

LEE J. KERKHOF
Institute of Marine and Coastal Sciences
Rutgers University, New Brunswick, NJ 08901- 8521
(732) 932-6555 x 335 lkerkhof@rutgers.edu

A. EDUCATION:

B.Sc., 1983, Univ. of Calif., Berkeley, Marine Science/Biochemistry, Berkeley, California
Ph. D., 1991, Univ. of Calif., San Diego/Scripps Inst. of Oceanography, La Jolla, CA.

B. PROFESSIONAL EXPERIENCE:

Professor, Marine Microbiology, Institute of Marine and Coastal Sciences, Rutgers University,
2008-Date

Associate Professor, Marine Microbiology, Institute of Marine and Coastal Sciences, Rutgers
University, 2001-2008

Assistant Professor, Marine Microbiology, Institute of Marine and Coastal Sciences, Rutgers
University, 1994-2001

Post-doctoral fellow, Agouron Institute, La Jolla, CA and Brookhaven National Lab, 1992-1994.
Research investigating growth rate regulation of ribosomal RNA promoters from marine
bacteria.

Research Assistant, UCSD/SIO 1986-1991. Ph. D. Research developing methods for extracting
nucleic acids from bacteria in seawater, targeting a specific rRNA subunit in natural samples,
and quantifying the signal from a non-radiolabeled DNA probe.

Research Assistant, Harvard University, 1982-1986. Research characterizing the gene complex
involved in imaginal disc formation in *Drosophila melanogaster* and assessment of aquatic
nitrogen transformation rates using heavy isotopes (¹⁵N).

C. PUBLICATIONS (10 of 51):

Oka, A. R., Phelps, C. D., McGuinness, L. M., Mumford, A., Young, L. Y., and **L. J. Kerkhof**.
2008. Identification of the Critical Members in a Sulfidogenic Benzene-Degrading
Consortium by DNA Stable Isotope Probing. *Appl. Environ. Microbiol.* 74: 6476-6480

Nelson, J. D., Boehme, S. E., Reimers, C. E., Sherrell, R. M., and **L. J. Kerkhof**. 2008.
Temporal patterns of microbial community structure in the Mid-Atlantic Bight. *FEMS Micro.
Ecol.* 65: 484-493

Mills, H. J., Hunter, E., Humphrys, M., **Kerkhof, L.**, McGuinness, L., Huettel, M. and J. E.
Kostka. 2008. Characterization of Nitrifying, Denitrifying, and Overall Bacterial
Communities in Permeable Marine Sediments of the Northeastern Gulf of Mexico. *Appl.
Environ. Microbiol.* 74: 4440-4453

Kerkhof, L. J. and M. M Häggblom. 2007. Detecting Active Bacteria Involved in
Biodegradation in the Environment. In: Diaz, E. (eds). *Microbial Biodegradation: Genomics
and Molecular Biology*. Caister Academic Press. pp 55-70.

McGuinness, L. M., Salganik, M., Vega, L., Pickering, K. D. and **L. J. Kerkhof**. 2006.
Replicability of Bacterial Communities in Denitrifying Bioreactors as Measured by PCR/T-
RFLP Analysis. *Env. Science and Tech.* 40: 509-515.

Gallagher, E. L. McGuinness, C. Phelps, L. Y. Young, and **L. J. Kerkhof**. 2005. ¹³C-carrier
DNA shortens the incubation time needed to detect benzoate utilizing, denitrifying bacteria
using stable isotope probing (SIP). *Appl. Environ. Microbiol.* 71: 5192-5196

Corredor, J. Wawrik, B., Paul, J. Tran, H., **Kerkhof, L.**, Lopez, J., Dieppa, A. and O. Cardenas.
2004. Geochemical Rate-RNA integration study: Ribulose 1,5 Bisphosphate
Carboxylase/Oxygenase Gene Transcription and Photosynthetic Capacity of Planktonic
Photoautotrophs. *Appl. Environ. Microbiol.* 70: 5459-5468

