

SANTIAGO HERRERA

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Google Scholar Profile

+1 484 456 0902

EDUCATION

- 2009-2014 Ph.D. Biological Oceanography. **Massachusetts Institute of Technology (MIT) / Woods Hole Oceanographic Institution (WHOI)**
- 2007-2009 M.Sc. Biological Sciences. **Universidad de los Andes**, Bogotá, Colombia.
- 2004-2007 B.Sc. Microbiology. **Universidad de los Andes**, Bogotá, Colombia
- 2002-2007 B.Sc. Biology. **Universidad de los Andes**, Bogotá, Colombia

ACADEMIC & RESEARCH APPOINTMENTS

- 2018-present **Assistant Professor.** Lehigh University, Department of Biological Sciences.
- 2016-2018 **Visiting Assistant Professor.** Lehigh University, Department of Biological Sciences.
- 2016-present **Guest Investigator.** Woods Hole Oceanographic Institution. Biology Department.
- 2015-2016 **Postdoctoral Fellow.** University of Toronto, Centre for Environmental Epigenetics and Development.
- 2009-2014 **Graduate Research Assistant.** Woods Hole Oceanographic Institution.
- 2008-2009 **Graduate Fellow.** National Museum of Natural History, Smithsonian Institution, Invertebrate Zoology Department & Laboratories of Analytical Biology.
- 2006-2009 **Research Assistant.** Universidad de los Andes, Department of Biological Sciences.

SELECT FELLOWSHIPS & AWARDS

- 2015-2017 Postdoctoral Fellowship. Canadian Institutes of Health Research (CIHR).
- 2014 Banting Postdoctoral Fellowship institutional nomination. University of Toronto.
- 2014 Graduate Student Fellowship. Deep Ocean Exploration Institute. WHOI.
- 2012-2014 MIT Student Assistance Fund Award (three times).
- 2012 Outstanding Student Presentation Award. Ocean Sciences Meeting.
- 2010 Outstanding Student Paper Award. American Geophysical Union - Fall Meeting.
- 2009-2014 Graduate Research Fellowship. WHOI.
- 2008 Smithsonian Graduate Fellowship. Smithsonian Institution.
- 2008 Foundation for the Promotion of Research and Technology award, Bank of the Republic of Colombia.

PUBLICATIONS

ARTICLES IN REFEREED JOURNALS (* indicates equal contributions)

1. Sigwart J.D., M.K. Wicksten, M. Jackson & **S. Herrera** (2018) Deep sea video technology tracks a monoplacophoran to the end of its trail (Mollusca, Tryblidia). *Marine Biodiversity*. 1-8 <https://doi.org/10.1007/s12526-018-0860-2>

