

Curriculum Vitae

Ernesto Otero Morales

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Academic Information Academic Information

Bachelor Studies in Biology- University of Puerto Rico, Rio Piedras Campus (1983)

Master of Science in Marine Sciences (Chemical Oceanography), University of Puerto Rico, Mayaguez Campus, 1988 Thesis Title: Sulfate Reduction Rates in Sediments of La Parguera, Puerto Rico: Effects of Organic Matter Content and Sediment Characteristics.

Ph.D., University of Georgia, Athens, GA. 1998. Microbiology Major Dissertation Title: Carbon Stable Isotope Inferences on the Utilization of Organic Matter by Bacterial Communities in estuarine Environments of Georgia, U.S.A.

Continued Education

- 18 May 2002. DNA microarray and T-RFLP Profiling for Environmental Microbiology. Salt Lake City, Utah. ASM
- 9 June 2002. Use of GIS in Aquatic Environments (ESRI). ASLO Summer Meeting Victoria Canada.
- Workshop on Utilization of Bacterial Source Tracking Technologies for Detection of Enterococcus faecalis non-point and point sources. 22-26 Oct 2003. Brunswick, GA.
- 31 July-13 August, 2005. Molecular Biology and PCR Workshop. Smith College, Northhampton. New England Biolabs Inc.
- EPA 316(b) Fish Impingement in Power and Industrial Plants, October 8-9, 2014 Providence, RI.

Job Experience

February 2016- Present. Director, Department of Marine Sciences, , University of Puerto Rico, Mayaguez Campus

May 2015- February 2016. Interim Director,

2014-2015: Associate Director, Department of Marine Sciences, University of Puerto Rico, Mayaguez Campus

2012- present: Researcher, Department of Marine Science, University of Puerto Rico, Mayaguez Campus

2005- 2011: Research Associate, Department of Marine Science, Universty of Puerto Rico, Mayaguez Campus

2001-2004: Research Auxiliary, Department of Marine Science, University of Puerto Rico, Mayaguez Campus

1990-2001: Associate Researcher, Department of Marine Sciences, University of Puerto Rico, Mayaguez.

1997-1998: Laboratory Teaching Assistant, Department of Biology, University of Georgia, Athens, GA.

1988-1990: Research Assistant, Marine Ecology Division, Center for Energy Environmental Research, University of Puerto Rico, Mayaguez, Puerto Rico.

1986-1988: Laboratory Teaching Assistant, Department of Biology, University of Puerto Rico, Mayaguez Campus

1984-1985: Research Assistant, Department of Marine Sciences, University of Puerto Rico, Mayaguez Campus

Marine Science and UPRM Committee Service

Departmental Seminars, Curriculum, Personnel, Assessment, Strategic Planning, Graduate Policy

Publications

Corredor, J.E., J. Morell, F. Nieves and **E. Otero**, 1985. Studies on eutrophication of the marine ecosystem of La Parguera, Puerto Rico. In Mem. Undecimo Simp.Rec. Nat. Departamento de Recursos Naturales, San Juan Puerto Rico

Otero, E., F. Nieves and J.E. Corredor, 1987. Patterns of tar ball accumulation on a Lunate Coral Key at La Parguera, Puerto Rico. *Caribbean Journal of Science* 23(1): 123-129.

Corredor, J.E., C.R. Wilkinson, V.P. Vicente, J. Morell, and **E. Otero**. 1988. Nitrate Release by Caribbean reef sponges. *Limnology and Oceanography* 33: 114-120.

Otero, E., R.L. Miller, and J.M. Lopez, 1992. Remote sensing of chlorophyll and sediments in coastal waters of Puerto Rico. *Proceedings of the First Thematic Conference on Remote Sensing for Marine and Coastal Environments, Louisiana, USA. Vol 1: 353-364.*

Miller, R.L., J.F. Cruise, **E. Otero** and J.M. Lopez, 1994. The water quality of Mayaguez Bay, Puerto Rico: Monitoring suspended particulate matter using field measurements and remote sensing. *Water Resources Bulletin*. 30(2): 271-282.

Culp, R.A., J.M. Legato, and **E. Otero**. 1998. Carbon isotope composition of selected flavoring compounds for the determination of natural origin by gas chromatography/isotope ratio mass spectrometer. p. 260-287. In: C.J. Mussinan and M.J. Morello (Eds.) *Flavor Analysis: Developments in Isolation and Characterization. ACS Symposium Series 705. ACS Pub.*

Otero, E., R. Culp, J. Noakes and R. Hodson. 2000. Allocation of particulate organic carbon from different sources in two contrasting estuaries of southeastern USA. *Limnology and Oceanography* 45: 1753-1763.

Otero, E., R. Culp, J. Noakes and R. Hodson. 2001. Sapelo Island Contribution #868. Allocation of particulate organic carbon from different sources in two contrasting estuaries of southeastern USA.

