

FRANK XAVIER FERRER GONZÁLEZ (HE/HIM)
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Profile

Marine microbial ecologist specializing in metabolite-mediated interactions between phytoplankton and heterotrophic bacteria. Extensive experience in field-based oceanographic research, laboratory experimentation, and mentoring undergraduate, graduate, and post-baccalaureate researchers in multicultural and bilingual environments. Strong commitment to inclusive research training, international collaboration, and science outreach in marine systems.

EDUCATION

University of Georgia (UGA), Athens, Georgia

Doctor of Philosophy in Marine Sciences, August 2022

Dissertation: Heterotrophic bacteria as biological sensors of phytoplankton exometabolic resources in the surface ocean

Advisor: Dr. Mary Ann Moran

University of Puerto Rico, Mayagüez Campus (UPRM), Mayagüez, Puerto Rico

Master of Science in Biology, May 2015

Thesis: Antibiotic Resistance Screening in Metagenomics Libraries Generated from Puerto Rico Cave Soil

Advisor: Dr. Carlos Rodríguez Mingüela

University of Puerto Rico, Mayagüez Campus (UPRM), Mayagüez, Puerto Rico

Bachelor of Science in Industrial Microbiology, May 2011

RESEARCH EXPERIENCE

Postdoctoral Researcher, University of Washington, September 2022 to Present.

PIs: Dr. Anitra E. Ingalls (primary), Dr. Virginia E. Armbrust

- Design and implementation of laboratory and *in situ* experiments to explore catabolism of methylated compounds by marine heterotrophic bacteria in an ecological and biogeochemical context.
- Isolation, phenotypic and genomic characterization, and metagenomic assembly of novel heterotrophic bacteria and metagenome-assembled genomes from the Equatorial Pacific.

Doctor of Philosophy in Marine Sciences, University of Georgia, July 2022, PI: Dr. Mary Ann Moran

- Design and implementation of co-culture experiments to investigate the transcriptional response and metabolite exchange between marine phytoplankton and heterotrophic bacteria.
- Characterization of metagenome assembled genomes from Monterey Bay, CA.

Master of Science in Biology, University of Puerto Rico at Mayagüez, May 2015, PIs: Dr. Carlos Rodríguez Mingüela (primary) and Dr. Carlos Ríos Velazquez

- Characterization of antibiotic resistance mechanisms from cave microbes
- Design and implementation of antibiotic resistance assays in metagenomic libraries.

Graduate Internship, Mastering Metagenomics, Yale University, New Hampshire CT, (2012), PIs: Dr. Ashley Shade (primary) and Dr. Jo Handelsman

- Generation of functional metagenomic libraries from Cueva Ventana Puerto Rico.

Bachelor of Science, University of Puerto Rico at Mayagüez, May 2011

- Generation of Functional Metagenomic Libraries from Guánica's Dry Forest, Biology department, (2010 to 2011), PI: Dr. Carlos Ríos Velazquez

- Identification of rare and endangered flora of Puerto Rico and Vieques Island, Biology Department Herbarium, (2008 to 2009), PI: Dr. Gary Breckon

GRANTS AND FELLOWSHIPS

Collaborative Research in Earth System Science and Technology (CRESST) Grant, December 2025 to August 2026 (\$80,000)

NSF Chemical Currencies of the Microbial Planet (C-CoMP) Post-Doctoral Fellowship, September 2023 to September 2025 (\$170,000)

University of Georgia's Graduate Recruitment Opportunity Assistantship. University of Georgia, Athens, Georgia. August 2015 to May 2017 (\$60,000)

National Institute of Health, Rise2Best UPRM Fellow University of Puerto Rico at Mayagüez. Grant No. NIH-R25GM088023 June 2011 to May 2013 (\$60,000)

United States Agricultural Department, Cooperative State Research, Education, and Extension Service (CSREES) Undergraduate Research Fellowship. GRANT NO. USDA-HSI-CSREES 2007-02386, January to May 2011 (\$915)