2. **Herrera S.**, M. Jackson, J. Konter, M. Lobecker, K. Elliott (2018) American Samoa Expedition: Suesuega o le Moana Amerika Samoa. *Oceanography*. 31 Suppl. (1): 72-73. <https://doi.org/10.5670/oceanog.2018.supplement.01>
3. Mullineaux L.S., A. Metaxas, S.E. Beaulieu, M. Bright, S. Gollner, B. Grupe, **S. Herrera**, J. Kellner, L. Levin, S. Mitarai, M. Neubert, A. Thurnherr, V. Tunnicliffe, H. Watanabe & Y. Won (2018) Exploring the ecology of deep-sea hydrothermal vents in a metacommunity framework. *Frontiers in Marine Science*. 5: 49 . <https://doi.org/10.3389/fmars.2018.00049>
4. Quattrini A.M., B.C. Faircloth, L.F. Dueñas, T. Bridge, M. Brugler,, I.F. Calixto-Botía,, D.M. DeLeo, S. Forêt, **S. Herrera**, S. Lee, D.J. Miller, C. Prada, G. Rádis-Baptista, C. Ramírez-Portilla,, J. Sánchez, E. Rodríguez & C.S. McFadden (2018) Universal target-enrichment baits for anthozoan (Cnidaria) phylogenomics: New approaches to long-standing problems. *Molecular Ecology Resources*. 18(2): 281-295. <http://doi.org/10.1111/1755-0998.12736>
5. De Vega W.C., **S. Herrera**, S.O. Vernon & P.O. McGowan (2017) Epigenetic modifications and glucocorticoid sensitivity in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS). *BMC Medical Genomics* 10(1):11 <http://doi.org/10.1186/s12920-017-0248-3>
6. Cordes E.E., D.O. Jones, T.A. Schlacher, D.J. Amon, A.F. Bernadino, B.J. Bett, S. Brooke, R. Carney, D.M. DeLeo, K.M. Dunlop, Elva G. Escobar-Briones, A.R. Gates, L. Genio, J. Gobin, Lea-A. Henry, **S. Herrera**, S. Hoyt, S. Joye, S. Kark, N.C. Mestre, A. Metaxas, S. Pfeifer, K. Sink, A.K. Sweetman, U.F. Witte (2016) Environmental impacts of the deep-water oil and gas industry: a review to guide management strategies. *Frontiers in Environmental Science*, 24:58 <http://doi.org/10.3389/fenvs.2016.00058>
7. **Herrera S.** & Shank T.M. (2016) RAD sequencing enables unprecedented phylogenetic resolution and objective species delimitation in recalcitrant divergent taxa. *Molecular Phylogenetics and Evolution*, 100:70-79 <http://dx.doi.org/10.1016/j.ympev.2016.03.010>.
8. **Herrera S.**, P.H. Reyes-Herrera & T.M. Shank (2015) Predicting RAD-seq marker numbers across the eukaryotic tree of life. *Genome Biology and Evolution*, 7(12): 3207-3225. <http://dx.doi.org/10.1093/gbe/evv210>. Git code repository: <https://github.com/phrh/PredRAD>
9. Reyes-Herrera P.H., C.A. Speck-Hernandez, C.A. Sierra & **S. Herrera** (2015) BackCLIP: a tool to identify common background presence in PAR-CLIP datasets. *Bioinformatics*, 31(22): 3703-3705. <http://doi.org/10.1093/bioinformatics/btv442>.
10. **Herrera S.**, H. Watanabe & T.M. Shank (2015) Evolutionary history and biogeographical patterns of barnacles from deep-sea hydrothermal vents. *Molecular Ecology*, 24(3): 673-689. <http://doi.org/10.1111/mec.13054>
11. Reitzel A.M.*, **S. Herrera***, M.J. Layden, M.Q. Martindale & T.M. Shank (2013) Going where traditional markers have not gone before: utility and promise for RAD-sequencing in marine invertebrate phylogeography and population genomics. *Molecular Ecology*, 22(11): 2953-2970. Special Issue: Genotyping by Sequencing. <http://doi.org/10.1111/mec.12228>.
12. **Herrera S.** T.M. Shank & J.A. Sánchez (2012) Spatial and temporal patterns of genetic variation in the widespread antitropical deep-sea coral *Paragorgia arborea*. *Molecular Ecology*, 21(24): 6053-6067. <http://doi.org/10.1111/mec.12074>.
13. Shank T.M., E.T. Baker, R.W. Embley, S. Hammond, J.F. Holden, S. White, S.L. Walker, M. Calderón, **S. Herrera**, et al. (2012) Exploration of the deepwater galápagos region. *Oceanography* 25: 50-51. <http://dx.doi.org/10.5670/oceanog.2011.supplement.01>.
14. Shank T.M., **S. Herrera**, W. Cho, C.N. Roman, K.L.C. Bell (2011) Exploration of the Anaximander mud volcanoes. *Oceanography* 24 Suppl.: 22-23. <http://dx.doi.org/10.5670/oceanog.24.1.supplement>.
15. **Herrera S.**, A. Baco & J.A. Sánchez (2010) Molecular systematics of the bubblegum coral genera (Paragorgiidae, Octocorallia) and description of a new deep-sea species. *Molecular Phylogenetics and Evolution*, 55(1): 123-135. <http://dx.doi.org/10.1016/j.ympev.2009.12.007>.
16. Sánchez J.A., **S. Herrera**, R. Navas-Camacho, A. Rodríguez-Ramírez, P. Herron, V. Pizarro, A.R.

Acosta, P.A. Castillo, P. Montoya & C. Orozco (2010) White plague-like coral disease in remote reefs of the Western Caribbean. *International Journal of Tropical Biology and Conservation*, 58(Suppl. 1): 145-154. <http://doi.org/10.15517/rbt.v58i1.20031>.

