

## Andreas P. Teske

Associate Professor  
 University of North Carolina, Dept. of Marine Sciences  
 Venable Hall 12-7, CB 3300, Chapel Hill, NC 27599  
 Phone: 919-843-2463 / Fax: 919-962-1254 / email: teske@email.unc.edu

**Education:** Diploma (Masters) in Biochemistry, Hannover University, Germany, June 1991  
 Fellow of the German National Scholarship Foundation 1988 - 1991  
 Fulbright Fellowship at Univ. of Illinois, Champaign-Urbana, with David Stahl and Carl Woese, July 1991 - July 1992  
 Ph.D. in Microbial Ecology, Max-Planck-Institute for Marine Microbiology, Bremen, Germany, October 1992 - December 1995  
 WHOI postdoctoral fellowship, Woods Hole, March 1996 - February 1998

**Professional experience:** Assistant Scientist at the Woods Hole Oceanographic Institution, Biology Department (Feb. 1998 – Sept. 2002)  
 Adjunct Scientist, WHOI (since February 2003) and MBL (since July 2002)  
 Associate Professor, Dept of Marine Sciences at UNC Chapel Hill (since Sept 2002)  
 Research interests: molecular microbial ecology; microbiology of the marine sulfur and methane cycle, hydrothermal vent and deep subsurface microbiology

**Memberships:** American Society for Microbiology  
 American Society for Limnology and Oceanography

### Publications during the last 3 years (February 2003- February 2006).

- House, C., B. Cragg, and A. Teske. 2003. Drilling Contamination Tests on ODP Leg 201 Using Chemical and Particulate Tracers. Proc. ODP, Init. Repts., 201 [CD-ROM]. Available from: Ocean Drilling Program, Texas A&M University, College Station TX 77845-9547, USA.
- Teske, A., A. Dhillon, and M. L. Sogin. 2003. Genomic Markers of ancient anaerobic microbial pathways: sulfate reduction, methanogenesis, and methane oxidation. *The Biological Bulletin* 204:186-191.
- Dhillon, A., A. Teske, J. Dillon, D. A. Stahl, and M. L. Sogin. 2003. Molecular characterization of sulfate-reducing bacteria in the Guaymas Basin. *Applied and Environmental Microbiology* 69:2765-2772.
- Kormas, K., D. Smith, V.E. Edgcomb, and A. Teske. 2003. Molecular analysis of the deep subsurface microbial communities in Nankai Trough (ODP Leg 190, Site 1176A). *FEMS Microbiology Ecology* 45:115-125.
- Teske, A., and D. C. Nelson. The Genera *Beggiatoa* and *Thioploca*. In M. Dworkin, K.-H. Schleifer (eds.), *The Prokaryotes: An Evolving Electronic Resource for the Microbiological Community*. Release 3.16, March 15, 2004. Springer Verlag, New York, <http://link.springer-ny.com/link/service/books/10125>.
- Klepac, V, M. Bahr, B. C. Crump, A. P. Teske, J. E. Hobbie, and M. F. Polz. 2004. High overall diversity and dominance of microdiverse relationships in salt marsh sulphate-reducing bacteria. *Environmental Microbiology* 6:686-698.
- Edgcomb, V.E., S. J. Molyneaux, M. A. Saito, K. Lloyd, S. Böer, C. O. Wirsen, M. S. Atkins, and A. Teske. 2004. Sulfide ameliorates metal toxicity in deep-sea hydrothermal vent archaea. *Applied and Environmental Microbiology* 70:2551-2555.
- Sørensen, K.B., A. Lauer, and A. Teske. 2004. Archaeal phylotypes in a metal-rich, low-activity deep

