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ACADEMIC DEGREES

- 2007 Ph. D. University of Puerto Rico, Río Piedras Campus
Thesis: *Comparative phylogeography of Caribbean wetland plant species*. Advisors:
T. Mitchell Aide, Ph.D. and W. O. Mc Millan, Ph.D. (GPA 4.0)
- 2000 MS in Biology, University of Puerto Rico, Río Piedras Campus.
Thesis: *Genetic structure of Pterocarpus officinalis (a tropical wetland species) from
the species distribution to the watershed scale*.
Advisor: T. Mitchell Aide, Ph.D. (GPA 4.0)
- 1996 BS in Biology, University of Puerto Rico, Río Piedras Campus,
Cum Laude

ADDITIONAL ACADEMIC STUDIES

- 2015 Quantitative Ecology -Introduction to R-program, data management and
complex statistical analysis Workshop
USDA Forest Service, San Juan
- 2006 Advance Training in *ABI3130xl Sequence Analyzer* and Gene Mapper,
Software for Microsatellites and Sequencing, *Applied Biosystems do Brasil
Ltda*, August 8-11 (32 hours).
- 2006 Molecular Markers: Tools for Developing Enriched Microsatellite
Libraries- Technical Workshop
Interdisciplinary Center for Biotechnology Research Facilities, University
of Gainesville, Florida, April 3-7 (40 hours).
- 2001-2002 Multi-Site, Multi-Comparison, Multi Disciplinary (3M) Initiative for
Training in Plant Ecology organized by Organization for Tropical Studies
(OTS) and A.W. Mellon Foundation, 4 months over a two year period.
August –September 2001
Biogeochemistry and ecological succession-*Hawaii*
Forest Structure, Floristics and Regeneration-*Costa Rica*
Forest Fragments Dynamics, biological Reserves and
Floodplains-*Brazil*
August –September 2002
Riparian and Savanna systems ecological studies –*South Africa*
Plant and Animal Interactions, long-term forest dynamics *Panamá*
Cloud and floodplain forest Diversity-*Perú*
- 1999 Ecology of Amazonian Ecosystems 99-13, Organization for Tropical
Studies Centro Amazónico de Educación Ambiental e Investigación and
Universidad Nacional de la Amazonia Peruana, May 10 to June 7,
Iquitos, Perú.
- 1997 Natural History of Mona Island, Puerto Rico NSF-
Chautauqua/University of Puerto Rico-Río Piedras Campus and
University of Puerto Rico-Mayaguez Campus (1-week course).

LANGUAGES

Spanish (first language)
English-fluent

TEACHING & ADVISING EXPERIENCE

August 2011-Present	Assistant professor-General Biology-Cell and Molecular Biology Component, undergraduate course for biology majors. University of Puerto Rico- Bayamon.
August 2011-Present	Assistant professor-Biological Sciences-Cell and Molecular Biology Component, undergraduate introductory course for non-biologist. University of Puerto Rico- Bayamon
August 2011-Present	Assistant professor-Biometry- undergraduate introductory course in Statistics for biology majors. University of Puerto Rico- Bayamon.
August-2012-Present	Assistant professor-Botany laboratory professor, University of Puerto Rico, Bayamon Campus.
August 2011-Present	Assistant professor-Undergraduate Research Course- undergraduate introductory course in research skills and scientific writing for biology majors. University of Puerto Rico- Bayamon.
August 2011-Present	Assistant professor-General Biology Laboratories I-II, laboratory coordinator and professor, University of Puerto Rico, Bayamon.
August 2007-June 2011	Assistant professor-General Biology - Cell and Molecular Biology Component, undergraduate introductory course for biology majors. University of Puerto Rico- Río Piedras.
August-2007-June 2011	Assistant professor-Botany laboratory coordinator and professor, University of Puerto Rico, Río Piedras. August-2007-June 2011 Assistant professor-Botany laboratory coordinator and professor, University of Puerto Rico, Río Piedras.
August 2007, 2008	Assistant professor-Biotechnology course- specialized laboratory in molecular biology techniques for undergraduate students. University of Puerto Rico, Río Piedras.
2007	Instructor of General Biology Laboratory, undergraduate course, University of Puerto Rico, Río Piedras.
2001-2009	Research Introductory Course-Biol 4990 and RISE and Marc students- Research advisor of nine undergraduate students, University of Puerto Rico, Río Piedras.
2004	Instructor-Microsatellite development workshop-two weeks graduate course, University of Puerto Rico, Río Piedras.
1999 - 2000	Instructor- General Biology Laboratory, undergraduate course, University of Puerto Rico, Río Piedras.
1996	Instructor and coordinator -Peninsula Gigante Field Ecology Course- Smithsonian Tropical Research Institute- Universidad Nacional de Panamá. 1-week field ecology training for Panamanian undergraduate students, Barro Colorado Island, República de Panamá.