- Bachoon, D., **E. Otero**, and R.E. Hodson. 2001. Effects of humic substances on fluorometric DNA quantification and DNA hybridization. *J. Microbial. Met.* 1513:73-82
- Otero, E.** R. Culp, J.E. Noakes and R.E. Hodson. 2003. The distribution and $\delta^{13}\text{C}$ of DOC and its humic fraction in estuaries of southeastern USA. *Est. Coast. Shelf. Sci.* 56:1185-1192.
- Otero, E.** and K.K. Carbery. 2005. Chlorophyll *a* and turbidity patterns over coral reef systems of La Parguera Reserve. *Int. J. Trop. Biol.* 53 (Suppl. 1): 25-32
- Peter G. Hartel¹, Karen Rodgers¹, Jared A. Fisher¹, Jennifer L. McDonald², Lisa C. Gentit², Carolyn N. Belcher², **Otero, E. Otero**³, Yaritza Rivera-Torres³, Tamara L. Bryant⁴, and Stephen H. Jones⁴. 2005. SURVIVAL AND REGROWTH OF FECAL ENTEROCOCCI IN DESICCATED AND REWETTED SEDIMENTS. *Proceedings of the 2005 Georgia Water Resources Conference*, held April 25-27, 2005, at the University of Georgia. Kathryn J. Hatcher, editor, Institute Ecology, The University of Georgia, Athens, Georgia.
- Carbery, K., R. Owen, T. Frickers, **E. Otero** and J. Readman. 2006. Contamination of Caribbean Coastal Waters by the Antifouling Herbicide Irgarol 1051. *Mar. Poll. Bull.* 52: 635-644.
- Hartel, P.G., J.L. McDonald, L.C. Gentit, S. N. J. Hemmings, K. Rodgers, K. Smith, C.N. Belcher, R.L. Kunts, Y. Rivera-Torres, **E. Otero** and E.C. Schroder. 2007. Improving Fluorometry as a Source Tracking Method to Detect Human Fecal Contamination. *Estuaries and Coasts.* 30(3):551-561.
- David L. Ballantine, Richard S. Appeldoorn, Paul Yoshioka, **Otero, E.** Weil, Roy Armstrong, Jorge R. Garcia, **Otero, E. Otero**, Francisco Pagan, Clark Sherman, Edwin A. Hernandez-Delgado, Andrew Bruckner, and Craig Lilyestrom. 2008. Biology and ecology of Puerto Rican Coral reefs. In: B. Riegl and R.E. Dodge (Eds). *Coral reefs of the USA*. Springer. 806p.
- Artigas, L.F., **E. Otero**, R. Paranhos, M.L. Gomez, C. Piccini, M. Costagliola, R. Silva, P. Suarez, V.A. Gallardo, D.U. Hernandez Becerril, A. Chistoserdov, R. Vieira, M. Perez-Cenci, J.F. Ternon, B. Beber, M. Thyssen, H. Dionisi, I.do Rosario Marinho-Jassaud, A. Gonzalez, C. Hurtado, J.P. Parra, C. Alonso, c. Hozbor, S. Peresutti, R. Negri, C. Espinoza, A. Cardoso, O. Martins, F. Covacevich, C. Berón, and G.L Salerno. 2008. Towards a Latin American and Caribbean international census of marine microbes (LACar-ICoMM): overview and discussion on some current research directions. *International Journal of Tropical Biologia and Conservation* 56(Supl.1): 183-214.
- Otero, E.** 2009. Spatial and temporal patterns of water quality indicators in reef systems of southwestern Puerto Rico. *Carib. J. Sci.* 45:168-180.
- Todd, B. R., D. L. Ballantine, **E. Otero**. 2009. Nutrient distribution across the insular shelf of Puerto Rico: Assessment by algal tissue nitrogen. *Carib. J. Sci.* 45: 181-190.
- Bachoon, D.S. S. Markand, **E. Otero**, G. Perry and A. Ramsubaugh. 2010. Assessment of non-point sources of fecal pollution in coastal waters of Puerto Rico and Trinidad. *Mar. Poll. Bull.* 60: 1117-1121.
- Bachoon, D. C. Miller, C. Green and **E. Otero**. 2010. Comparison of Four Polymerase Chain Reaction Methods for the Rapid Detection of Human Fecal Pollution in Marine and Inland Waters. *I. J. Microbiol.* doi:10.1155/2010/595692
- Fabiano L. Thompson, Thiago Bruce, Alessandra Gonzalez, Alexander Cardoso, Maysa Clementino, Marcela Costagliola, Constanza Hozbor, **Otero, E. Otero**, Claudia Piccini, Silvia Peressutti, Robert Schmieder, Robert Edwards, Matthew Smith, Luis Roberto