PEER-REVIEWED PUBLICATIONS

Published

1. **Ferrer-González, F.X.***, Heal, K.R.*, Sacks, J., Romero-Maysonet, Y., Finch, A., Carlson, L.T., Coe, L.S., Bartolek, Z., Luthy, C.B., Gaffney, M.P., Angier, S.K., Flynn, S.E., Bachmann Gómez, C.I., Dunn, J.M.L., Bay, K.J., Yamamoto, L.A., Tien, M.Z., Armbrust, V.E., Durham, B.P., Sosa, O.A., Ingalls, A.E., (2026). Conserved pathway for homarine catabolism in environmental bacteria. *Nature Microbiology*, 1-16.
2. Sacks, J. S., Carlson, L. T., Finch, A. H., **Ferrer-González, F. X.**, Boysen, A. K., Heal, K. R., Karl, D. M., White, A.E., Sosa, O.A., & Ingalls, A. E. (2026). The cycling of glycine betaine and homarine in marine microbial communities: Quantitative flux measurements and the role of competitive uptake inhibition. *Limnology and Oceanography Letters*, 11(1), e70069.
3. Olofsson, M.*, Uchimiya, M.*, **Ferrer-González, F. X.**, Schreier, J. E., Powers, M. A., Smith, C. B., Edison, A.S. & Moran, M. A. (2025). Dynamic reworking of marine diatom endometabolomes in response to temperature and a model bacterium. *mSystems*, e01036-25.
4. Durham, B.P.*., Johnson, W.M.*., Bannon, C.C., Bertrand, E.M., Ingalls, A.E., Edwards, B.R., Apprill, A., Borges, R., Boysen, A., Bundy, R.M., Chen, H., **Ferrer-González, F.X.**, Fiore, C., Heal, K.R., Kuhlisch, C., Liu, S., Lu, K., Meke, L., Pontrelli, S., Prabavathy, V.R., Reigel, A.M., Sacks, J.S., Schreier, J.E., Sekar, J., Uchimiya, M., Kujawinski, E.B. (2025). An ecological framework for microbial metabolites in the ocean ecosystem, *Limnology & Oceanography Letters*.
5. Hamilton, M., **Ferrer-González, F. X.**, & Moran, M. A. (2024). Heterotrophic bacteria trigger transcriptome remodeling in the photosynthetic picoeukaryote *Micromonas commoda*. *Environmental Microbiology Reports*, 16(3), e13285.
6. **Ferrer-González, F. X.**, Hamilton, M., Smith, C. B., Schreier, J. E., Olofsson, M., & Moran, M. A. (2023). Bacterial transcriptional response to labile exometabolites from photosynthetic picoeukaryote *Micromonas commoda*. *ISME communications*, 3(1), 5.

7. Moran, M.A., **Ferrer-González, F.X.**, Fu, H., Nowinski, B., Olofsson, M., Powers, M.A., Schreier, J.E., Schroer, W.F., Smith, C.B., and Uchimiya, M. (2022). The Ocean's labile DOC supply chain. *Limnology and Oceanography*.
8. Holderman, N. R.*, **Ferrer-González, F. X.***, Glushka, J., Moran, M. A., & Edison, A. S. (2023). Dissolved organic metabolite extraction from high-salt media. *NMR in Biomedicine*, 36(4), e4797.
9. Olofsson, M., **Ferrer-González, F.X.**, Uchimiya, M., Schreier, J.E., Holderman, N.R., Smith, C.B., Edison, A.S., Moran, M.A. (2022). Growth-stage-related shifts in diatom endometabolome composition set the stage for bacterial heterotrophy. *ISME Communications*, 2(1), 1-9.
10. Widner, B., Kido Soule, M. C., **Ferrer-González, F. X.**, Moran, M. A., & Kujawinski, E. B. (2021). Quantification of Amine-and Alcohol-Containing Metabolites in Saline Samples Using Pre-extraction Benzoyl Chloride Derivatization and Ultrahigh Performance Liquid Chromatography Tandem Mass Spectrometry (UHPLC MS/MS). *Analytical Chemistry*, 93(11), 4809-4817.
11. **Ferrer-González, F. X.***, Widner, B.*, Holderman, N. R.*, Glushka, J., Edison, A. S., Kujawinski, E. B., & Moran, M. A. (2021). Resource partitioning of phytoplankton metabolites that support bacterial heterotrophy. *The ISME journal*, 15(3), 762-773.

