

## BIOGRAPHICAL SKETCH

NAME: Roberson, Loretta ORCID: 0000-0001-7725-0495

POSITION TITLE & INSTITUTION:  
Associate Scientist, Marine Biological Laboratory

### (a) PROFESSIONAL PREPARATION

California State University Northridge, CA Biology BS 1994

Stanford University Palo Alto, CA Biological Sciences PHD 2001

### (b) APPOINTMENTS

2016 – present Associate Scientist, Marine Biological Laboratory, Woods Hole, MA

2011 – 2016 Director, University of Puerto Rico Río Piedras, Puerto Rico Center for Environmental Neuroscience, San Juan, PR

2008 – 2016 Assistant Professor, University of Puerto Rico Rio Piedras, Department of Environmental Science, San Juan, PR

2003 – 2016 Adjunct Professor, Institute of Neurobiology, UPR Medical Sciences, San Juan, PR

2003 – 2008 Affiliated Researcher, University of Puerto Rico Rio Piedras, Department of Biology, San Juan, PR

2002 – 2003 Post-doctoral Researcher, USC Wrigley Marine Science Center, California State University, Northridge, Avalon, CA

1997 – 1997 Research Technician, National Institute of Oceanography, Indo-US Program, Goa  
1996 - 2003 Research Technician, Channel Islands Research Program, University of California Santa Barbara, Santa Barbara, CA

1995 – 1995 Research Technician, National Undersea Research Center, Key Largo, FL

1992 – 1994 Research Technician, Nearshore Marine Fish Research Program, California State University, Northridge, Northridge, CA

### (c) PRODUCTS

#### Products Most Closely Related to the Proposed Project

1. Toledo-Hernández C, Ruiz-Díaz CP, Díaz-Vázquez LM, Santiago-Cárdenas V, Rosario-Berrios DN, García-Almedina DM, Roberson LM. Comparison of chemical compounds associated with sclerites from healthy and diseased sea fan corals (*Gorgonia ventalina*). PeerJ. 2017;5:e3677. PubMed Central PMCID: PMC5572935.

2. Sánchez-García MA, Zottoli SJ, Roberson LM. Hypoxia has a lasting effect on fast-startle behavior of the tropical fish *Haemulon plumieri*. Biol Bull. 2019 Aug;237(1):48-62. PubMed PMID: 31441698.

3. Denny M, Roberson L. Blade motion and nutrient flux to the kelp, *Eisenia arborea*. Biol Bull. 2002 Aug;203(1):1-13. PubMed PMID: 12200251.

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4. Roberson LM, Coyer JA. Variation in blade morphology of the kelp *Eisenia arborea*: Incipient speciation due to local water motion? Marine Ecology Progress Series. 2004; 282:115-128. 10.3354/meps2821155.
5. Navarro AE, Hernandez-Vega A, Masud ME, Roberson LM, Diaz-Vázquez LM. Bioremoval of Phenol from Aqueous Solutions Using Native Caribbean Seaweed. Environments. 2016; 4(1):1.

### **Other Significant Products, Whether or Not Related to the Proposed Project**

1. Keegan LP, Rosenthal JJ, Roberson LM, O'Connell MA. Purification and assay of ADAR activity. Methods Enzymol. 2007;424:301-17. PubMed PMID: 17662847.
2. Roberson LM, Rosenthal JJ. An accurate fluorescent assay for quantifying the extent of RNA editing. RNA. 2006 Oct;12(10):1907-12. PubMed Central PMCID: PMC1581973.
3. Mansour TA, Rosenthal JJ, Brown CT, Roberson LM. Transcriptome of the Caribbean stony coral *Porites astreoides* from three developmental stages. Gigascience. 2016 Aug 2;5(1):33. PubMed Central PMCID: PMC4969664.
4. Laissue PP, Roberson L, Gu Y, Qian C, Smith DJ. Long-term imaging of the photosensitive, reef-building coral *Acropora muricata* using light-sheet illumination. Sci Rep. 2020 Jun 25;10(1):10369. PubMed Central PMCID: PMC7316744.

### **(d) SYNERGISTIC ACTIVITIES**

1. Department of Energy ARPA-E MARINER project lead, Development of techniques for tropical seaweed cultivation and harvesting, 2018-present
2. Development of the Puerto Rico Center for Environmental Neuroscience. The Center integrates expertise in molecular neurobiology with environmental sciences to understand how organisms respond to anthropogenic changes in the environment and transform research capabilities and student opportunities at the University of Puerto Rico. <http://prcen.upr.org/> 2011-2016
3. Coral reef Biological Condition Gradient model expert panel member, 2012-2021. A collaboration led by the US Environmental Protection Agency and a group of scientific coral reef experts to develop a Biological Condition Gradient for the coral reefs of Puerto Rico and the US Virgin Islands.
4. Research Mentor, currently advising 1 PhD student (UPR Río Piedras) and trained 6 PhD, 4 MS, 67 undergraduates 2004-2021, and 4 high school students 2016-2021.
5. Development of new courses Coral Reefs in a Changing World, Communicating Science, Renewable Energy and Sustainability, Coastal Processes, and Marine Biology.