- Takiyama, Ricardo Vieira, Rodolfo Paranhos, Luis Felipe Artigas. 2011. Coastal bacterioplankton community diversity along a latitudinal gradient in Latin America by means of V6 tag pyrosequencing. Arch. Microbiol. 193:105-114. doi:10.1007/s00203-010-0644-y.
- Sherchan, S.P., D.S. Bachoon, **E. Otero**, and A. Ramsubhag. 2013. Molecular detection of atrazine catabolism gene atzA in coastal waters of Georgia, Puerto Rico and Trinidad. Mar. Poll. Bull. 69: 215-218.
- Walker, T.J., D.S. Bachoon, **E. Otero** and A. Ramsubhag. 2013. Detection of verotoxin producing e. coli in marine environments of the Caribbean. Marine Poll. Bull. 76: 406-410.
- Holman, C.B., D.S. Bachoon, **E. Otero** and A. Ramsubhag. 2014. Detection of Helicobacter pylori in the coastal waters of Georgia, Puerto Rico and Trinidad. 79: 354-358.
- Soler-Figueroa, B and **E. Otero**. 2014. The Influence of Rain Regimes and Nutrient Loading on the Abundance of Two Dinoflagellate Species in a Tropical Bioluminescent Bay, Bahía Fosforescente, La Parguera, Puerto Rico. Estuaries and Coasts. 10.1007/s12237-014-9827-0
- Wade, C., **E. Otero**, B. Poon-Kwong, R. Rozier and D. Bachoon. 2015. Detection of human-derived fecal contamination in Puerto Rico using carbamazepine, HF183 Bacteriodes, and fecal indicator bacteria. Mar. Poll. Bull. 101(Issue2) Page p.872-877
- Soler, B. and **E. Otero**. May 2015. Seasonal changes in bioluminescence levels and dinoflagellates composition in a tropical bioluminescent bay, Bahía Fosforescente, La Parguera, Puerto Rico. JEMBE. In Review.
- Gomez, F., D. Qiu, **E. Otero** Morales, S. Lin and R.M. Lopes. 2015. Circumtropical distribution of the epiphytic dinoflagellate *Coolia malayensis* (Dinophyceae): Morphology and molecular phylogeny from Puerto Rico and Brazil. Phycological Review. In review.
- Pantoja Agreda, Fernando and **E. Otero**. 2016. Temporal and vertical dynamics of the autotrophic picoplankton in a subtropical reservoir: Cerrillos, Puerto Rico. Lake and Reservoir Management. In Review.

Presentations

- Corredor, J.E., J. Morell, F. Nieves and **E. Otero**, 1985. Studies on eutrophication of the marine ecosystem of La Parguera, Puerto Rico. Undécimo Simp.Rec. Nat. Departamento de Recursos Naturales, San Juan Puerto Rico.
- Otero, E.**, F. Nieves and J.E. Corredor, 1985. Patterns of tar ball accumulation on a Lunate Coral Key at La Parguera, Puerto Rico. CARIPOL Symposium. December 2-6, 1985 La Parguera, Puerto Rico.
- Otero E.**, 1986. Sulfur speciation in shallow tropical marine sediments. Aslo Winter Meeting. San Fransisco, CA. December 8-12, 1986.
- Otero, E.**, R.Almodovar-Ferrer and Jose M. Lopez. December 1989. Distribution of trace elements in Coastal Mangrove Sediments. Presented at American Chemical Society XIII Senior Technical Meeting, Humacao, Puerto Rico.

- Otero, E.** and J.M. Lopez. October, 1989. La industria y las comunidades marinas de la bahia de Guayanilla: Aspectos de contaminacion. Talk Presented at Sea Grant Symposium: Perspectivas en el Uso de la Costa y los Recursos Marinos. Ponce, Puerto Rico.
- Goenaga, C. and **E. Otero**, 1989. The coral reefs of Laguna Joyuda. 22nd Meeting of the Association of Marine Laboratories of the Caribbean. La Parguera, PR.
- Otero, E.** Sulfur metabolism in tropical coastal marine sediments. February 1991. Talk presented at Wetland Biogeochemistry Symposium, Baton Rouge, Louisiana.
- Miller, R.L., J.F. Cruise, **E. Otero** and J.M. Lopez, 1994. Monitoring the water quality of Mayagüez Bay, Puerto Rico, using remote sensing and field measurements. Third Thematic Conference on Remote Sensing for Marine and Coastal Environments. New Orleans, USA.
- Otero, E.**, R. Culp, J.E. Noakes and R.E. Hodson, April 1998. Changes in particulate organic carbon and chlorophyll a delta13-C in the Altamaha and Satilla River estuaries. Talk presented at Conference on Southeast Coastal Ocean Research. Savannah, Georgia.
- Otero, E.**, R. Culp, J.E. Noakes and R.E. Hodson, June 1998. Distribution of Delta C-13 of organic constituents and extracted pigments from Georgia river estuaries water column. Poster presented at ASLO/ESA, 7-12 June 1998, St. Louis, Missouri.
- Otero, E., R. Culp, J.E. Noakes and R.E. Hodson, February 1999. Delta 13C and concentration of dissolved organic carbon and humic substances from the Satilla and Altamaha estuaries, Southeastern, GA. ASLO Santa Fe, New Mexico.
- Otero, E., 2000. First Modeled Estimates of Carbon Flux Through Bacteria in the Caribbean Time Series Station. 12th AAAS & Epscor Annual Meeting May 26-28, 2000. Fajardo, Puerto Rico.
- Otero, E. 2001. Flux of Carbon and Nitrogen Through Heterotrophic Picoplankton in the Caribbean Time Series Station (CaTS) and the Caribbean. 13th AAAS & Epscor Annual Meeting. April 20-22, 2001. Dorado, Puerto Rico.
- Otero, E. 2001. Bacterial abundance and production in contrasting coastal systems of southwestern, Puerto Rico. ASLO Aquatic Sciences Meeting February 12-16, 2001, Albuquerque, NM. <http://aslo.org/albuquerque2001/1023.html>
- Otero, E., 2002. Microbial patterns in different tropical seascapes in southwestern Puerto Rico. ASLO June 10-14, 2002 Summer Meeting, Victoria, Canada. <http://www.aslo.org/meetings/victoria2002/archive/252.html>
- Otero, E., 2002. Oceanografía y Ecología Microbiana del Caribe. Presentacion Semana de La Microbiología de Ortho-Biologics. 16-20 septiembre 2002. Toa Alta, PR.
- Otero, E., 2002. Impacts of recreational boats in the reef area on seagrass and coral. Caribbean Regional Workshop on coral Reef Fisheries Management: Collaboration on Successful Management, Enforcement and Education Methods. September 30-October 1st, 2002. San Juan Puerto Rico.
- Otero, E., Carrubba L., N. Jiménez and J. Bauzá. 2003. Cuantificación de impactos de cicatrices de helices sobre praderas de yerbas marinas en reservas naturales del suroeste de Puerto Rico. *XXII Simposio de la Flora y Fauna de Puerto Rico y el Caribe*, Departamento de Biología, Universidad de Puerto Rico, Humacao, PR. 2 mayo 2003.
- Ramírez, L.F & Otero, E. 2003. Diferentes fuentes de materia organica inducen diferentes respuestas de reducción de sulfato en sedimentos marinos superficiales del suroeste de