MANUSCRIPTS IN REVIEW

17. **Herrera S.**, W.C. De Vega, D. Ashbrook, S.O. Vernon & P.O. McGowan (in review) Genome-Epigenome Interactions Associated with Chronic Fatigue Syndrome. *Scientific Reports*.
18. Bors E., **S. Herrera**, J. Morris, T.M. Shank (in review) Population genomics of the rapidly invading Lionfish in the Caribbean. *Molecular Ecology*.
19. De Leo D.M., S. Herrera, S.D. Lengyel, A.M. Quattrini, R.J. Kulathinal & E.E. Cordes (in review) Gene expression profiling reveals deep-sea coral response to the Deepwater Horizon oil spill. *Molecular Ecology*.

ARTICLES IN NON-REFEREED JOURNALS

1. Mills S., D. Leduc, J. C. Drazen, P. Yancey, A.J. Jamieson, M.R. Clark, A.A. Rowden, D. J. Mayor, S. Piertney, T. Heyl, D. Bartlett, J. Bourque, W. Cho, A. Demopoulos, P. Fryer, M. Gerringer, E. Grammatopoulou, **S. Herrera**, M. Ichino, B. Lecroq, T.D. Linley, K. Meyer, C. Nunnally, H. Ruhl, G. Wallace, C. Young and T.M. Shank (2016). 10,000 m under the sea: an overview of the HADES expedition to Kermadec Trench. In B. Golder and A. Connell (Eds.) Proceedings of Kermadec – Discoveries and Connections. Paper presented at Kermadec – Discoveries and Connections, Wellington, New Zealand (Pp 36–38). The Pew Charitable Trusts.
2. **Herrera S.** & Sánchez J.A. (2013) Un coral a la conquista de los océanos profundos (A coral conquering the deep oceans). *Revista Hipótesis: apuntes científicos uniandinos*. Universidad de los Andes. Bogotá. (Special Anniversary Number): 76-79. <http://hipotesis.uniandes.edu.co/hipotesis/ediciones/especial-2013/>
3. **Herrera S.**, C.A. Hernandez & E. Bahamón (2008) Guerreros fantasmales: comportamiento competitivo en el cangrejo *Ocyropsis gaudicaudii* de la isla Gorgona (Ghostly warriors: competitive behavior of the crab *Ocyropsis gaudicaudii* in the Gorgona island). *Revista Hipótesis: apuntes científicos uniandinos*. Universidad de los Andes. Bogotá. (9): 34-35. http://issuu.com/revistahipotesis/docs/hipotesis_9/39?e=5734754/2477767

RESEARCH FUNDING

LEHIGH UNIVERSITY

- 2017-2019 **Lead Principal Investigator.** RESTORE Act Science Program, NOAA award NA17NOS4510096. Population Connectivity of Deepwater Corals in the Northern Gulf of Mexico. Co-PIs: Andrea Quattrini (Harvey Mudd College), Annalisa Bracco (Georgia Institute of Technology), Peter Etnoyer (NOAA) **US\$1,338,194**.
- 2017-2018 **Co-Principal Investigator.** Faculty Innovation Grant, Lehigh University. Investigating the role of epigenetic changes and differential gene regulation in animal regeneration. Co-PI Michael Layden (Lehigh). **US\$30,000**.
- 2017-2019 **Co-Lead Principal Investigator.** Ray Dalio Foundation, USA. COLDEX Exploration of the Unknown Deep Caribbean of Colombia. Co-PIs: Timothy Shank (WHOI), Juan Sanchez (UniAndes). Field and research funding through WHOI. **Funded fieldwork**.
- 2017 **Lead Principal Investigator.** Office of Ocean Exploration and Research, NOAA, USA. University Corporation for Atmospheric Research Subaward Z17-28063, Climate Adaptation and Mitigation Program, USA. EX1702 American Samoa Expedition. **US\$25,039**.

