

JOSÉ RAMÓN DE LA TORRE, III

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EDUCATION

Ph.D. 1998 Biochemistry & Biophysics, University of California, San Francisco
B.A. 1990 Molecular Biology, University of California, Berkeley (HONORS)

PROFESSIONAL POSITIONS

2008-present Assistant Professor, Department of Biology, San Francisco State University
2003-2008 Research Associate, University of Washington, Seattle, Dr. David A. Stahl
2000-2003 Postdoctoral Fellow, Monterey Bay Aquarium Research Institute, Dr. Edward F. DeLong
1998-2001 Postdoctoral Fellow, University of California, Berkeley, Dr. Norman Pace
1990-1998 Graduate Student, University of California, San Francisco, Dr. Marc Tessier-Lavigne
1994-1995 Guest Investigator, The Rockefeller University, Dr. Ali Hemmati-Brivanlou
1988-1990 Undergraduate Honors Researcher, University of California, Berkeley, Dr. Richard Harland
1988 Research Intern, Kirin Breweries Laboratory of Key Technology, Takasaki, Japan
1985 & 1986 Research Intern, British Petroleum Research Institute, Sunbury-on-Thames, England

HONORS & AWARDS

1998-2001 NSF Postdoctoral Research Fellowship
1993-1994 University of California President's Dissertation Year Fellowship
1990-1993 NSF Graduate Fellowship
1989-1990 University of California President's Undergraduate Fellowship
1989 Summer Fellowship for Minority Students, University of California, Berkeley
1988-1990 Undergraduate Honors Research, University of California, Berkeley
1988-1989 NSF Incentives for Excellence Scholarship Prize
1986-1990 University of California Merit Scholars Program
1986 French National *Baccalauréat*, (Honors), Emphasis in Biology & Chemistry

PEER-REVIEWED PUBLICATIONS

1. Stahl DA and de la Torre JR. (2012). Physiology and diversity of ammonia-oxidizing archaea. *Annu Rev Microbiol.* 66:83-101.
2. Pelve EA, Lindås AC, Martens-Habbena W, de la Torre JR, Stahl DA, and Bernander R. (2011). Cdv-based cell division and cell cycle organization in the thaumarchaeon *Nitrosopumilus maritimus*. *Molec Microbiol.* 82:555-66.
3. Dodsworth JA, Hungate B, de la Torre JR, Jiang H, and Hedlund BP. (2011). Measuring nitrification, denitrification, and related biomarkers in terrestrial geothermal ecosystems. *Methods Enzymol.* 486:171-203.
4. Bernhard AE, Landry ZC, Blevins A, de la Torre JR, Giblin AE, and Stahl DA. (2010). Abundance of ammonia-oxidizing archaea and bacteria along an estuarine salinity gradient in relation to potential nitrification rates. *Appl Environ Microbiol.* 76:1285-9.
5. Martens-Habbena W, Berube PM, Urakawa H, de la Torre JR, and Stahl DA. (2009). Ammonia oxidation kinetics determine niche separation of nitrifying *Archaea* and *Bacteria*. *Nature*, 461:976-9.
6. Walker CB, de la Torre JR, Klotz MG, Urakawa H, Pinel N°, Arp DJ, Brochier-Armanet C, Chain PS,