- Puerto Rico. *XXII Simposio de la Flora y Fauna de Puerto Rico y el Caribe*, Departamento de Biología, Universidad de Puerto Rico, Humacao, PR.
- Otero, E., K. Carbery, L. Perez and Y. Rivera. Chlorophyll *a* and turbidity patterns over coral reefs systems of La Parguera Reserve as derived from continuous water quality sampling. 31st AMLC Scientific Meeting 14-18 July 2003. Port of Spain, Trinidad.
- Carrubba, L. **E. Otero**, N. Jiménez and J. Bauza. Using GIS to quantify propeller scarring in seagrass beds of La Parguera and Guanica Natural reserves, Puerto Rico. 31st AMLC Scientific Meeting 14-18 July 2003. Port of Spain, Trinidad.
- Carbery, K., **E. Otero**-Morales and Y. Rivera-Torres. 2004. Spatial and temporal water quality monitoring among coral populations in La Parguera, Puerto Rico. XXIII Simposio Fauna y Flora del Caribe. 30 April, 2004. Humacao, PR.
- Otero, E. K. Carbery and Y. Rivera. 2003. Monitoreo instrumental semi-continuo de calidad de agua de sistemas arrecifales de La Parguera, Puerto Rico. XXIII Simposio Fauna y Flora del Caribe. 30 April, 2004. Humacao, PR.
- Rivera-Torres, Y. K. Carbery and E. Otero. 2004. Determination of Nutrient Limitation of Phytoplankton at La Parguera, Puerto Rico. XXIII Simposio Fauna y Flora del Caribe. 30 April, 2004. Humacao, PR.
- Peter G. Hartel, K. Rodgers, J.A. Fisher, S.N.J. Hemmings, J.L. McDonald, K. Gates, S.H. Jones, T.L. Bryant, B. O'Hara, **E. Otero** and Y. Rivera-Torres. Dessication as a mechanism of fecal enterococcal survival and regrowth for bacterial source tracking. ASM 23-28 May 2004.
- Peter G. Hartel, Karen Rodgers, Jared A. Fisher, Sarah N. J. Hemmings, Jennifer L. McDonald, Keith W. Gates, Stephen H. Jones, Tamara L. Bryant, Bethany A. O'Hara, **Ernesto Otero**, Yaritza Rivera-Torres, and Yucheng Feng. 2004. SURVIVAL AND REGROWTH OF FECAL ENTEROCOCCI IN MOIST AND DESICCATED SEDIMENTS. National Beaches Conference October 13-15, 2004. San Diego, CA.
- Garcia-Urueña, R.d.P. and **E. Otero**. 2004. Natural short-term environmental changes, growth and survival of *Acropora cervicornis* as viewed through continued monitoring. 10th ICRS. 28 Jun-2 Jul 2004.
- Otero, E.**, F. Pagan and R. Appeldoorn. 2005. Automated and discrete water quality phytoplankton biomass and microbial parameter monitoring in coral reef habitats of La Parguera, Puerto Rico. 19-24 June 2005. ASLO Summer Meeting, Santiago de Compostela Spain.
- Carbery, K.K., R.J. Owen, J.W. Readman, T. Frickers and **E. Otero**-Morales. Contamination of Caribbean coastal waters by the antifouling herbicide Irgarol 1051. The First Annual Sea Grant Symposium on Coastal and Marine Applied Research September 2, 2005. Mayagüez, PR.
- Lebron, S., **E. Otero**, J.M. Lopez, A. Massol and E. Diaz. Accumulation and elimination of copper by the Flat-tree oyster *Isognomon alatus*. The First Annual Sea Grant Symposium on Coastal and Marine Applied Research September 2, 2005. Mayagüez, PR.
- Ramírez, L.F. and **E. Otero**. Propagation and establishment of *Avicennia germinans* seedlings in a disturbed subtropical coast, Jobos Bay National Estuarine Research Reserve, Puerto Rico. The First Annual Sea Grant Symposium on Coastal and Marine Applied Research September 2, 2005. Mayagüez, PR.