In review

12. **Ferrer-González, F.X.***, Bartolek, Z.*, Armbrust, V.E., Durham, B.P., Ingalls, A.E., Sosa, O.A., Ocean Genomes to Explore Microbial Metabolism of Phytoplankton Organic Matter, Accepted in Principle in CourseSource.
13. Bartolek, Z.*, **Ferrer-González, F.X.***, Ingalls, A.E., Armbrust, V.E., Genomes of novel heterotrophic bacteria, from isolates and metagenome-assembled genomes, reveal potential metabolic exchanges influencing multi-trophic interactions in the Equatorial Pacific, Manuscript in prep.

* Denotes co-first authorship

TEACHING EXPERIENCE

University of Puget Sound, Washington, USA - Fall 2023

1. Course-Based Undergraduate Research Experience (CURE)

PI: Dr. Oscar Sosa

- I was invited to collaborate on developing methods to train students in high-throughput screening.
- Designed and led a lesson on heterotrophic bacterial pathways for phytoplankton metabolite catabolism.

University of Georgia, Athens, GA - Fall 2021

2. Graduate Learning Assistant - Principles of Biology

- Led instruction and discussion for first- and second-year undergraduate students in foundational biology topics.

University of Puerto Rico at Mayagüez

3. Teaching Instructor - Genetics (*Spring, Summer, and Fall 2014*)

- Taught core genetics to undergraduate students across diverse academic programs.

4. Teaching Instructor - Bacterial Genetics (*Fall 2013*)

- Taught an upper-level undergraduate course and mentored graduate students through experiments and data interpretation.

5. Professional Development Teaching Professor -

Ethics, Integrity, and Responsible Conduct (*Fall 2014*)

- Delivered lectures on ethics in biotechnology to non-traditional learners through UPRM's continuing education program.
6. **Laboratory Assistant - Metagenomics Laboratory** (*Spring 2014*)
 - Supported lab instruction, prepared materials, and assisted students with experimental design and data analysis.