- Chan PP, Gollabgir A, Hemp J, Hügler M, Karr EA, Könneke M, Shin M, Lawton TJ, Lowe T, Martens-Habben W, Sayavedra-Soto LA, Lang D, Sievert SM, Rosenzweig AC, Manning G, and Stahl DA. (2010). *Nitrosopumilus maritimus* genome reveals unique mechanisms for nitrification and autotrophy in globally distributed marine crenarchaea. *Proc Natl Acad Sci USA*. 107:8818-23.
7. de la Torre JR*, Walker CB*, Könneke M, Ingalls AE, and Stahl DA. (2008). Cultivation of a thermophilic ammonia oxidizing archaeon synthesizing crenarchaeol. *Environ. Microbiol.* 10:810-8. (*These authors contributed equally to this work)
 8. Foesel BU, Gieseke A, Schwermer C, Stief P, Koch L, Cytryn E, de la Torre JR, van Rijn J, Minz D, Drake HL, and Schramm A. (2008) *Nitrosomonas* Nm143-like ammonia oxidizers and *Nitrospira marina*-like nitrite oxidizers dominate the nitrifier community in a marine aquaculture biofilm. *FEMS Microbiol. Ecol.* 63:192-204.
 9. Hallam SJ, Konstantinidis KT, Brochier C, Putnam N, Schleper C, Watanabe Y, Sugahara J, Preston C, de la Torre J, Richardson PM, and DeLong EF. (2006). Genomic analysis of the uncultivated marine crenarchaeon, *Cenarchaeum symbiosum*. *Proc. Natl. Acad. Sci. USA*. 103: 18296-301.
 10. Könneke M*, Bernhard AE*, de la Torre JR*, Walker CB, Waterbury J, and Stahl DA. (2005). Isolation of an autotrophic ammonia-oxidizing marine archaeon. *Nature*. 437: 543-6. (*These authors contributed equally to this work).
 11. Suzuki MT, Preston CM, Béjà O, de la Torre JR, Steward GF, and DeLong EF. (2004). Phylogenetic screening of ribosomal RNA gene-containing clones in Bacterial Artificial Chromosome (BAC) libraries from different depths in Monterey Bay. *Environ. Microbiol.* 48: 473-88.
 12. de la Torre JR, Christianson LM, Béjà O, Suzuki MT, Karl DM, Heidelberg JF, and DeLong EF. (2003). Proteorhodopsin genes are distributed among divergent marine bacterial taxa. *Proc. Natl. Acad. Sci. USA*. 100: 12830-5.
 13. de la Torre JR, Goebel BM, Friedmann EI, and Pace NR. (2003). Microbial diversity of cryptoendolithic communities from the McMurdo Dry Valleys, Antarctica. *Appl. Environ. Microbiol.* 69: 3858-67.
 14. de la Torre JR, Höpker VH, Ming G, Poo M, Tessier-Lavigne M, Hemmati-Brivanlou A, and Holt CE. (1997). Turning of retinal growth cones in a netrin-1 gradient mediated by the netrin receptor DCC. *Neuron* 19: 1211-24.
 15. Kennedy TE*, Serafini T*, de la Torre JR*, and Tessier-Lavigne M. (1994). Netrins are chemotropic factors for commissural axons in the developing spinal cord. *Cell* 78: 425-35.
 16. Hemmati-Brivanlou A, de la Torre JR, Holt C, and Harland RM. (1991). Cephalic expression and molecular characterization of *Xenopus En-2*. *Development* 111: 715-24.

MANUSCRIPTS SUBMITTED

1. Hamilton TL, Koonce E, Howells A, Havig JR, Jewell T‡, de la Torre JR, Peters JW, and Boyd ES. (2013). Competitive interactions influence the composition of a chemotrophic hydrothermal ecosystem. *Appl Environ Microbiol* (submitted)

GRANTS

National Science Foundation

PIRE: Toward a holistic and global understanding of hot spring ecosystems: A US-China based international collaboration
 NSF Award #: OISE-PIRE 0931455
 Funding Period: 2010-2015
 Awarded Amount to SFSU: \$223,665

National Science Foundation

CSUPERB Faculty-Student Collaborative Research Seed Grants Program

Student Research on the Isolation and Characterization of Thermophilic Nitrifiers
 Award Period: 2009-2010
 Award Amount: \$15,000

National Science Foundation

Diversity and Distribution of Ammonia-Oxidizing

RUI: Thermophilic ammonia-oxidizing archaea: physiology, genomics and role in nitrogen cycling at high temperature
NSF Proposal #: MCB 0949807
Funding Period: 2010-2013
Awarded Amount: \$509,978

Archaea
NSF Award MCB-0604448
Award Period: 2006-2010
Award Amount: \$431,501

STUDENTS MENTORED

Undergraduate Students: Alison Blevins, Mina Mostafavi, Michael Kaplan, Amy Jo Johnson, Robert Theis, Casey Bowers, Madeline Cassani, Diego Gelsinger, Virginia Russell, Rachel Bhaskar, Alexandre Blanc (Université Blaise Pascal), Joaquín Magaña (Occidental College).

Graduate Students: Damion Whitfield, Hope Gray, Emily Tung, Sandra Melloy, Amy Jo Johnson, Robert Theis, Donne Estipona.

Postdoctoral Fellows: Talia Jewell.

SYNERGISTIC ACTIVITIES

Member, American Geophysical Union, American Society for Microbiology, American Society of Limnology and Oceanography, International Society for Microbial Ecology, Society for the Advancement of Chicanos and Native Americans in Science

Reviewer, PNAS, AEM, Env Microbiol, ISMEJ, FEMS Microbial Ecol, NSF, NASA

Instructor, International GeoBiology Summer Course, Instructor (2006-2012)

Scientific Committee on Problems in the Environment Workshop on Microbial Genomics Technologies, Wageningen, the Netherlands (2004)

FASTDRILL "Interdisciplinary Polar Research Based on Fast Ice-Sheet Drilling" Workshop, National Science Foundation (2002)

Life in Ancient Ice Workshop, National Science Foundation (2001)

Lake Vostok Workshop, National Science Foundation (1998)