UNIVERSITY OF TORONTO

2015-2017 **Lead Principal Investigator.** Canadian Institutes of Health Research, Ottawa, Canada. **CAN\$15,000.**

MIT/WHOI

2013-2014 **Lead Principal Investigator.** National Geographic Society / Waitt Foundation. Research Award. Washington, DC. **US\$12,000.**

2011-2013 **Co-Lead Principal Investigator.** Ocean Life Institute and Deep Ocean Exploration Institute. Research Award. WHOI, Woods Hole, MA, Co-PI: Timothy Shank (WHOI). **US\$47,784.**

2011-2012 **Lead Principal Investigator.** Ocean Ventures Fund. WHOI, Woods Hole, MA. **US\$14,884.**

UNIVERSIDAD DE LOS ANDES

2008 **Principal Investigator.** Systematics Research Fund of the Systematics Association & the Linnean Society of London. London, United Kingdom. **£1,500**

2007-2008 **Co-Lead Principal Investigator.** CenSeam (Global Census of Marine Life on Seamounts CenSeam – part of the worldwide Census of Marine Life CoML project). Co-PI: Juan Sanchez (UniAndes). **US\$4,700.**

2007 **Principal Investigator.** Sigma Xi Grant-In-Aid of Research. **US\$1,000**

PENDING RESEARCH FUNDING

2018-2023 **Lead Principal Investigator.** NOAA/NOS/National Centers for Coastal Ocean Science (NCCOS), NOAA Office of National Marine Sanctuaries, Office of Ocean Exploration and Research, and the National Marine Fisheries Service's Southeast Regional Office, USA. Connectivity of Coral Ecosystems in the Northwestern Gulf of Mexico. Co-PIs: Andrea Quattrini (Harvey Mudd College), Annalisa Bracco (Georgia Institute of Technology), Randy Clark (NOAA NCCOS), Andrew David (NOAA NMFS), Amanda Demopoulos (USGS), Stacey Harter (NOAA NMFS), Christopher Meyer (Smithsonian Institution), Nancy Prouty (USGS). **US\$3,747,910.**

2018-2020 **Lead Principal Investigator.** Office of Ocean Exploration and Research, NOAA, USA. Advancing eDNA as a Tool for Exploration in Deepwater Environments. Co-PIs: Jill McDermott (Lehigh University), Andrea Quattrini (Harvey Mudd College), Erik Cordes (Temple University), Catherine McFadden (Harvey Mudd College). **US\$456,983.**

AD HOC PROPOSAL REVIEWER

- Division of Ocean Sciences, Biological Oceanography, U.S. National Science Foundation (NSF OCE).
- Office of Exploration and Research, U.S. National Oceanographic and Atmospheric Administration (NOAA OER).
- French National Research Agency, *Agence Nationale de la Recherche* (ANR)
- French National Fleet Commission, *Commission Nationale de la Flotte Hauturière* (CNFH)
- Oregon Sea Grant, U.S. National Oceanographic and Atmospheric Administration (NOAA Sea Grant).
- National Oceanographic Partnership Program (NOPP)

PROPOSAL REVIEW PANELIST

- National Oceanographic Partnership Program (NOPP)

AD HOC ACADEMIC JOURNAL REVIEWER

Molecular Ecology
Molecular Phylogenetics and Evolution
Bioinformatics
Symbiosis
PLoS ONE
Deep-Sea Research Part I

Deep-Sea Research Part II
Evolutionary Applications
PeerJ
Frontiers in Marine Science
Marine Biology

ACADEMIC JOURNAL EDITORIAL ROLES

Review Editor for Frontiers in Marine Science: Marine evolutionary biology, biogeography and species diversity

Guest Associate Editor for Frontiers in Marine Science: Marine conservation and sustainability

INVITED SEMINARS & PRESENTATIONS

- 2018 University of Hawaii at Manoa, JIMAR, Honolulu, HI.
2018 Moravian College, Department of Biology, Bethlehem, PA.
2017 Stockton University, School of Natural Sciences and Mathematics, Galloway, NJ.
2015 Norwegian University of Science and Technology, Department of Biology and Natural History Museum, Trondheim, Norway.
2015 Pontificia Universidad Javeriana, Biology Department, Bogotá, Colombia.
2015 Universidad de los Andes, Department of Biological Sciences, Bogotá, Colombia.
2015 University of Toronto Scarborough, Department of Biological Sciences, Toronto, Canada.
2014 Brown University, Dunn Lab, Providence, RI.
2014 Northwest Fisheries Science Center, NOAA, Seattle, WA.
2013 National Institute of Water and Atmospheric Research, Wellington, New Zealand.
2011 Universidad de los Andes, Department of Biological Sciences, Bogotá, Colombia.
2010 Sam Ratulangi University, Manado, North Sulawesi, Indonesia.
2010 Indonesia-US Science Team Workshop, Deep-Sea Exploration in Sangihe-Talaud 2010, Manado, North Sulawesi, Indonesia.