GRADUATE AND UNDERGRADUATE STUDENT MENTORSHIP

1. **Claudia Luthy**, Graduate student, Chemical Oceanography, University of Washington, Transcriptional response to osmolytes in the Pacific Ocean microorganisms. Fall 2025 to present.
2. **Susan Garcia**, Graduate student, Chemical Oceanography, University of Washington, Axenic diatom biosynthesis and release rates of low molecular weight metabolites from diatoms. Fall, 2022 to present.
3. **Jun (Tony) Sun**, Undergraduate student, Biology Department, University of Washington, Characterization of Amplicon Sequence Variants from the Equatorial Pacific. Fall 2024 to May 2025.
4. **Anna H. Finch**, Post-baccalaureate, Chemical Oceanography, University of Washington, Fate of homarine catabolism in *Ruegeria pomeroyi* DSS3. Fall 2023 to Summer 2024.
5. **Zachary Poyen**, Undergraduate student, Biology Department, University of Washington, Isolation of heterotrophic bacteria from American Samoa. Fall 2023 to Summer 2024.
6. **Sam Cryan**, Graduate student, Chemical Oceanography, University of Washington, Homarine degradation by heterotrophic bacterioplankton. Fall, 2022 to Spring 2023.
7. **Nelly Wood**, Graduate student, Integrative Life Science Rotation Program, University of Georgia, Determining bacterial kinetics from diatom substrates. Fall, 2019.
8. **Denzell Cross**, Graduate non-research mentee, Gateway to Graduate School (Summer Bridge) Program, University of Georgia, Athens, GA, Fall 2016 to Spring 2017.
9. **Walter Johnson**, Graduate non-research mentee, Gateway to Graduate School (Summer Bridge) Program, University of Georgia, Athens, GA, Fall 2016 to Spring 2017.
10. **Martin Douglass**, Graduate non-research mentee, Gateway to Graduate School (Summer Bridge) Program, University of Georgia, Athens, GA, Summer 2016.
11. **Stephanie L. Stromp**, Undergraduate student, Biology Department, University of Georgia, Bacteria-Phytoplankton Interactions in Understanding the Marine Carbon Cycle. Fall 2016 to Spring 2017.
12. **Lidimarie Trujillo**, Undergraduate student, Biology Department, Cultivable Approaches and Generation of Metagenomic Libraries from Soil for Functional Screening of Estrogen Metabolizing Candidates. Fall 2012 to Spring 2014.
13. **Luis Morales**, Undergraduate student, Premedical Program, Industrial Microbiology Program, Functional Screening of Thermal Tolerant Clones in Metagenomic Libraries. Fall 2012 to Spring 2013.
14. **Nader R. Hussein Fernandez**, Undergraduate student, Industrial Microbiology Program, Isolation of Cultivable Antibiotic-Resistant Candidates from Soil of Cueva Ventana. Fall 2011 to Spring 2012.

15. **Cristian Acevedo**, Undergraduate student, Industrial Microbiology Program, Isolation and characterization of different color spectra antibiotic resistant bacteria. 2012.
16. **Hiram Morales**, Undergraduate student, Industrial Microbiology Program, Screening for sulfur producing bacteria in soils of Puerto Rico. 2011.
17. **Albin Cardona**, Graduate student, Professional Development Program, Generation of Antibiotic Minimum Inhibiting Concentrations, Bacterial Growth Curves and Functional Antibiotic Resistance Screening. 2011.
18. **Ricky Padilla**, Undergraduate student, Mayagüez Residential Center for Educational Opportunities CROEM, Isolation of Antibiotic-like Substances from Plant Sources. 2011.
19. **Giovanni González** and **Juliana Rodríguez Varella**, Professional development students, Science and Technology of Food Program and Teachers Development Program, Generation of a metagenomic library using an indirect method from cave Ventana. 2011.

PRESENTATIONS

Invited Seminars

1. **Frank X. Ferrer González**, Zinka Bartolek, Shiri Graff van Creveld, Joshua Sacks, Oscar A. Sosa, E. Virginia Armbrust, Anitra E. Ingalls, Exploring the metabolic capacity of phytoplankton-associated heterotrophic bacteria in the Equatorial Pacific, Marine Microbes Gordon Research Seminars: Linking Microbial Processes to Ecosystem Functions, Les Diablerets, Switzerland, June 9, 2024
2. **Frank X. Ferrer González**, Exploring betaine mediated links in surface ocean microbial networks, Biological Oceanography Department, School of Oceanography, University of Washington, Seattle Washington. Feb 13, 2024
3. **Frank Xavier Ferrer González**, Zinka Bartolek, Oscar A. Sosa, E. Virginia Armbrust, Anitra E. Ingalls, Microbial Links Mediated by Betaines across the Equatorial Pacific, C-COMP-Early Career Seminar Series, Virtual, January 16, 2024
4. **Frank X. Ferrer-González**, Flujo de carbono en la superficie del océano, Puerto Rican Virtual Research Talks, Virtual, Fall 2020.