- Detres, Y, R.A. Armstrong, and **E. Otero**. 2006. Remote sensing of episodic rainfall events impacting coral reef areas. ASLO Summer Meeting. June 4-9. Victoria, BC.
- Otero, E.**, Carbery, K.K., R.J. Owen, J.W. Readman, and T. Frickers. Assessment of inter annual and spatial distribution of Irgarol 1051 in Southwestern Puerto Rico and St. Thomas, USVI. 2nd Annual Symposium for Coastal and Marine Applied Research October 5, 2006. Biology Building Auditorium, Mayaguez, PR.
- Rodriguez, A.E., **E. Otero**, J.C. Martínez-Cruzado and J.T. Ramírez. Mitochondrial DNA analyses as a valid tool for family and species identification of fish larvae: emphasis on snappers. 2nd Annual Symposium for Coastal and Marine Applied Research October 5, 2006. Biology Building Auditorium, Mayaguez, PR.
- Otero, E.** and L. Carrubba. Daños Mecánicos a las Praderas de Yerbas Marinas de la Reserva Natural de La Cordillera. XXVI Simposio del Departamento de Recursos Naturales y Ambientales. San Juan PR. 24-25 Octubre del 2007.
- Todd, B. R., D. L. Ballantine, **E. Otero**. 2008. Nutrient distribution across the insular shelf of Puerto Rico: Assessment by algal tissue nitrogen. 2008 ASLO Ocean Sciences Meeting. 2-7 March 2008, Orlando Florida.
- Otero, E.** 2008. Multiseasonal assessment of water quality in coral reef systems of southwestern Puerto Rico. 2008 ASLO Ocean Sciences Meeting. 2-7 March 2008, Orlando Florida.
- Artigas, L.F., **E. Otero**, R. Paranhos, M.L. Gomez, C. Piccini, M. Costagliola, R. Silva, P. Suarez, V.A. Gallardo, , D.U. Hernandez Becerril. 2008. The LACAR-ICOMM Network: Identification of Research Capabilities and Opportunities for Assessing Marine Microbila Diversity in South America and the Caribbean. 2008 ASLO Ocean Sciences Meeting. 2-7 March 2008, Orlando Florida.
- Todd, B. R., D. L. Ballantine, **E. Otero**. 2008. Nutrient distribution across the insular shelf of Puerto Rico: Assessment by algal tissue nitrogen. International Coral Reef Symposium, 7-11 July. Ft. Lauderdale, FL.
- Padilla-Crespo, e. T.L. Shearer, A. Massol-Deya, **E. Otero-Morales**, K.M. Ritalahti and F.E. Loeffler. 2009. Detection of dechlorinating Chloroflexi in marine environments. ASLO Aquatic Sciences Meeting. 25-30 Jan 2009.
- Otero, E. 2009. Spatial and temporal patterns of water quality indicators in reef systems of Southwestern, Puerto Rico. CRES Synthesis Meeting, 11-19 Feb 2009, La Parguera, PR.
- Todd, B. R., D. L. Ballantine, **E. Otero**. 2009. Nutrient distribution across the insular shelf of Puerto Rico: Assessment by algal tissue nitrogen. CRES Synthesis Meeting, 11-19 Feb 2009, La Parguera, PR.
- Artigas, L.F., C. Alonso, M. Costagliola, H.M. Dionisi, A. Gonzalez, C. Hozbor, **E. Otero**, R. Paranhos, S. Peressutti, C. Piccini, M. Smith. 2009. The LACar cooperative project: microbial diversity in coastal systems along a latitudinal gradient from South America to the Caribbean. International census of Marine Microbes 454 User Spring Meeting April 6-9 2009. Marine Biological Laboratory, Woods Hole, MA, USA.
- Kristen Green, Shanu Markand, **Otero, E. Otero**, Adash Ramsubagh, Gavin Perry and Dave S. Bachoon (2009) Comparison of Traditional and Molecular Methods for Assessing Fecal Pollution in Georgia and the Caribbean Region . 109th General Meeting, American Society of Microbiology Meeting. May, 2009. Philadelphia, Pa.