RESEARCH EXPERIENCE

- 2017-Presente Monitoreo y regeneración asistida del bosque de cayur (*Annona glabra*) en la reserva natural del humedal de punta tuna en Maunabo. In collaboration with Dr. Concepción Rodríguez Fourquet from UPR-Bayamon and Tamara Heartsill Scalley from USDA Forest Service IITF
- 2016 Guía pictórica de cortezas de árboles en el Caribe. In collaboration with Melody Rosario-Fonseca-University of Puerto Rico-Bayamón and Dr. Eugenio Santiago-Valentín from University of Puerto Rico-Rio Piedras, Herbario Jardín Botánico UPR
- 2015-2016 Forest structure and dynamics of *Pterocarpus officinalis* swamp forest of Puerto Rico. In collaboration with Dr. Tamara Heartsill Scalley from USDA Forest Service IITF
- 2007-2009 Phylogeographic patterns of a widespread tropical tree: *Poulsenia armata* (Moraceae) based on nuclear and chloroplast DNA. In collaboration with Dr. Jason Rauscher, Dr. Christopher Dick and Dr. Mitchell Aide. University of Puerto Rico
- 2002-2007 Comparative phylogeography of wetland plant species in the Caribbean Basin Molecular analyses using DNA sequences from nrDNA and cpDNA (Dr. Jason T. Rauscher, Dr. W. Owen McMillan, Dr. T. Mitchell Aide)
- 2003-2004 Microsatellite markers development of several tropical species University of Puerto Rico
Generation of enriched libraries and microsatellite isolation for several tropical species 1) Reptiles (Mona Iguana) 2) Sea Turtle (Hawksbill turtle) 2) Fish and 3) Plants (White and Buttonwood mangroves).
- 2001 Phylogeography of Pantropical Trees
NAOS marine and Molecular laboratories, Smithsonian Tropical Research Institute, Panamá
Genetic analysis-DNA sequencing. (Dr. Eldredge Bermingham and Dr. Christopher Dick).
- 1996 - 2000 Genetic Structure of *Pterocarpus officinalis* (a tropical wetland species) from the species distribution to the watershed scale.
University of Puerto Rico
Sample collection for molecular analyses using AFLP DNA fingerprint technique.
(Dr. W. Owen McMillan and Dr. T. Mitchell Aide)
- 1996 -2006 Forest structure and spatial distribution of *Pterocarpus officinalis* swamp forest of Puerto Rico.
University of Puerto Rico
Plant census, DBH measurements, and data analysis of all individuals > 1cm DBH within a 1ha area.
(Dr. T. Mitchell Aide)
- 1996 Environmental and physiology regulation of water flux through a tropical ecosystem
Smithsonian Tropical Research Institute, Barro Colorado Island, Panama
Field work (Placed water sensors into trees, set up climatic stations)
(Dr. José Luis Andrade and Dr. R.C. Meinzer)
- 1994, 1997 - 1998 Comparison of nutrient dynamics between three *Dacryodes excelsa* forest in Puerto Rico.
International Institute of Tropical Forestry
Field work, sample collection, and preparation for chemical and statistical analyses.