Selection of Conference Presentations

1. **Frank X. Ferrer González**, Michael Carlson, Debbie Lindell, E. Virginia Armbrust, Anitra E. Ingalls, Genomic insights into methyl group acquisition strategies in marine bacteria, Decoding the Marine Microbial World: Currencies, Interactions and Environmental Controls, Castelldefels, Spain, June 7-12, 2026, Poster.
2. **Frank X. Ferrer Gonzalez** and Katherine Heal, Joshua Sacks, Yarinete Romero-Maysonet, Anna Finch, Laura T. Carlson, Lisa S. Coe, Claudia B. Luthy, Moira P. Gaffney, Sabine Angier, Samantha Flynn, Matthew Z. Tien, Chiara I. Bachmann Gómez, Jensen M.L. Dunn, Kenzie Jo Bay, Bryndan P. Durham, Oscar A. Sosa, Anitra E. Ingalls, Homarine catabolism and metabolic response in marine heterotrophic bacteria, Texel, Netherlands, March 17-20, 2025, Speaker.
3. **Frank X. Ferrer González**, Zinka Bartolek, Shiri Graff van Creveld, Joshua Sacks, Oscar A. Sosa, E. Virginia Armbrust, Anitra E. Ingalls, Exploring the metabolic capacity of phytoplankton-associated heterotrophic bacteria in the Equatorial Pacific, Marine Microbes Gordon Research Conference: Linking Microbial Processes to Ecosystem Functions, Les Diablerets, Switzerland, June 10-14, 2024, Poster.

4. Mentee - Zachary Poyen, Zinka Bartolek, **Frank X. Ferrer González**, E. Virginia Armbrust, Bacterial Phenotypes of the Equatorial Pacific in the Presence of Different Phytoplankton Metabolites, UW Oceanography Senior Thesis Symposium, University of Washington, Seattle, Washington, March 7th, 2024, Poster.
5. **Frank X. Ferrer González**, Susan García, Zinka Bartolek, Joshua Sacks, Oscar A. Sosa, E. Virginia Armbrust, Anitra E. Ingalls, Betaines support microbial interdependencies in the surface ocean, NSF Chemical Currencies of the Microbial Planet (C-CoMP) Annual Meeting, October 2-5, 2023, Poster.
6. **Frank X. Ferrer González**, Susan García, Zinka Bartolek, Joshua Sacks, Oscar A. Sosa, Shiri Graff Van Creveld, E. Virginia Armbrust, Anitra E. Ingalls, Betaines Support Microbial Interactions in the Equatorial Pacific, Simons Collaboration on Ocean Processes and Ecology (SCOPE) Annual Meeting, Simons Foundation, New York City, New York, November 6 to 8, 2023, Poster.
7. Mentee - Susan García, **Frank X. Ferrer González**, Joshua Sacks, William Kumler, Laura T. Carlson, Anitra Ingalls, Comparative exometabolomics analysis of *Thalassiosira oceanica* and *Thalassiosira pseudonana*. SACNAS NDISTEM CONFERENCE, Portland, Oregon, October 26-28, 2023, Poster.
8. **Frank X. Ferrer González**, Zinka Bartolek, Joshua Sacks, Shiri Graff van Creveld, E. Virginia Armbrust, Anitra Ingalls, Bacterioplankton response to Low Molecular Weight Dissolved Primary Production from the Equatorial Pacific, ASLO Aquatic Sciences Meeting, Palma de Mallorca, Spain, June 5 to 9, 2023, Poster.
9. **Frank X. Ferrer-González**, Brent Nowinski, Mary Ann Moran, Dynamic Heterotrophic Bacterial Strategies for Carbon Acquisition in a Coastal Phytoplankton Bloom, Gordon Research Conference, Les Diablerets, Switzerland, Spring 2022, Poster.
10. **Frank X. Ferrer-González**, Mary Ann Moran, Resource Partitioning of Diatom Metabolites by Marine Bacterial Heterotrophy in the Surface Ocean, Marine Science Student Symposium, University of Georgia, Athens, GA, Fall 2020, Speaker.
11. **Frank X. Ferrer-González**, Mary Ann Moran, Resource-Based Niche Partitioning in Surface Ocean Heterotrophic Bacteria Growing on Diatom Derived Metabolites, Southeastern Biogeochemical Symposium (SBS), University of South Carolina, Columbia South Carolina, March 2019, Poster.
12. **Frank X. Ferrer-González**, Mary Ann Moran, Asking the Bacteria What Diatom Metabolites Support Heterotrophic Growth in the Surface Ocean, Association for the Science of Limnology and Oceanography (ASLO), Puerto Rico Convention Center, San Juan Puerto Rico, February 2019, Speaker.
13. **Frank X. Ferrer-González**, Mary Ann Moran, Diatom Metabolites Support Heterotrophic Growth in the Surface Ocean, Annual Southeastern Branch American Society for Microbiology Meeting Microbial Dynamics and Infection, Georgia Tech, Atlanta GA, November 2018, Speaker.
14. **Frank X. Ferrer-González**, Mary Ann Moran, Phytoplankton Metabolites that Support Heterotrophic Growth in the Surface Ocean, Southeastern Biogeochemical Symposium (SBS) Florida State University, Tallahassee, FL, April 2018, Poster.
15. **Frank X. Ferrer-González**, Mary Ann Moran, Diatom derived metabolites that Support Heterotrophic Growth in the Surface Ocean, Suddath Symposium, The Chemical Ecology of Microbiome Interactions, Georgia Tech, Atlanta GA, January 2018, Poster.