- Shanu Markand, **E. Otero**, Adash Ramsubagh, Gavin Perry and Dave S. Bachoon Enumeration and Molecular Source Tracking of Fecal Pollution in Popular Public Beaches and Estuaries in Georgia, Puerto Rico and Trinidad. Georgia College & State University Research Conference. April. 2009.
- Artigas, L. F.; Alonso, C.; Costagliola, M.; Dionisi, H. M.; Hozbor, C.; **Otero, E.**; Paranhos, R.; Peressutti, S.; Piccini, C.; Thompson, F. L. 2011. PROKARYOTIC DIVERSITY (EUBACTERIA AND ARCHAEA) IN COASTAL SYSTEMS ALONG A LATITUDINAL GRADIENT FROM SW ATLANTIC TO THE CARIBBEAN. ASLO Aquatic Sciences Meeting. San Juan, PR 13-18 Feb. 2011.
- Soler-Figueroa, B. M.; **Otero-Morales, E.** 2011. DAILY, SPATIAL AND SEASONAL VARIABILITY . OF *PYRODINIUM BAHAMENSE* AND *CERATIUM FURCA* AT BAHIA FOSFORESCENTE, LA PARGUERA, PUERTO RICO. ASLO Aquatic Sciences Meeting. San Juan, PR 13-18 Feb. 2011.
- Dave Bachoon, D. S.; **Otero, E. Otero, E.**; Adesh Ramsubaugh, A.; Trisha Philips, T.; Samendra Prasad Sherchan, S. 2011. RAPID DETECTION AND QUANTIFICATION OF FECAL INDICATOR BACTERIA ESCHERICHIA COLI O157:H7 AND ATRAZINE DEGRADERS IN THE CARIBBEAN. ASLO Aquatic Sciences Meeting. San Juan, PR 13-18 Feb. 2011.
- Zepp, R. G.; Cyterski, M.; Molina, M.; White, E.; **Otero, E.**; Wolfe, K.; Parmar, R. 2011. PREDICTIVE MODELING OF CULTURABLE AND QPCR ENTEROCOCCI AT BOQUERNN BEACH, PUERTO RICO. ASLO Aquatic Sciences Meeting. San Juan, PR 13-18 Feb. 2011.
- Otero-Morales, E.**; Carbery, K. K. 2011. FURTHER RESULTS OF IRGAROL 1051 CONCENTRATION IN COASTAL WATERS OF PUERTO RICO AND US VIRGIN ISLANDS. ASLO Aquatic Sciences Meeting. San Juan, PR 13-18 Feb. 2011.
- Otero Morales, E.** 2012. EcoElectrica's 2011 Biological Monitoring Program Plan Studies Results. USEPA Region 2 Office. 31 June 2012.
- Otero Morales, E.** 2014. EcoElectrica's Review of Biological Monitoring Activities at USEPA Region 2 Office, Nov 2014.
- Rosado, Gualberto and **E. Otero**. Marine Sponges and thier fungal associates as bioindicators of heavy metal pollution in coastal environments. 2015 Aquatic Sciences Meeting. 22-27 February 2015.
- Rodriguez, A. and **E. Otero**. An evaluation of zooplankton entrainment by a cooling water intake system operated by EcoElectrica, LP. 22-27 February 2015. Granda, Spain.
- Otero, E., S. Williams, W. Hernández, Y. Detrés-Cardona, R. Armstrong, M. Careli, L. Carrubba-MacPherson. Coastal and Marine Development Contribute to the Elimination of Nearshore Seagrass Habitats. CERF 2015: Grand Challenges in Estuarine & Coastal Science: Securing our Future. Portland Oregon. 8-12 November 2015.
- Soler Figueroa, B.M. and **E. Otero**. 2015. PATterns of variability of two potentially HAB dinoflagellates in Nahia Fosforescente, PR: role of seasonality. CERF 2015: Grand Challenges in Estuarine & Coastal Science: Securing our Future. Portland Oregon. 8-12 November 2015.

