

RAFAEL R. MONTALVO-RODRIGUEZ Ph.D.

University of Puerto Rico
Biology Dept.
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EDUCATION

May 2003

Doctor of Philosophy Major in Microbiology

University of Nebraska

Lincoln, Nebraska

May 1996

Master in Science Majoring in Microbiology

University of Puerto Rico, Mayaguez Campus,

Mayaguez, Puerto Rico

May 1993

Bachelor in Science Majoring in Industrial Microbiology

University of Puerto Rico, Mayaguez Campus,

Mayaguez, Puerto Rico

INTERNATIONAL COMMITTEES

*** International Committee on the Systematics of Prokaryotes**

- Elected member of the subcommittee **on the Taxonomy of the family *Halobacteriaceae***

- Elected member of the subcommittee **on the Taxonomy of the family *Halomonadaceae***

*** Organizer and President of the International Committee for the 11th Conference on Halophilic Microorganisms “Halophiles 2016”**

Meeting was held in San Juan, Puerto Rico May 22-27, 2016

WORK EXPERIENCE

July 2013 to present

Full Professor

Biology Department

University of Puerto Rico, Mayaguez Campus

Mayaguez, PR

July 2008 to February 2010

Associate Chair and Graduate Program Coordinator

Biology Department

University of Puerto Rico, Mayaguez Campus

Mayaguez, PR

July 2006 to June 2013

Associate Professor

Biology Department

University of Puerto Rico, Mayaguez Campus

Mayaguez, PR

May 2003 to June 2006

Assistant Professor

Biology Department

University of Puerto Rico, Mayaguez Campus

Mayaguez, PR

August 1996 to May 2003

Instructor

Biology Department

University of Puerto Rico, Mayaguez Campus

Mayaguez, PR

Courses taught at UPRM:

- General Biology (Biol 3051 and Biol 3052)
- Introduction to Biological Sciences I (CIBI 3031)
- Introduction to Biotechnology (Bind 3005)
- Cell Physiology (Biol 3010)
- Genetics (Biol 3300)
- General Microbiology for Majors (Biol 3770)
- Industrial Microbiology (Biol 4367)
- Microbial Physiology (Biol 4368)
- Microbiology of Water and Sewage (Biol 4735)
- General Microbiology lab. (Biol 3770L)
- Microbial Ecology lab. (Biol 4365L)
- Medical Mycology lab. (Biol 3745L)
- Bacterial Diversity (Biol 6650)
- Bacterial Diversity lab. (Biol 6650L)
- Bacterial Physiology (Bota 6006)
- Bacterial Physiology lab. (Bota 6006L)

- Special topics in Archaea (Biol 6993)
- Research (Biol 6990)
- Seminar (Biol 4925)
- Special Problems in Biology (Biol 4901 and Biol 4902)
- Organic Chemistry Laboratory (Chem 3031L)

December 1990 to December 1991

Laboratory Assistant and Bacteria Collection Keeper
University of Puerto Rico, Mayaguez Campus

PUBLICATIONS

Cuebas-Irizarry, M.F.; Irizarry-Caro, R.A.; López-Morales, C.; Badillo-Rivera, K.M.; Rodríguez-Minguela, C.M.; **Montalvo-Rodríguez, R.** 2017. Cloning and Molecular Characterization of an Alpha-Glucosidase (MalH) from the Halophilic Archaeon *Haloquadratum walsbyi*. *Life* 2017, 7, 46.

Sánchez-Nieves R, Facciotti M, Saavedra-Collado S, Dávila-Santiago L, Rodríguez-Carrero R, **Montalvo-Rodríguez R.** 2016. Draft genome of *Haloarcula rubripromontorii* strain SL3, a novel halophilic archaeon isolated from the solar salterns of Cabo Rojo, Puerto Rico. *Genom Data*. 2016 Feb 6;7:287-289.

Sánchez-Nieves R, Facciotti MT, Saavedra-Collado S, Dávila-Santiago L, Rodríguez-Carrero R, **Montalvo-Rodríguez R.** 2016. Draft genome sequence of *Halorubrum tropicale* strain V5, a novel halophilic archaeon isolated from the solar salterns of Cabo Rojo, Puerto Rico. *Genom Data*. 2016 Feb 6;7:284-286.

Cuebas-Irizarry MF, Pietri-Toro JM, **Montalvo-Rodríguez R.** 2016. Draft genome sequence of strain MC1A, a UV-resistant bacterium isolated from dry soil in Puerto Rico. *Genom Data*. 2016 Feb 1;7:243-244.

Latorre, I, Hwang, S., and **Montalvo-Rodríguez, R.** 2012. Isolation and molecular identification of landfill bacteria capable of growing on di-(2-ethylhexyl) phthalate and deteriorating PVC materials. *J. Environ. Sci. and Health, Part A* 47:2254–2262

Latorre, I, Hwang, S., Sevillano, M, and **Montalvo-Rodríguez, R.** 2012. PVC biodeterioration and DEHP leaching by DEHP-degrading bacteria. *Int. Biodeterioration & Biodegradation* 69:73-81

Sánchez-Porro C., Rafael R. de la Haba, Nelis Soto-Ramírez, M. Carmen Márquez, **Montalvo-Rodríguez R.** and A. Ventosa. 2009. Description of *Kushneria aurantia* gen. nov., sp. nov., a novel member of the family *Halomonadaceae*, and a proposal for reclassification of *Halomonas marisflavi* as *Kushneria marisflavi* comb. nov., of *Halomonas indalinina* as *Kushneria indalinina* comb. nov. and of *Halomonas avicenniae* as *Kushneria avicenniae* comb. nov. *Int. J. Syst. Evol. Micro* 59:397-405.