Fennel, D. Rhee, S.-K., Ahn, Y.-B., Häggblom, M. and **L. Kerkhof**. 2004. Detection and
Characterization of a Dehalogenating Microorganism by Terminal Restriction Fragment

- Length Polymorphism Fingerprinting of 16S rRNA in a Sulfidogenic, 2-Bromophenol-Utilizing Enrichment. *Appl. Environ. Microbiol.* 2003. 70: 1169-1175
- Scala, D. and **L. Kerkhof**. 2000. Horizontal Heterogeneity in Denitrifying Bacterial Assemblages in Marine Sediments Using TRFLP Analysis. *Appl. Environ. Microbiol.* 66: 1980-1986
- Kerkhof, L.** and P. Kemp. 1999. Small Ribosomal RNA Content in Marine Bacteria During Non-Steady State Growth. *FEMS Micro. Ecol.* 30: 253-260

D Synergistic Activities (last 3 years): Professional Activities

- 2008 Ad Hoc Mail Reviewer for the National Science Foundation, Member of the editorial board for *Applied Environmental Microbiology*, Ad Hoc Mail Reviewer for *FEMS Microbial Ecology* manuscripts. Chair- Div. N (Microbial Ecology) for American Soc. of Microbiology.
- 2007 Ad Hoc Mail Reviewer for the National Science Foundation, Member of the editorial board for *Applied Environmental Microbiology*, Ad Hoc Mail Reviewer for *FEMS Microbial Ecology* manuscripts. Chair-elect Div. N (Microbial Ecology) for American Soc. of Microbiology.
- 2006 Ad Hoc Mail Reviewer/Panel Member for the National Science Foundation, Dept. of Energy; Co-Chair of Palmer Antarctic LTER Site Review Team, Member of the editorial board for *Applied Environmental Microbiology*, Ad Hoc Mail Reviewer for *FEMS Microbial Ecology*, *Science*, and *Aquatic Microbial Ecology* manuscripts.

Educational Activities

- 2002-Date Member, General Honors Committee; Member Curriculum Committee Cook College, Rutgers University
- 1998-Date Member, Biosafety Committee, Rutgers University; Member, Steering Committee for Perspective in Agriculture and the Environment, Rutgers University Participant, Northeast Regional Teaching Workshop, Member, numerous search committees for faculty.

Teaching:

I have taught 3 courses in the Marine Science department. Marine Microbiology (3 yrs), Biochemical Methods in Marine Science, and Perspectives in Agriculture (8 yrs.). I have co-taught Biological Oceanography (6 yrs) and Microbial Life for graduate students (5 yrs.)

- E. Collaborators:** Debbie Bronk, Jorge Corredor, Craig Criddle, Donna Fennell, Max Haggblom, Peter Jaffe, Joel Kostka, Jerry Kukor, Phil Long, Jose Lopez, Derek Lovely, Peter Morin, Julio Morel, John Paul, Karen Pickering, Clare Reimers, Oscar Schofield, Rob Sherrell, Gary Taghon, Costantino Vetriani, Boris Wawrik, Ken Williams, Weimin Wu, Steve Yabusaki, Lily Young, Gerben Zylstra
- Post Docs:** Young Beom Ahn (w/ Max Haggblom), Ingeborg Bussmann, Donna Fennell (w/ Max Haggblom), Victoria Knight (w/ Max Haggblom), Craig Phelps(w/ Lily Young), Sung Keun Rhee (w/Max Haggblom), Elise Sullivan (w/ Lily Young), Mary Voytek
- Grad Students:** Timeka Whitehead (Ph.D.), Nora Lopez (Ph.D.), Carrie Fraser (Ph.D), Erin Gallagher (Ph. D. w/Lily Young), Darryl Babcock (MS, Graduated 12/06), Josh Nelson (MS, Graduated, 1/03), Jose Perez-Jimenez (Ph.D., Graduation, 10/03), Yuko Sakano (Ph. D. Graduated, 1/01), David Scala (Ph. D. Graduated 3/99)