Awards and Grants

- 1991-1992: NASA Summer Faculty Award 1991 and 1992.
- 1993-1997: NASA Graduate Student Research Program, Underrepresented Minority Focus Fellowship (NGT-70345)
- 1994: Best of Session Award for: Miller, R.L., J.F. Cruise, **E. Otero** and J.M. Lopez, 1994. Monitoring the water quality of Mayaguez Bay, Puerto Rico, using remote sensing and field measurements. Third Thematic Conferences on Remote Sensing for Marine and Coastal Environments. New Orleans, USA.
- 2000: Seed Money funds, R&D Center, UPR-Mayaguez. Title: Variation of Bacterial Production in Coastal Waters of Western Puerto Rico.
- 2000: Seed Money Funds, SeaGrant Program. UPR-Mayaguez. Title: The Distribution of Bacterioplankton Biomass and Productivity in Mayaguez Bay.
- 2000-2005: Tropical Center for Earth and Space Studies. NASA.
- 2001: Quantifying the Impact of Propeller Scarring on Seagrass Beds. National Fish and Wildlife Foundation. \$40,000.
- 2001: Determinación Rápida de Oxígeno: Cambios Respiratorios Microbianos Como Respuesta Influjos de Nutrientes en Zonas Marítimo Costeras. Fondos de Semilla Artes y Ciencias, UPRM \$2,500
- 2001: Estudio de Flora y Fauna del Canal San Antonio, San Juan, PR. Panzardi ERM.
- 2002: Undulating Oceanographic Data Collection System for University of Puerto Rico-Mayagüez. ONR/DOD. PI Jose. Lopez
- 2002: Seed Money Funds, SeaGrant Program. UPR-Mayaguez. Phytoplankton biomass and production patterns as indicators of nutrient inputs in coral reef systems of La Parguera.
- 2002: NOAA-Coral Reef Ecosystem Studies. (Material Transport Component, \$308,000) PI. Appeldoorn
- 2003: Research and Development Center, University of Puerto Rico, Mayaguez. Allocation of Organic Matter From Mariculture Cages to Benthic Habitats in Culebra, Puerto Rico: Stable Isotope and Elemental Composition Approach.
- 2003: National Estuarine Research Reserves (NERR) Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET). Field-Testing Targeted Sampling and *Enterococcus faecalis* to Identify Human Fecal Contamination in Three National Estuarine Research Reserves.
- 2003: Otero, E., K. Carbery and R. Owens. An island wide (Puerto Rico), U.S. and British Virgin Island distribution and impact study of triazine constituents in anti-fouling paints on inshore marine communities, and the development/incorporation of biomarkers for assessment of marine pollution. SeaGrant. 2004-2006.
- 2004: Otero, E. San Juan Bay Estuary Indicators. SJBEP-EPA 2004-2005 \$100,000
- 2005: Rivera, Y and **E. Otero**. Development of a Method for the Rapid and Precise Detection of the Fecal Pollution Indicator *Enterococcus spp.* in Tropical Marine Environments. SeaGrant Seed Money. 2005-2006.

- 2005: Ecology, Integrity & Status of Deep Caribbean Coral Reefs. Appeldoorn, R. D. Ballantine, **E. Otero**, F. Pagan, N. Schizas, C. Sherman, E. Weil, P. Yoshioka and S. Zea. CRES/NOAA.
- 2007: Rapid Detection and Quantification of Fecal Pollution in the Caribbean Region. D. Bachoon, **E. Otero** and A. Ramsabhag. Seagrant.
- 2008: The LACar cooperative project: microbial diversity in coastal systems along a latitudinal gradient from South America to the Caribbean. L.F. Artigas, C. Alonso, M. Costagliola, H.M. Dionisi, A. Gonzalez, C. Hozbor, **E. Otero**, R. Paranhos, S. Peressutti, C. Piccini.
- 2011: Deciphering Phosphorescent Bay: New Approaches towards the understanding of this unique ecosystem. Seagrant. Brenda Soler and **E. Otero**
- 2011: Proposal for the acquisition of an automated microscopic particle analysis (*FLOWCAM*) for the evaluation of the condition of coastal marine environments in Puerto Rico. EcoElectrica.
- 2011: Acquisition of A Underwater Bioluminescence Assessment Tool (UBAT): Linking environmental conditions bioluminescence and science education: A case study of La Parguera Phosphorescent Bay and adjacent systems. EcoElectrica. **E. Otero**.
- 2011: A Proposal for Monitoring Studies for the Biological Monitoring Program Plan EcoEléctrica, LP: An Opportunity for Advanced Education and Training. **E. Otero**
- 2012: A Proposal to Conduct Work Related to EcoElectrica's 2012 BMPP and Mitigation Activities: Entrainment (Plankton), Water Quality, Seagrasses, Sediment Quality, and Water Currents. **E. Otero**
- 2012: Application for EcoEléctrica, LP Environmental Outreach and Mitigation Program.
- 2012: Fecal Coliforms, E. coli and PCR Based Microbial Source Tracking in Streams of Puerto Rico. Proposal Submitted to PR Environmental Quality Board. **E. Otero**.
- 2013-2014: Biological Monitoring Studies at EcoElectrica LNG Power Generation Facilities.
- 2014: Puerto Rico Seagrass Fund – Initial Assessment: Integration of Field, Aerial Photography and Water Quality Measurements for the Assessment of Anthropogenic Impacts and Stressors in Southern Puerto Rico. **E. Otero**. Yasmín Detrés, Roy Armstrong and Stacey Williams.
- 2015: EcoElectrica Biological Monitoring for Intake and Outfall Activities. (BMPP 2015). PI. **E. Otero**.

Graduate Student Supervision

Luisa Fernanda Ramirez (M.S.)
 Sandra Lebron (M.S.)
 Yaritza Rivera (M.S.)
 Kelly Carbery (M.S.)
 Aurea Rodriguez (Ph.D.)
 Brenda Soler (Ph.D.)
 Giovanni Rojas (M.S.)
 Carolina Hincapié (Ph.D.)
 Gualberto Rosado (Ph.D.)

Christina Wade (M.S.)
Fernando Pantojas (Ph.D.)
Geraldine Gómez Matías (M.S.)
Rosamar Ayala Torres (M.S.)