16. Mentee - Stephanie L. Stromp, **Frank X. Ferrer-González**, Mary Ann Moran, Bacteria-Phytoplankton Interactions in Understanding the Marine Carbon Cycle. CURO Symposium, University of Georgia, April 2017, Poster.
17. **Frank X. Ferrer-González**, Carlos Ríos Velazquez, Accessing Antibiotic Resistant Clones in Puerto Rican Soils through Metagenomics. Second Annual Symposium: Science & Technology, Innovation Through Research, University of Puerto Rico, Mayagüez, April 2014, Poster.
18. **Frank X. Ferrer-González**, Carlos Ríos Velazquez, Unraveling Kanamycin and Tetracycline Resistant Genes in Cave Soil of Puerto Rico. Puerto Rico Society of Microbiology: Second Student Research Symposium Passing the Torch of Research and Ethics to the Next Generation, University of Puerto Rico, Arecibo. Arecibo, Puerto Rico, December 2013, Speaker.
19. **Frank X. Ferrer-González**, Carlos Ríos Velazquez, Accessing Antibiotic Resistant Clones in Puerto Rican Soils through Metagenomics. Annual conference of the AAAS-Caribbean Division: Infectious diseases in the tropics, AAAS and Science Caribbean Division, University of Puerto Rico, Medical Center. Río Piedras, Puerto Rico, September 2013, Poster.
20. **Frank X. Ferrer-González**, Carlos Ríos Velazquez, Accessing the Puerto Rican Cave Resistome: Identifying Multiple Types of Antibiotic Resistant Bioprospects from Cave Soil Metagenomic Libraries. American Society of Microbiologist 113th General Meeting, Colorado Convention Center. Denver, Colorado, May 2013, Poster.
21. Mentee - Nader R. Hussein Fernandez, **Frank X. Ferrer-González**, Carlos Ríos Velazquez, Isolation of Cultivable Antibiotic Resistant Candidates from Soil of Cueva Ventana. American Society of Microbiologist 113th General Meeting, Colorado Convention Center. Denver, Colorado, May 2013, Poster.
22. **Frank X. Ferrer-González**, Carlos Ríos Velazquez, Assessing Highly Resistant Kanamycin Clones in Puerto Rican Soils through Metagenomics. SACNAS Regional Chapter "Science & Technology, Innovation Through Research" UPRM, SACNAS UPRM Chapter, University of Puerto Rico, Mayagüez. Mayagüez, Puerto Rico, April 2013, Speaker.
23. **Frank X. Ferrer-González**, Carlos Ríos Velazquez, Assessing Highly Resistant Kanamycin Clones in Puerto Rican Soils through Metagenomics. Puerto Rico Society of Microbiologist Student Research Symposium "Passing the Torch of Ethics to the Next Generation", Puerto Rico Society of Microbiologist, Interamerican University, Metropolitan Campus. San Juan, Puerto Rico, April 2013, Poster.
24. **Frank X. Ferrer-González**, Carlos Ríos Velazquez, Unraveling a Highly Resistant Kanamycin Clone in Puerto Rican Soils through Metagenomics. VI International Congress of Public Health Promoting Universities and IV Public Health Puerto Rican Conference, Medical Science Campus UPR and the Faculty of Biosocial Sciences and Graduate School of Public Health, Puerto Rico Convention Center. San Juan, Puerto Rico, March 2013, Poster.
25. **Frank X. Ferrer-González**, Carlos Ríos Velazquez, Unraveling Tetracycline Resistance Genes in Soil Metagenomics. SACNAS National Conference, Washington State Convention and Trade Center. Seattle, Washington, October 2012, Poster.
26. **Frank X. Ferrer-González**, Carlos Ríos Velazquez, Unraveling Gentamicin Resistance Genes in Soil Metagenomics. ASM General Meeting, Moscone Convention Center. San Francisco, California, May 2012, Poster.