- subsurface sediment of the Peru Basin, ODP Leg 201, Site 1231. *Geobiology* 2:151-161.
- D'Hondt, S.L., B.B. Jørgensen, D.J., Miller, A. Bqatzke, R. Blake, B.A. Cragg, H. Cypionka, G.R. Dickens, T. Ferdelman, K-U. Hinrichs, N.G. Holm. R. Mitterer, A. Spivack, G. Wang, B. Bekins, B. Engelen, K. Ford, G. Gettemy, S.D. Rutherford, H. Sass, C.G. Skilbeck, I. Aiello, G. Guerin, C. House, F. Inagaki, P. Meister, T. Naehr, S. Niitsuma, R.J. Parkes, A. Schippers, D.C. Smith, A. Teske, J. Wiegel, C. N. Padilla, J. L. S. Acosta. 2004. Distributions of Microbial Activities in Deep Subseafloor Sediments. *Science* 306:2216-2222.
- Dhillon, A., S. Goswami, M. Riley, A. Teske, and M. L. Sogin. 2005. Domain Evolution and Functional Diversification of Sulfite Reductases. *Astrobiology* 5:18-29.
- Amend, J.P., and A. Teske. 2005. Expanding frontiers in deep subsurface microbiology. *Palaeogeography, Palaeoclimatology, Palaeoecology* 219:131-155.
- Bahr, M., B.C. Crump, V. Klepac-Ceraj, A. Teske, M. L. Sogin, and J. E. Hobbie. 2005. Molecular characterization of sulfate-reducing bacteria in a New England salt marsh. *Environmental Microbiology* 7(8):1175-1185.
- Dhillon, D., M. Lever, K. G. Lloyd, D. B. Albert, M. L. Sogin, and A. Teske. 2005. Methanogen Diversity Evidenced by Molecular Characterization of Methyl Coenzyme M Reductase A (*mcrA*) Genes (*mcrA*) in Hydrothermal Sediments of the Guaymas Basin. *Applied and Environmental Microbiology* 71(8):4592-4601.
- Teske, A. 2005, The Deep Subsurface Biosphere is alive and well. *Trends in Microbiology* 13 (9): 402-404.
- Lloyd, K.G., V. P. Edgcomb, S. J. Molyneaux, S. Böer, C. O. Wirsen, M. S. Atkins, and A. Teske. 2005. Effects of dissolved sulfide, pH, and temperature on growth and survival of marine hyperthermophilic archaea. *Applied and Environmental Microbiology* 71(10):6383-6387.
- Sørensen, K.B., D. E. Canfield, A. Teske, and A. Oren. 2005. Community composition of a hypersaline endoevaporitic microbial mat. *Applied and Environmental Microbiology* 71(11):7352-7365.
- Inagaki, F., T. Nunoura, S. Nakagawa, A. Teske, M. Lever, A. Lauer, M. Suzuki, K. Takai, M. Delwiche, F.S. Colwell, K.H. Nealson, K. Horikoshi, S.L. D'Hondt, and B.B. Jørgensen. 2006. Biogeographical distribution and diversity of microbes in methane-hydrate bearing deep marine sediments on the Pacific Ocean Margin. *Proc. Natl. Acad. Sci. USA*. 103(8):2815-2820.
- Biddle, J.F., J. S. Lipp, M. Lever, K. Lloyd, K. Sørensen, R. Anderson, H. F. Fredricks, M. Elvert, T. J. Kelly, D. P. Schrag, M. L. Sogin, J. E. Brenchley, A. Teske, C.H. House, K.-U. Hinrichs. 2006. Heterotrophic Archaea dominate sedimentary subsurface ecosystems off Peru. *Proc. Natl. Acad. Sci* 103(10):3846-3851.

### **In press (March 2006)**

- Teske, A. 2006. Microbial community composition in deep marine subsurface sediments of ODP Leg 201: Sequencing surveys and cultivations. ODP Leg 201 Scientific Results Volume, in press.
- Kormas, A.K. M. K. Tivey, K. Von Damm, and A. Teske. 2006. Molecular characterization of the prokaryotic diversity associated with distinct mineralogical layers of a white smoker spire from a deep-sea hydrothermal vent site (9°N, East Pacific Rise). *Environmental Microbiology*, in press.

