

Costantino Vetriani - *Curriculum Vitae*

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Education

- Ph.D., Molecular Biology, University of Rome Tor Vergata, Rome, Italy, 1994.
- M.S., Microbiology, University of Rome La Sapienza, Rome, Italy, 1990.

Professional Experience

- 2006-Present: Associate Professor, Department of Biochemistry and Microbiology and Institute of Marine and Coastal Sciences, Rutgers University, NJ, USA.
- 2001-2006: Assistant Professor, Department of Biochemistry and Microbiology and Institute of Marine and Coastal Sciences, Rutgers University, NJ, USA.
- 1999-2001: Research Assistant Professor, Institute of Marine and Coastal Sciences, Rutgers University.
- 1997-1999: Research Associate, Institute of Marine and Coastal Sciences, Rutgers University.
- 1996: Guest Investigator, Woods Hole Oceanographic Institution, Woods Hole, MA, USA.
- 1995-1997: Research Associate, Center of Marine Biotechnology, Baltimore, MD, USA.

Fellowships and Awards

- Institute of Marine and Coastal Sciences Postdoctoral Fellowship, Rutgers University, 1997.
- Associated Western Universities Postdoctoral Fellowship, 1997.
- Office of Naval Research Award, Marine Biological Laboratory, 1995.
- Lucretia Crocker Scholarship Fund Award, Marine Biological Laboratory, 1995.

Selected Publications

- Chatziefthimiou, A.D., Crespo-Medina, M., Wang, Y., **Vetriani, C.**, and Barkay, T. The isolation and initial characterization of mercury resistant chemolithotrophic and thermophilic bacteria from mercury rich geothermal springs. *Extremophiles*, in press.
- Hügler, M., Huber, H., Molyneaux, S.J., **Vetriani, C.**, and Sievert, S.M. (2007). Autotrophic CO₂ fixation via the reductive tricarboxylic acid cycle in different lineages within the phylum *Aquificae*: Evidence for two ways of citrate cleavage. *Environmental Microbiology* 9:81-92.
- Reed, A.J., Lutz, R.A., and **Vetriani, C.** (2006). Vertical Distribution and Diversity of Bacteria and Archaea in Sulfide and Methane-Rich Cold Seep Sediments Located at the Base of the Florida Escarpment. *Extremophiles* 10:199-211.
- Voordeckers, J.W., Starovoytov, V., and **Vetriani, C.** (2005). *Caminibacter mediatlanticus* sp. nov., a thermophilic, chemolithoautotrophic, nitrate ammonifying bacterium isolated from a deep-sea hydrothermal vent on the Mid-Atlantic Ridge. *Intl. J. Syst. Evol. Microbiol.* 55:773-779.
- Vetriani, C.** Chew, Y.S., Miller, S.M., Yagi, J., Coombs, J., Lutz, R.A., and Barkay, T. (2005). Mercury adaptation among bacteria from a deep-sea hydrothermal vent. *Appl. Environ. Microbiol.* 71:220-226.

- Vetriani, C.**, Speck, M.D., Ellor, S.V., Lutz, R.A., and Starovoytov, V. (2004) *Thermovibrio ammonificans* sp. nov., a thermophilic, chemolithotrophic, nitrate ammonifying bacterium from deep-sea hydrothermal vents. *Intl. J. Syst. Evol. Microbiol.* 54:175-181.
- Vetriani, C.**, Tran, H.V., and Kerkhof, L.J. (2003) Fingerprinting Microbial Assemblages from the Oxidic/Anoxic Chemocline of the Black Sea. *Appl. Environ. Microbiol.* 69:6381-6488.
- Koblížek, M., Bèjà, O., Bidigare, R.R., Christensen, S., Benitez-Nelson, B., **Vetriani, C.**, Kolber, M.K., Falkowski, P.G., and Kolber, Z.S. (2003) Isolation and characterization of *Erythrobacter* sp. strains from the upper ocean. *Arch. Microbiol.* 180:327-338.
- Grzebyk, D., Schofield, O., **Vetriani, C.**, and Falkowski, P.G. (2003) The Mesozoic radiation of eukaryotic algae: The portable plastid hypothesis. *J. Phycol.* 39:1-10.
- Kolber, Z.S., Plumley, F.G., Lang, A.S., Beatty, J.T., Blankenship, R.E., VanDover, C.L., **Vetriani, C.**, Koblížek, M., Rathgeber, C., and Falkowski, P.G. (2001) Contribution of aerobic photoheterotrophic bacteria to the carbon cycle in the ocean. *Science* 292:2492-2495.
- Vetriani, C.** Origin of Archaea. (2001) In "Encyclopedia of Biodiversity", Ed. S. Levin, pp. 219-230, Academic Press.
- Vetriani, C.** and Reysenbach, A.-L. Archaea. (2000) In "Encyclopedia of Microbiology", Ed. J. Lederberg, pp. 319-331, Academic Press.
- Britton, K. L., Yip, K. S. P., Sedelnikova, S. E., Stillman, T. J., Adams, M. W. W., Ma, K., Maeder, D. L., Robb, F. T., Tolliday, N., **Vetriani, C.**, Rice, D. W., and Baker, P. J. (1999) Structure Determination of the glutamate dehydrogenase from the hyperthermophile *Thermococcus litoralis* and its comparison with that from *Pyrococcus furiosus*. *J. Mol. Biol.* 293, 1121-1132.
- Vetriani, C.**, Jannasch, H.W., MacGregor, B.J., Stahl, D.A., and Reysenbach, A.-L. (1999) Population structure and phylogenetic characterization of marine benthic *Archaea* in deep-sea sediments. *Appl. Environ. Microbiol.* 65, 4375-4384.
- Vetriani, C.**, Maeder, D.L., Tolliday, N., Klump, H.H., Yip, K.S.P., Rice, D.W. and Robb, F.T. (1998) Improving enzyme thermostability: the *Thermococcus litoralis* glutamate dehydrogenase model. In "New developments in marine biotechnology", Eds. Y. Le Gal and H.O. Halvorson, pp. 221-225, Plenum Press.
- Vetriani, C.**, Maeder, D.L., Tolliday, N., Yip, K.S.P., Stillman, T.J., Britton, K.L., Rice, D.W., Klump, H.H. and Robb, F.T. (1998) Protein thermostability above 100°C: a key role for ionic interactions. *Proc. Natl. Acad. Sci. USA* 95, 12300-12305.
- Vetriani, C.**, Reysenbach, A.-L. and Doré, J. (1998) Recovery and phylogenetic analysis of Archaea from Continental Shelf sediments. *FEMS Microbiol. Letters* 161, 83-88.

Current Grants

- Vetriani, C. (P.I.)**. Alkane oxidation in pure cultures and natural microbial communities from deep-sea hydrothermal vents: linking diversity and function. CEBIC (Center for Environmental and BioInorganic Chemistry). October 1, 2005 – September 30, 2007. Total amount awarded \$ 20,000.
- Vetriani, C. (P.I.)**, Casciotti, K.L., and Sievert S.M. (Co-P.I.s). Collaborative Research: MIP: Physiology and molecular ecology of thermophilic, nitrate-reducing microorganisms at deep-sea hydrothermal vents. National Science Foundation. June 15, 2005 – May 31, 2008. Total amount awarded: \$ 418,313.
- Lutz, R. A. (P.I.), Luther, G. W., Shank, T. M., and **Vetriani, C.** (Co-P.I.s). Collaborative Research: Integrated studies of biological community structure at deep-sea hydrothermal vents. National Science Foundation. October 1, 2003 – September 30, 2007. Total amount awarded: \$ 887,622.