HONORS AND AWARDS

- Travel Award - To attend a conference in the Netherlands, M2C2, Netherlands, 2025
- Travel Award - To attend a conference in Switzerland, Gordon Research Conference, Switzerland, 2024
- Travel Award - To attend a conference in Switzerland, University of Georgia Graduate School, 2022
- Travel Award - To perform research in the North Pacific Ocean, University of Georgia Graduate School, 2017
- Second Annual Symposium: Science and Technology, Innovation Through Research. *First Place Poster Presentation*. SACNAS UPRM Chapter, University of Puerto Rico, Mayagüez. April 2014.
- Annual Conference of the AAAS-Caribbean Division: Infectious Diseases in the Tropics-Second Place Robert I. Larus Award. AAAS and Science Caribbean Division, University of Puerto Rico, Medical Center, September 2013.
- Second Biomedical Engineering Symposium University of Puerto Rico, Mayaguez. *Second Place Poster Presentations*. Biomedical Engineering Society, University of Puerto Rico, Mayagüez. April 2013.
- Puerto Rico Society of Microbiologist Student Research Symposium “Passing the Torch of Ethics to the Next Generation”. *First Place in Graduate Poster Presentations*. Puerto Rico Society of Microbiology, Interamerican University, Metropolitan Campus. April 2013.
- VI International Congress of Public Health Promoting Universities and IV Public Health Puerto Rican Conference - *2nd Prize Honorific Mention in Public Health*. Medical Science Campus UPR and the Faculty of Biosocial Sciences and Graduate School of Public Health, Puerto Rico Convention Center. March 2013.

OCEANOGRAPHIC RESEARCH CRUISES

- R/V Falkor (too), FKT260303, South Atlantic Subtropical Gyre, 35-day cruise, March to April 2026.
- R/V Thomas J. Thompson, University of Washington, Seattle WA TN448. Philippine Sea, 13-day cruise, January 2026
- R/V Rachael Carson, University of Washington, Seattle, WA RC104. Puget Sound, Washington, 7-day cruise, September 2023
- R/V Thomas J. Thompson, University of Washington, Seattle, WA TN412. Equatorial Pacific, 29-day cruise, January to February 2023
- R/V Oceanus, University of Oregon, Newport, OR OC1708A. North Pacific, 16-day cruise, August 2017