### **In revision, submitted or in writing:**

- K.B. Sørensen, and A. Teske. Stratified communities of active archaea in deep subsurface sediments. Submitted to *Applied Environmental Microbiology*.
- Lauer, A., K.B. Sørensen, and A. Teske. Diversity and distribution of marine benthic Archaea in organic-poor sediments of the Eastern Equatorial Pacific (ODP Site 1225). *FEMS Microbiology Ecology*, in revision.
- Edgcomb, V. E., S. J. Molyneaux, S. Boer, C. O. Wirsen, M. S. Atkins, K.G. Lloyd, and A. Teske. Survival and growth of two heterotrophic hydrothermal vent archaea, *Pyrococcus* strain GB-D and

*Thermococcus fumicolans*, under hydrothermal vent and deep subsurface stress factors. Extremophiles, in revision.

Teske, A. 2005. Microbial communities of deep marine subsurface sediments: Molecular and cultivation surveys. Geomicrobiology Journal, in revision.

**Synergistic activities:**

- ASM Division N Chair (Microbial Ecology) July 2004-July 2005
- Co-chair (with T. Ferdelman) of Session "The Subsurface Biosphere" (No. 33) at Goldschmidt Conference, Davos, Switzerland, August 18-23, 2002.
- Session chair "The new ecological perspective", ASM Centennial Biodiversity Conference, Chicago, August 1999
- Convener of the Holger W. Jannasch Memorial Symposium at WHOI, Biology Dept., with Carl O. Wirsen and Stephen S. Molyneux. June 3-5, 1999.
- Research cruises, to Chile (1994, 1997); the Red Sea (1994), the North and the Baltic Seas (1993-1996), the North Atlantic (1996), the Guaymas Basin (on ATLANTIS, 1998), the Eel River Basin (1999), to the Eastern Equatorial Pacific and the Peru Margin (on JOIDES Resolution in 2000 and 2002), and to Svalbard (2003).
- Obtaining NSF funding and setting up the current microbiology laboratory on JOIDES Resolution as a community resource, ready to use for seagoing microbiologists since May 2000.
- Member of advisory editorial board of Geobiology (since 2003)
- Member of Ridge 2000 Steering Committee (since Feb 2004)
- Diverse invited talks and seminars; too many ad-hoc reviews

**Ph.D. advisor:** Bo B. Jorgensen

**Postdoctoral advisor:** Holger W. Jannasch

**Ph.D. Student advisees:** Michael S. Atkins (1998-2000); Karen G. Lloyd (2002 - ), Mark Lever (2002 - )

**Ph.D. student committee member** for: Lara Gulmann (2000-2004), John Tolli (WHOI, 2000-2003)); Vanja Klepac (MIT, 2000-2004)); Vanessa Madrid (LSU, 2001-)

**Postdoctoral advisees:** Virginia Edgcomb (WHOI/MBL), Michael S. Atkins (WHOI/MBL), Stefan Sievert (WHOI), Konstantinos A. Kormas (WHOI), Antje Lauer (UNC), Ketil Soerensen (UNC)

**Collaborators during the last 48 months:**

Daniel Albert, Carol Arnosti (UNC Chapel Hill); Jan Amend (Washington University, St. Louis); Michele Bahr, Ashita Dhillon (Marine Biological Laboratory); Steven D'Hondt (University of Rhode Island); Heribert Cypionka (Oldenburg University, Germany); Manabu Fukui (Tokyo Metropolitan University, Tokyo, Japan); Peter Girguis (MBARI); Kai-Uwe Hinrichs (Bremen University, Bremen, Germany); John Hobbie (MBL); Christopher House (Penn State University); Fumio Inagaki (JAMSTEC, Yokosuka, Japan); Bo B. Jørgensen (MPI for marine Microbiology, Bremen, Germany); Andrew MacArthur (MBL); Barbara MacGregor, Christopher Martens (University of North Carolina at Chapel Hill); Douglas C. Nelson (University of California at Davis); Monica Riley (MBL); Mak Saito (Woods Hole Oceanographic Institution); David C. Smith (University of Rhode Island); Mitchell L. Sogin (MBL); David A. Stahl (University of Washington); Carl Wirsen (Woods Hole Oceanographic Institution)