterial cells with high and low nucleic acid content and electron transport system activity in an upwelling ecosystem. *Applied and Environmental Microbiology*. 71: 7737-7749.

Longnecker, K. and A.-L. Reysenbach (2001). Expansion of the geographic distribution of a novel lineage of ε-Proteobacteria to a hydrothermal vent site on the Southern East Pacific Rise. *FEMS Microbiology Ecology*. 35: 287-293.

Reysenbach, A.-L., **K. Longnecker** and J. Kirshtein (2000). Novel bacterial and archaeal lineages from an in situ growth chamber deployed at a Mid-Atlantic Ridge hydrothermal vent. *Applied and Environmental Microbiology*. 66: 3798-3797.

Van Winkle, D.H., **K. Longnecker** and N.W. Blackstone (2000). The effects of hermit crabs on hydractiniid hydroids. *Marine Ecology*. 21: 55-67.

Sea experience

USCGC *Healy*. Bering, Chukchi, and Beaufort Seas, Nov-Dec 2011.
RV *F.G. Walton Smith*. Gulf of Mexico. April-May 2011.
RV *Endeavor*. Western Equatorial Atlantic. July 2010.
RV *Oceanus*. North Atlantic. April 2008.
NOAAS *McArthur II*. Northern California to Washington coast. May 2006.
RV *Wecoma*. Oregon coast. September 2004. *Chief Scientist.
RV *Wecoma*. Oregon coast. April-May 2002.
RV *Elakha*. Ten day-long cruises off Oregon in May, June, and September 2001.
RV *Atlantis*. Guaymas Basin. January 2000.
RV *Atlantis*. Juan de Fuca Ridge. October 1999.
RV *Atlantis*. 9°N, East Pacific Rise. May 1999.
RV *Atlantis*. Southern East Pacific Rise. December 1998-January 1999.
RV *Atlantis*. 9°N, East Pacific Rise. October-November 1997.
SSV *Corwith Cramer*. Sea Education Association. Caribbean. October-December 1991.