COASTAL AND LAND SAMPLING EXPERIENCE

- Coastal Sampling at Sapelo Island GA, for the In Situ Chemotaxis Assay (ISCA), February 2019
- Coastal Sampling at Guánica Dry Forest, Guánica, Puerto Rico, Spring 2012
- Cave Sampling at Cueva Ventana, Arecibo, Puerto Rico, Fall 2011

PROFESSIONAL AND PUBLIC SERVICES AND OUTREACH

Professional services

Reviewer for peer-reviewed journals

- ISME Journals
- eLIFE
- ASM Journals
- AGU

Reviewer for scientific proposals

National Science Foundation (NSF)

Other professional and public services

- Member of the Student Life Sub-Committee of the Marine Science DEI Initiative, University of Georgia, Athens, GA, 2020 to 2022
- Member of the DEI Training Sub-Committee of the Marine Science DEI Initiative, University of Georgia, Athens, GA, 2020 to 2022
- Member of the Marine Science, DEI committee, University of Georgia 2020 to 2022
- Certificate in Diversity & Inclusion (CDI) through the Office of Institutional Diversity at the University of Georgia, Athens, GA, Fall 2021
- Co-Chair of the Student Life Sub-Committee of the Marine Science DEI Initiative, University of Georgia, Athens, GA, 2020 to Fall 2021
- Co-lead, First Graduate Student Marine Science Department Symposium, University of Georgia, Athens, GA, Fall 2020
- Graduate Steering Committee, Southeastern Biogeochemical Symposium (SBS), University of Georgia, Athens, GA, Spring, 2017

Outreach

- UW Aquatic Sciences Open House, University of Washington, May 2026
- UW Aquatic Sciences Open House, University of Washington, May 2024
- Outreach Science Night at Wedgwood Elementary School in Seattle Washington, April 2024
- Outreach to underrepresented and marginalized students at Cedar Shoals High School: Latin American Ocean Scientists and what we do, Athens, GA, February 2020
- STEM Zone: What are marine sciences? Missouri Home Game, UGA, Athens, GA, November 2019

Public service

- Co-founder, One filter one family, supplied 1000 water filters to families in Puerto Rico distributed by the University Institute for the Development of Communities at the University of Puerto Rico in Mayagüez, Fall 2017
- Lead, Hurricane Maria UGA Response Team, provided over \$100,000 in supplies distributed by the NGO ISER Caribe for relief from the hurricane aftermath in Puerto Rico, Athens, GA, Fall 2017

- Photograph Exhibition on Climate Change in the United Nations COP21, in cooperation with the Fondation Alliance Francaise París. United Nations Climate Change Conference, COP21, Paris, France, 2015
- Photojournalist for Sea Grant Puerto Rico, Research: How climate change impacts the West Coast of Puerto Rico. Summer to Fall 2014
- Photojournalist of Esta Vida Boricua, A Life Narrative Project, University of Puerto Rico at Mayagüez. January 2014 to 2015
- Photography Exhibition: Climate Change and the City: State of Emergency? Urban Culture Fair and the Fondation Alliance Francaise París, Mona Lisa at Rio Piedras, Puerto Rico, 2014
- Photographer Fellow: The Fondation Alliance Francaise París French Fellowship. The Fondation Alliance Francaise París, San Juan Puerto Rico, 2014
- ISEF 2013 Regional Science Fair Judge, Mayaguez, Puerto Rico, 2014
- ISEF Science Fair Mentor CROEM High School, Mayaguez, Puerto Rico, 2011 to 2013
- Judge at Science Fair; CROEM High School, Mayaguez, Puerto Rico, 2011 - 2012
- Judge at Science Fair; SESO School, Mayaguez, Puerto Rico, 2011 - 2014
- Student employee at the Social and Cultural Activities Department at the Students's Deanship - University of Puerto Rico, Mayagüez Campus, August 2009 to 2011

LANGUAGES

Fluent in Spanish and English