- (Dr. Ariel Lugo)
- 1994 - 1995 Especiación del género *Quercus* en Colombia: un siglo y medio de incertidumbre.
University of Puerto Rico and Universidad de los Andes, Colombia
Molecular analysis using PCR-RAPD DNA fingerprint technique.
(Dr. T. Mitchell Aide and Dr. Jaime Cavalier)
- Patterns of genetic diversity in a widespread tropical tree: *Poulsenia armata* (Moraceae).
University of Puerto Rico
Molecular analysis using PCR-RAPD DNA fingerprint technique.
(Dr. T. Mitchell Aide)

GRANTS/AWARDS AND FELLOWSHIPS

- 2017-2019 Monitoreo y regeneración asistida del bosque de cayur (*Annona glabra*) en la reserva natural del humedal de punta tuna en Maunabo. April 2017.
Elsie Rivera Ocasio y Concepción Rodríguez Fourquet
Programa de Incentivos 2017 del Programa de Forestación Urbana y de Comunidades (PFUC), Departamento de Recursos Naturales y Ambientales y IITF-USDA-Forest Service. Presupuesto: \$106,126.75.
- 2017-2019 Punta Tuna Natural Reserve Monitoring and Regeneration of *Annona glabra* (cayur). **Elsie Rivera Ocasio** y Concepción Rodríguez Fourquet
Puerto Rico NASA SPACE GRANT CONSORTIUM
\$3,681.00
- 2006-2007 Dean of Graduate Studies-Merit Pre-doctoral Fellowship (UPR-Golf Tournament Fellowship) Given to only two students among more than 75 applicants among all graduate programs in the Natural Sciences Faculty) 20k
- 2006 Natural Science Dean's Award for academic excellence
- 2004-2006 Alliance for Graduate Education and Professorate (AGEP) Pre-doctoral Fellowship-NSF
- 2001-2004 U.S. EPA- Science to Achieve Results (Star) Program Pre-doctoral Fellowship, 130k
- 2001-2004 Smithsonian Tropical Research Institute, Pre-doctoral fellowship
- 2001-2002 Fellowship and Tuition grant, OTS-Mellon Program. Merit based to participate in (3M) Multi-site, Multi-comparison, and Multi disciplinary plant ecology training.
- 2001 José Ramón Ortíz Award: Award given by the University of Puerto Rico to one outstanding Master's student in each graduation section.
- 1999 - 2000 Organization for Tropical Studies (OTS) Post Course Fellowship: 1-yr Fellowship to conduct a research project after the end of the OTS course- Ecology of Amazonian Ecosystems.
- 1999 Fellowship and Tuition Grant, Organization for Tropical Studies (OTS), merit based for travel to participate in 1999-13 Ecology of Flooded Amazonian Ecosystems.
- 1999 Isabel Andréu de Aguilar Scholarship: Scholarship granted by the Asociación de Graduadas of the University of Puerto Rico annually to one female master's student at the University of Puerto Rico.

- 1997 Outstanding Poster Presentation Award: Certificate of award for best poster presentation at graduate level in the Ninth Annual Conference of The National Alliance of Research Centers of Excellence (NARCE) held at El Paso, Texas.
- 1996 Undergraduate Research Award: Award given by the Natural Science Faculty to the undergraduate student with most prominent research contribution, University of Puerto Rico.

SERVICES

- 2018 Graduate committee member of Wilmer Rivera, Ph.D. student at the Environmental Sciences in University of Puerto Rico Rio Piedras.
- 2017-2018 Institutional professional development committee, University of Puerto Rico-Bayamón
- 2017-2018 Member of the advisory committee of the Honor Society- University of Puerto Rico-Bayamón
- 2016 Institutional catalog 2016-2019 preparation- University of Puerto Rico-Bayamón
- 2016 Para La Naturaleza- Cañon de San Cristobal Bio-blitz-Volunteer
- 2016 Education Program- Radio Interview- Ecological Importance of *Annona glabra* Coastal Wetlands and the effects of climate change.
Radio Victoria 840- Local radio station for the eastern part of Puerto Rico
- 2016 Bio-Blitz-Scientific Advisor for Plant Taxonomy, University of Puerto Rico-Bayamón
- 2016 Member of the Five-year Evaluation Committee- Biology Department UPR-Bayamon
- 2015-present Advisory committee of Agustin Stahl Award to Puerto Rican Scientist.
- 2015-present Scientific Board of Museo de Vida Silvestre Municipio de San Juan
- 2011-2016 Juror of student's posters presentations at the Bio Expo, undergraduate student activity at UPR, Bayamon.
- 2012 Juror of student's posters presentations at the Devo Expo, undergraduate student activity at UPR, Bayamon.
- 2011-Present Member of the Student Affairs Committee- Biology Department UPR-Bayamon
- 2011-2014 Coordinator of the professional development committee –Biology Department-UPR Bayamon
- 2009 Invited speaker to Sierra Club Vegetation Field Trips
- 2006 Student representative in the PhD evaluation committee for the certification of the Biology PhD program by the Middle States Commission on Higher Education (MSCHE).
- 2003- Present Peer reviewer for: Molecular Ecology, Journal of Biogeography, Heredity, Conservation Genetics, and Evolution.