SELECT CONFERENCE PRESENTATIONS

- 2018 Ocean Sciences Meeting, Portland, OR. Talk and poster.
2016 International Deep-Sea Coral Symposium, Boston, MA. Talk.
2015 Deep-Sea Biology Symposium, Aveiro, Portugal. Two talks and poster.
2014 Evolution Meeting 2014, Raleigh, NC. Talk.
2013 Evolution Meeting 2013, Snowbird, UT. Poster.

- 2013 Society for Molecular Biology and Evolution, Chicago, IL. Poster.
- 2012 Deep-Sea Biology Symposium, Wellington, New Zealand. Talk and poster.
- 2012 International Deep-Sea Coral Symposium, Amsterdam, Netherlands. Two talks.
- 2012 Ocean Sciences Meeting, Salt Lake City, UT. Talk. **Outstanding Presentation Award.**
- 2010 AGU Fall Meeting, American Geophysical Union, San Francisco, CA. Talk and poster. **Outstanding Paper Award.**
- 2008 International Deep-Sea Coral Symposium, Wellington, New Zealand. Talk. 4th
- 2008 International Coral Reef Symposium, Ft. Lauderdale, FL. Poster.
- 2008 Evolution Meeting 2008, Minneapolis, MN. Talk.
- 2006 Evolution Meeting 2006, Stony Brook, NY.

CAMPUS & DEPARTMENTAL PRESENTATIONS

- 2018 Lehigh University, Energy Systems Engineering Institute, Distinguished Lecture Series.
- 2017 Lehigh University, Department of Biological Sciences.
- 2016 Lehigh University, Department of Earth and Environmental Sciences.
- 2016 Lehigh University, Department of Biological Sciences.
- 2016 Lehigh University, RARE/STEM Lehigh Community.
- 2013 WHOI, Biology Department.
- 2013 WHOI, Challenger Expeditions Biology Forum.
- 2013 WHOI, Institutional visit of the Admiral Guillermo E. Barrera CNO Distinguished International Fellow at the U.S. Naval War College.
- 2012 WHOI, Institutional visit of the Harbor Branch Oceanographic Institution directors.
- 2011 WHOI Fall Annual Meeting of the Board of Trustees and Corporation.
- 2011 WHOI, Institutional visit of British Petroleum plc.
- 2010 WHOI Fall Annual Meeting of the Board of Trustees and Corporation.

TEACHING EXPERIENCE

- 2017-present **Instructor.** *Oceanography*. Lehigh University.
- 2016-present **Instructor.** *Epigenetics*. Lehigh University.
- 2016-present **Instructor.** *Biodiversity in a Changing Planet*. Lehigh University.
- 2016 **Instructor.** *Epigenetics in Health and Disease*. University of Toronto.
- 2014 **Instructor.** *Introduction to Oceanography*. WHOI.
- 2013 **Guest Lecturer.** *Bioinformatics Seminar*. WHOI.
- 2013 **Guest Lecturer.** *Environment Sustainability*. Bunker Hill Community College.
- 2011 **Guest Lecturer.** *Introduction to Ocean Sciences*. Gordon University.
- 2009 **Guest Lecturer.** *Bioinformatics*. Universidad de los Andes.
- 2009 **Instructor.** *Phylogenetic Systematics Laboratory*. Universidad de los Andes.
- 2007 **Teaching Assistant.** *Marine Ecology*. Universidad de los Andes.
- 2007 **Teaching Assistant.** *Phylogenetic Systematics*. Universidad de los Andes.

2006 **Teaching Assistant.** *Cell Biology*. Universidad de los Andes.

MENTORING

POSTDOCTORAL RESEARCHERS

Matt Galaska. Lehigh University.