Community Service

- Member of Community Group Vecinos de La Parguera (VLP) since Dec 2001
- Seagrass conservation project with VLP (Mar 2002-Aug 2003). Helped prepared, coordinate and implement conservation strategy using informative buoys and signs to minimize seagrass scarring at several locations within the Natural Reserve of La Parguera.
- Collaborated with San Juan Estuary Program providing information about flora and fauna within the estuary system (2002)
- Invited to participate by the Office of San Juan Bay Estuary Program of the Indicators Forum celebrated in EPA's Region 2 headquarters in NY, USA (Feb 02)
- Presentation on Coral Reef Conservation Project to La Parguera community (Sep 03)
- Orientation to Comité de Vecinos de La Parguera on Joint Permit Application in relation to seagrass conservation project. (Sept 03)
- Design and construction of easy to install anchors for informational buoys to minimize costs and damage to soft bottom communities such as seagrasses (Oct-Nov 03)
- Participated in Educational Videos produced by NOAA related to Coral Reef Ecosystem Health (Dec 2003)
- Installation of informative buoys with the community group Comité de Vecinos de La Parguera (June 04)
- Helped to coordinate and participated in the First Marine Fair, an open-house activity for the children of the public school of La Parguera. The activity was the first of its kind and was a collaboration of the community group, Vecinos de La Parguera and Department of Marine Sciences/UPRM (Nov-Dec 04)
- Evaluated potential impacts of development projects within the Joyuda Lagoon Reserve watershed as requested by Office and Environmental Evaluations of PR Housing Department. (Dec 04 and Feb 05)
- Invited Speaker for the SouthEast Portal to Ocean Research for Teachers, Ocean Awareness Day, Lajas, PR. (Oct 05)
- Evaluated legislative measures for Representative Jose Luis Rivera Guerra (Mar 05)
- Participated in Geoambiente, a local TV documentary program portraying issues of coral reef conservation (July 05)
- Finished installation of informational markers in collaboration with comité de Vecinos de La Parguera (July 2005)
- Conducted Assessment of Boating Impacts in La Cordillera Reserve, Fajardo Puerto Rico for PRDNER. 2006.

- Modified anchors for informational buoys and reinstalled at the entrance of Canal Corto, La Parguera (March 2007).
- Production of a PSA related to Boating Impacts on Seagrass Habitats (DNER, April 2007)
- Participated in Interviews of the TV Program *Turismo en Borinquen* in which basic aspects of boating impacts upon marine habitats were presented (December 2007).
- Conducted Assessment of Boating Impacts to Seagrasses in Culebra, Puerto Rico. December 2007.
- Participated in discussion of aspects related to the development of Management Plan of La Parguera Natural Reserve invited by Centro Interdisciplinario de Estudios del Litoral (CIEL).
- Helped install Informative Buoys in Playa de Boqueron for the protection of Seagrass Beds (April 2008)
- Co-Chairman of two special sessions of ASLO Aquatic Sciences Meeting. San Juan, Feb 2010.
 - S84: Advances in Marine Microbial Diversity and Dynamics in Latin America and the Caribbean
Conveners: Luis Felipe Artigas, Université du Littoral Côte d'Opale (France), Felipe.Artigas@univ-littoral.fr; **Otero, E. Otero**, University of Puerto Rico Mayagüez, [Otero, E.otero3@upr.edu](mailto:Otero.E.otero3@upr.edu); Rodolfo Paranhos, Universidade Federal do Rio de Janeiro (Brazil), rodolfo@biologia.ufrj.br
 - S90: Biological Contamination of Puerto Rican Streams and Coastal Waters: Sources, Fate, Monitoring, and Predictive Modeling
Conveners: Marirosa Molina, U.S. EPA, molina.marirosa@epa.gov; Richard Zepp, U.S. EPA, zepp.richard@epa.gov; **Otero, E. Otero**, University of Puerto Rico, Mayagüez, ernesto.otero3@upr.edu.
- Report on Contamination of Sediments and Fish tissue in San Juan Bay Estuary System (2011)
- Charla "Bahías Bioluminiscentes: joyas del Caribe", Isla Magueyes. Presentación dirigida al grupo de la Ecoeléctrica 30 mayo 2013:
- Charla "Ecosistemas Marinos de Puerto Rico", Isla Magueyes. Presentación y viaje a los ecosistemas dirigido a personal de la Compañía de Turismo en Puerto Rico. 31 mayo 2013
- Charla "Bahías Bioluminiscentes: joyas del Caribe", Isla Magueyes. Presentación dirigida al grupo de la Ecoeléctrica. 12 de junio 2013.
- Comentarios sobre Guías de Turismo Ecológico referente a Bahías Bioluminiscentes para la Compañía de Turismo de Puerto Rico. (2013)
- Presentación, Compliance Monitoring Aspects of at EcoElectrica's LNG Pier: Water, Sediment Quality and Biological Monitoring. South Coast Harbor Safety & Security Committee meeting on December 5, 2014.