PUBLICATIONS

- 2018 Marc-André Selosse, Seynabou Sene, Mathieu Forget, Josie Lambourdières, Khoudia Cissé, Abdala Gamby Diédhiou, **Elsie Rivera-Ocasio**, Hippolyte Kodja, Norikazu Kameyama, Kazuhide Nara, Lucie Vincenot, Jean-louis Mansot, Jean Weber, Mélanie Roy, Samba Ndao Sylla, and Amadou Ba. 2018. A pantropically introduced tree is followed by specific ectomycorrhizal symbionts due to pseudo-vertical transmission". In press. Paper #ISMEJ-17-00904OAR
- 2015 Cerón-Souza, Ivania; González, Elena; Schwarzbach, Andrea E.; Salas-Leiva, Dayana; **Rivera-Ocasio, Elsie**; Toro-Perea, Nelson; Bermingham, Eldredge; McMillan, Owen. 2015. Contrasting demographic history and gene flow patterns of two mangrove species on either side of the Central American Isthmus. *Ecology and Evolution*. Volume 5, Issue 16, pages 3486–3499. DOI: 10.1002/ece3.15692015
- 2015 Amadou M. Bâ, and **Rivera-Ocasio, Elsie**. 2015. Genetic Diversity and Functional Traits of *Pterocarpus officinalis* Jacq. Associated with Symbiotic Microbial Communities in Caribbean Swamp Forests in Relation to Insular Distribution, Salinity and Flooding. *Wetlands*: Volume 35, Issue 3, Page 433. DOI 10.1007/s13157-015-0651-5
- 2010 Cerón -Souza, Ivania, **Rivera-Ocasio, Elsie**, Medina, Ernesto, Jiménez, Jorge A., McMillan, Owen, Bermingham, Eldredge. 2010. Hybridization and introgression in new world Red mangroves *Rhizophora* (Rhizophoraceae). *American Journal of Botany*, 97:945-957.
- 2007 **Rivera-Ocasio, Elsie**, T. Mitchell Aide, and Neftalí Rios-López. 2007. The effects of salinity on the dynamics of a *Pterocarpus officinalis* forest stand in Puerto Rico. *Journal of Tropical Ecology*, 23:5:559-568.
- 2006 Cerón-Souza, Ivania, **Rivera-Ocasio, Elsie**, Funk, Stephan M., McMillan, W. Owen. 2006. Development of six microsatellite loci for black mangrove (*Avicennia germinans*). *Molecular Ecology Notes* 6(3), 692-694.
- 2006 **Rivera-Ocasio, Elsie**, T. Mitchell Aide, and W. Owen McMillan. 2006. The influence of spatial scale on the genetic structure of a widespread tropical wetland tree, *Pterocarpus officinalis* (Fabaceae). *Conservation Genetics* 7, 251-266.
- 2004 Pauw, A., S. A. Van Bael, H. A. Peters, S.D. Allison, J.L. Camargo, M. Cifuentes-Jara, A. Conserva, T. Garcia-Restom, T. Heartsill-Scalley, S. A. Mangan, G. Nuñez-Iturri, **E. Rivera-Ocasio**, M. Rountree, S. Vetter, C. Volkmer de Castilho. 2004. Physical damage in relation to Carbon allocation strategies of tropical forest tree saplings. *Biotropica* 36(10), 410-413.
- 2002 **Rivera-Ocasio, E.**, T.M. Aide, and W. O. McMillan. 2002. Patterns of genetic diversity and biogeographical history of the tropical wetland tree, *Pterocarpus officinalis* (Jacq.), in the Caribbean basin. *Molecular Ecology* 11: 675-683.
- 1998 Aide, T. M. and **E. Rivera**. 1998. Geographic patterns of genetic diversity in *Poulsenia armata* (Moraceae): implications for the theory of Pleistocene refugia and the importance of riparian forest. *Journal of Biogeography*. 25: 695-705.