PHD STUDENTS

Daniel De Leo. Temple University (now postdoc at FIU). Committee member.

UNDERGRADUATE STUDENTS

Maria Manz. Moravian College. (Committee member).

Omar Ahmed. Computer Science, Lehigh University.

Destiny West. Biological Sciences/RARE, Lehigh University.

Alondra Maldonado. Biological Sciences/RARE, Lehigh University.

Avory Serrano. Biological Sciences/RARE, Lehigh University.

Neal Hefner. Earth and Environmental Sciences. Lehigh University.

Emily Bursta. Earth and Environmental Sciences. Lehigh University.

Catriona Munro. WHOI (now PhD student at Brown University).

Elizabeth Siebert. WHOI (now postdoc at Harvard University).

Anabel Martinez-Lyons. WHOI (now PhD student at University of Cambridge).

Luke McCartin. WHOI (now research assistant at WHOI).

SYNERGISTIC ACTIVITIES & PROFESSIONAL SERVICE

- 2019 **Convener.** 7th International Symposium on Deep-Sea Corals, Cartagena, Colombia. (forthcoming)
- 2018 **Invited Expert.** Pacific Islands Deep-Sea Coral Research Initiative (2015-17) Wrap-up Workshop, NOAA DSCRTP, Honolulu, HI.
- 2017-present **Member.** National Geographic Explorer Advisory Panel
- 2016-present **Invited Steering Scientific Committee Member.** Colombian Network of Evolutionary Biology (ColEvol)
- 2015-present **Contributing Member.** Deep-Ocean Stewardship Initiative (DOSI) Oil & Gas, and Climate Change working groups
- 2015-present **Elected Governing Board Trustee.** Membership Secretary & Data Protection Officer of the Deep-Sea Biology Society.
- 2016 **Invited Steering Scientific Committee Member.** 6th International Symposium on Deep Sea Corals, Boston, MA.
- 2014 **Invited Expert.** Next Generation Sequencing of Deep Sea Corals Workshop, National Oceanic and Atmospheric Administration (NOAA), Seattle, WA.
- 2013 **Co-founder/Convener.** Challenger Expeditions Biology Forum. WHOI
- 2013-2014 **Contributing Participant.** Bioinformatics Seminar. WHOI.
- 2013 **Invited Expert.** Deep-Sea Coral Taxonomy Workshop, National Institute of Water and Atmospheric Research, Wellington, New Zealand.

- 2013 **Invited Expert.** Ocean Exploration 2020: A National Forum, National Oceanic and Atmospheric Administration (NOAA), Aquarium of the Pacific, Long Beach, CA.
- 2011 **Invited Expert.** Northeast Atlantic Deep-Sea Coral Research Priorities Workshop, National Oceanic and Atmospheric Administration (NOAA) Coral Reef Conservation Program (CRCP), James J. Howard Marine Sciences Lab, Sandy Hook, NJ.
- 2011 **Elected President.** MIT/WHOI Joint Program Student Organization. MIT Association of Student Activities.
- 2010-2014 **Web Manager and co-Developer.** WHOI, Woods Hole, MA. <http://sba.who.edu>, Barcoding Seamount Life: Advancing the capacity to discover, conserve, and manage biodiversity on seamounts, Seamount Barcoding Association.

ADDITIONAL TRAINING

- 2015 Early Career Investigators Workshop, Deep Submergence Science Committee (DeSSC) of the University-National Oceanographic Laboratory System (UNOLS), San Francisco.
- 2015 Ontario Summer School on High Performance Computing, SciNet, Toronto.
- 2013 Workshop Deep-Sea Coral Taxonomy, National Institute of Water and Atmospheric Research, Wellington, New Zealand.
- 2012 AAUS Scientific Diver, dry suit, cold-water, technical diving.
- 2012 Workshop Identification of Deep-Sea Corals from Imagery Data, Amsterdam, Netherlands.
- 2012 Workshop on Genomics, Cesky Krumlov, Czech Republic.
- 2009 Workshop on Molecular Evolution, Marine Biological Laboratory, Woods Hole, MA.
- 2002 Advanced SCUBA Diver (PADI & NAUI), EANx Diver (NAUI), and oxygen administrator (DAN).

SCIENTIFIC FIELD EXPEDITIONS (*TELEPRESENCE)

- 2017 R/V *Manta*, ROV Mohawk, RESTORE MT17, U.S. Gulf of Mexico. **Chief scientist.**
- 2017 M/V *Ocean Project*, ROV Comanche, RESTORE OP17, U.S. Gulf of Mexico. **Chief scientist.**
- 2017 M/V *Ocean Intervention II*, ROV Global Explorer, ECOGIG OI2, U.S. Gulf of Mexico.
- 2017 R/V *Okeanos Explorer*, ROV Deep Discoverer, EX1702, American Samoa. **co-Lead scientist.**
- 2015 *R/V *Okeanos Explorer*, ROV Deep Discoverer, EX1502, Caribbean Sea, Puerto Rico.
- 2014 R/V *Thomas G. Thompson*, HROV Nereus, TN309, Kermadec Trench, New Zealand.
- 2014 R/V *Tangaroa*, TAN1402, Louisville Seamounts, New Zealand.
- 2013 *R/V *Okeanos Explorer*, ROV Deep Discoverer, EX1304 Northeast U.S. Canyons.
- 2013 Technical scuba diving, British Columbia Fjords, Canada. **Chief Scientist.**
- 2012 R/V *Falkor*, ROV Global Explorer MK3, U.S. Gulf of Mexico.
- 2012 *R/V *Okeanos Explorer*, ROV Little Hercules, EX1202, U.S. Gulf of Mexico.
- 2011 M/V *Holiday Chouest*, ROV UHD-34, U.S. Gulf of Mexico.
- 2011 *R/V *Okeanos Explorer*, ROV Little Hercules, EX1103, Galápagos Rift, Ecuador.
- 2011 RSS *James Cook*, ROV Isis, JC055, Bransfield strait & East Scotia Ridge. Antarctica.
- 2010 *E/V *Nautilus*, ROV Hercules, NA010, Anaximander Seamounts, Turkey. **co-Lead scientist.**
- 2010 R/V *Okeanos Explorer*, ROV Little Herc, EX1004L3, Sangihe Talud, Indonesia. **Lead scientist.**

- 2010 *R/V *Okeanos Explorer*, ROV Little Herc, EX1004L2, Sangihe Talaud, Indonesia.
- 2010 R/V *Tangaroa*, KARMA TAN1007, Kermadec arc, New Zealand.
- 2009 R/V *Ronald H. Brown*, ROV *Jason II*, Lophelia II, U.S. Gulf of Mexico.
- 2009 SSV *Corwith Cramer*, Atlantis Canyon, U.S. North Atlantic Ocean.

OUTREACH & COMMUNITY INVOLVEMENT

WEBLOGS

[American Samoa Biogeography](#). **S. Herrera**, L. Watling (2017) American Samoa Expedition, NOAA, Office of Ocean Exploration and Research.

[Exploring the Paramount Seamounts](#), Munro C., **S. Herrera** & T. Heyl (2011) Signature Exploration: Galápagos Rift Expedition 2011, GALREX 2011, NOAA, Office of Ocean Exploration and Research.

[High Biodiversity in the Deep-Sea](#), **Herrera S.** (2010) Signature Exploration: Indonesia-USA Deep-Sea Exploration of the Sangihe Talaud Regions, NOAA, Office of Ocean Exploration and Research.

[Coral reefs in the deep sea](#), **Herrera S.** (2010) KARMA Cruise: Kermadec ARc MinerAls, CenSeam, Census of Marine Life on Seamounts, Census of Marine Life.

[Seeing it First Hand!](#) **Herrera S.** (2009) Signature Exploration: Lophelia II 2009: Deepwater Coral Expedition: Reefs, Rigs and Wrecks, NOAA, Office of Ocean Exploration and Research.

SEMINARS

- 2017 How do we Explore the Ocean?, 6 Degrees of Influence: Understanding the Interconnectedness of Earth Systems. NASA interns, Lehigh University.
- 2016 Ocean Exploration and Research. STEM/RARE students, Lehigh University.
- 2012 Are There True Cosmopolitan Deep-Sea Coral Species? The Case of the Bubblegum Coral *Paragorgia arborea*, Ocean Science Journalism Fellowship, WHOI.
- 2011 Recent Discoveries of Benthic Biodiversity via Telepresence in the Deep-Sea, Ocean Science Journalism Fellowship, WHOI.
- 2011 A Journey into Inner Space with WHOI – Galapagos Rift Live Event, NOAA Signature Exploration GALREX 2011, event with prospective donors, WHOI.
- 2011 Live from the Galapagos Rift, NOAA Signature Explorations: INDEX-SATAL 2010 and GALREX 2011, Peanut Butter Club, WHOI.