CONFERENCES

- 2018 Effects of Hurricane Maria on the abiotic conditions within a costal stand of *Annona glabra* at Punta Tuna Natural Reserve in Maunabo, Puerto Rico. Annual meeting of the Ecological Society of America, New Orleans, Louisiana.
- 2018 Impacto del Huracán María en la vegetación costera. Seminario "UPRB una alternativa frente al Huracán María" Puerto Rico NASA Space Grant-UPR Bayamón Sala de Usos Múltiples - University of Puerto Rico –Bayamón
- 2018 Basic Statistics to Analyze Scientific Data, University of Puerto Rico, Bayamón
- 2017 Impacto de los Huracanes Irma y María en los Ecosistemas Costeros. Anfiteatro 612, University of Puerto Rico –Bayamón
- 2017 Threats to coastal freshwater *Pterocarpus officinalis* wetlands from synergistic effects of high salinity and altered species dominance. Society of Wetland scientist 2017 Annual Meeting, San Juan PR.
- 2017 Reconciling Palynological and Molecular Data from the Caribbean Mangrove Community Society of Wetland scientist 2017 Annual Meeting, San Juan PR.
- 2017 “Conozcamos el bosque de Cayur” Casa Verde, Reserva Natural Humedal Punta Tuna, sector PRRA del barrio Emajaguas de Maunabo, PR
- 2016 Introducción al análisis de datos cuantitativos University of Puerto Rico, Bayamón.
- 2016 Séne S, Selosse M-A, Forget M, Lambourdière J, Cissé K, Diédhiou AG, **Rivera-Ocasio E**, Kodja H, Nara K, Sylla SN & Bâ AM. Dissémination pantropicale de *Scleroderma bermudense* via les graines de sa plante hôte *Coccoloba uvifera*. 11èmes Rencontres de Phytopathologie-Mycologie de la Société Française de Phytopathologie.
- 2015 Caribbean forested wetlands- *Pterocarpus officinalis* forest as models to understand wetlands in light of expected changes in sea level. USDA- Forest Service, San Juan PR
- 2015 Séne S, Selosse MA, Forget M, Geoffroy A, Lambourdière J, **Rivera-Ocasio E**, Kodja H, Thiao M, Nara K, Diédhiou AG, Sylla NS & Bâ AM (2015). Diversity and genetic structure of *Scleroderma bermudense* population associated with *Coccoloba uvifera* in these origin and introduction regions. Abstract presented at the ICOM8, Mycorrhizal Integration across Continents and Scales, August-3-7, Northern Arizona University.
- 2015 Conferencia a estudiantes de nuevo ingreso: Introducción al análisis de datos cuantitativos en UPR, Bayamón.
- 2015 Taller de identificación de plantas en UPRB- BlioBlitz 2015.
- 2013 Caribbean forested wetlands- *Pterocarpus officinalis* forest as models to understand wetlands in light of expected changes in sea level. San José, Costa Rica
- 2006 Comparative phylogeography of Caribbean wetland plant species. Evolution Meeting, Stony Brook, New York

- 2005 Phylogeographic patterns of Caribbean wetland plant species, Evolution Meeting, Fairbanks, Alaska
- 2005 Phylogeographic patterns of Caribbean wetland plant species, II Symposium of Graduate Research, Integrating Scales in Biology: A holistic approach. San Juan, Puerto Rico
- 2003 Biogeographical patterns of wetland tree species within the Caribbean Basin. Centro de Investigaciones Científicas de Yucatán, Mérida, México
- 2002 Forest dynamics and productivity in a *Pterocarpus officinalis* stand in Puerto Rico.
- 2003 3M Symposium-Association of Tropical Biology annual meeting
Panamá City, Panamá.
- 2001 Distribution of genetic diversity in a freshwater tropical tree species *Pterocarpus officinalis* (Fabaceae): from the regional to the watershed scale, Smithsonian Tropical Research Institute, Panama City, Panama.
- 2000 Patterns of genetic structure in a tropical tree species *Pterocarpus officinalis* (Fabaceae): from the regional to the watershed scale
Symposium “Modelling and Experimental Research on Genetic Processes in Tropical and Temperate Forest” Kourou, French Guiana.

REFERENCES

Available on request