K-12 ACTIVITIES

- Interactive exploration tours of the R/V *Okeanos Explorer*. How do we Explore the Deep Ocean. More than 300 students from Samoan and American Samoa middle and high schools. 2017.
- Guest Teacher. Marine invertebrate anatomy summer class. The Children's School of Science. Woods Hole, MA. 2012.
- Associate Teacher. Science grade 8. Madawaska Middle/High School, Madawaska, Maine. 2010-2012.
- Judge. Falmouth Public Schools Science Fair 2011, Falmouth, MA.

MEDIA COVERAGE

- 2018 National Geographic Society (book), *Ultimate Secrets Revealed* (forthcoming).
- 2017 Lehigh University News (online), [Unlocking the Mysteries of Deepwater Corals to Restore the Gulf of Mexico](#), featured by EurekAlert, phys.org.

- 2017 Lehigh University News (online), [A Deepwater Expedition to Study 'Jewels of the Gulf'](#).
- 2017 Lehigh University News (online), [A Journey to the Unexplored Depths of the Pacific Ocean](#), featured by CBS News, Discovery Channel, Scientific American, Huffington Post, and Live Science.
- 2017 Gizmodo (online), [Here Are the Most Incredible Life Forms NOAA Found on Its Latest Deep Sea Dive](#).
- 2017 Radio New Zealand International (radio and online), [Scientists find living fossil in American Samoa deep dive](#).
- 2016 MIT News (online), [DNA markers tell the story of deep sea adaptation](#).
- 2016 Deep Sea News (online), [Deep-Sea Barnacle Genomics](#).
- 2015 Astrobiology Magazine (online), [Barnacles Explain Life at the Extreme](#), featured by [phys.org](#).
- 2013 Dinero (magazine, printed and online), featured as one of the [‘101 Most Creative and Innovative People in Colombia’](#).
- 2013 CNN in Spanish (television), live interview at the *Encuentro* news show.
- 2013 Agencia EFE (online), [Un Colombiano en el grupo del programa de exploración del océano en EEUU](#), (A Colombian in the group of ocean exploration program of the U.S.) featured by [Univision](#), [El Espectador](#), [El Nuevo Herald](#), [CM&](#), [El Colombiano](#).
- 2013 El Tiempo (newspaper, front page printed and online editions), [Colombianos dan cátedra sobre un coral gigante](#) (Colombians authorities in giant coral).
- 2012 Live Science (online), [How a Bubblegum Coral Conquered the Globe](#), featured by [YAHOO News](#), [MSNBC News](#), [CBS News](#), [Discovery News](#), [Consortium for Ocean Leadership](#).
- 2010 WHOI News Release (online), [Genetic Patterns of Deep-Sea Coral Provide Insights into Evolution of Marine Life](#), featured by [Science Daily](#), [Science Codex](#), [e! Science News](#), [phys.org](#).
- 2010 Scientific American (online), [Indonesia expedition maps rich undersea life](#).
- 2010 Live Science (online), [Possible New Species Found in Ocean Crossroads](#), featured by [MSNBC News](#).
- 2010 U.S. National Oceanographic and Atmospheric Administration News (online), [U.S. and Indonesian Scientists Find Biodiversity Runs Deep in Sulawesi Sea](#).

PROFESSIONAL SOCIETIES MEMBERSHIP

Sigma Xi, The Scientific Research Society; Society of Systematic Biologists (SSB); American Association for the Advancement of Science (AAAS); The Oceanography Society (TOS); American Geophysical Union (AGU); American Society of Limnology and Oceanography (ASLO), American Academy of Underwater Sciences (AAUS), Society for the Study of Evolution (SSE), Society for Molecular Biology and Evolution (SMBE), American Genetic Association (AGA), Deep-Sea Biology Society (DSBS).