Soto-Ramírez N., C. Sánchez-Porro, S. Rosas, K. Almodóvar, G. Jiménez, M. Machado-Rodríguez, M. Zapata, A. Ventosa, and **R. Montalvo-Rodríguez**. 2008. *Halobacillus mangrovi* sp. nov., a moderately halophilic bacterium isolated from the black mangrove *Avicennia germinans* in Puerto Rico. *Int. J. Syst. Evol. Micro*. 58: 100-105.

Soto-Ramírez N., C. Sánchez-Porro, S. Rosas, W. González, M. Quiñones, A. Ventosa, and **R. Montalvo-Rodríguez**. 2007. *Halomonas avicenniae* sp. nov., isolated from the salty leaves of the black mangrove *Avicennia germinans* in Puerto Rico. *Int. J. Syst. Evol. Micro*. 57:900-905.

Díaz-Muñoz, G., and **R. Montalvo-Rodríguez**. 2005. Halophilic Black Yeast *Hortaea werneckii* in the Cabo Rojo Solar Salterns: Its First Record for this Extreme Environment in Puerto Rico. *Carib. J. Sci* 41:360-365.

Oren, A., **R. Montalvo-Rodríguez**, and R. H. Vreeland. 2001. The Genus *Halogeometricum*. Volume 1 Bergey's Manual of Systematic Bacteriology

Haseltine, C., T. Hill, **R. Montalvo-Rodríguez**, S. Kemper, R. Shand, and P. Blum. 2001. Secreted Euryarchaeal Microhalocins Kill Hyperthermophilic Crenarchaea. *J. Bact.* 183: 287-291.

Montalvo-Rodríguez, R., J. López-Garriga, R.H. Vreeland, A. Oren, A. Ventosa, and M. Kamekura. 2000. *Haloterrigena thermotolerans* sp. nov., a Halophilic Archaeon from Puerto Rico. *Int. J. Syst. Evol. Micro*. 50: 1065-1071.

Montalvo-Rodríguez, R., C. Haseltine, K. Huess-LaRossa, T. Clemente, J. Soto, P. Staswick, and P. Blum. 2000. Autohydrolysis of Plant Polysaccharides Using Transgenic Hyperthermophilic Enzymes. *Biotech. Bioeng.* 70: 151-159.

Haseltine, C., **R. Montalvo-Rodríguez**, A. Carl, E. Bini, and P. Blum. 1999. Extragenic Pleiotropic Mutations that Repress Glycosyl Hydrolase Expression in the Hyperthermophilic Archaeon *Sulfolobus solfataricus*. *Genetics* 152:1353-1361.

Haseltine, C., **R. Montalvo-Rodríguez**, E. Bini, A. Carl, and P. Blum. 1999. Coordinate Transcriptional Control in the Hyperthermophilic Archaeon *Sulfolobus solfataricus*. *J. Bact.* 181: 3920-3927.

Montalvo-Rodríguez, R., R.H. Vreeland, A. Oren, M. Kessel, C. Betancourt, and J. López-Garriga. 1998. *Halogeometricum borinquense* gen. nov., sp. nov., a Novel Halophilic Archaeon from Puerto Rico. *Int. J. Syst. Bact.* 48: 1305-1312.

Montalvo-Rodríguez, R., A. Ruíz-Acevedo, and J. López-Garriga. 1997. New Isolates of Extremely Halophilic Archaeobacteria (Halobacteria) from Puerto Rico and the Caribbean. *Carib. J. Sci.* **33**: 98-104.

ORAL PRESENTATIONS, POSTERS AND WORKSHOPS

May 2016 (Posters) Presented at the 11th International Conference on Halophilic Microorganisms “Halophiles 2016”

Functional Gene Diversity of the Cabo Rojo Salterns Using Metagenomics

Mr. Ricardo Couto (University of Puerto Rico-Mayagüez Campus)

Ms. Nicole Feliberty (University of Puerto Rico-Mayagüez Campus)

Ms. Daliana Campos (University of Puerto Rico-Mayagüez Campus)

Dr. Rafael Montalvo-Rodríguez (University of Puerto Rico-Mayagüez Campus)

***Halorubrum tropicale* sp. nov., a Novel Halophilic Archaeon Isolated from the Solar Salterns in Cabo Rojo, Puerto Rico**

Ms. Sofía María Saavedra Collado (University of Puerto Rico-Mayagüez)

Mr. Rubén L. Sánchez-Nieves (University of Puerto Rico-Mayagüez)

Mr. Roy Joel Rodríguez-Carrero (University of Puerto Rico-Mayagüez)

Prof. Antonio Ventosa (University of Sevilla, Department of Microbiology and Parasitology, Faculty of Pharmacy)

Dr. Rafael Montalvo-Rodríguez (University of Puerto Rico-Mayagüez)

***Haloarcula rubripromontorii*, sp. nov., a Novel Halophilic Archaeon from the Cabo Rojo Solar Salterns.**

Mr. Roy Joel Rodríguez-Carrero (University of Puerto Rico-Mayagüez Campus)

Mr. Rubén L. Sanchez-Nieves (University of Puerto Rico-Mayagüez Campus)

Ms. Sofia Maria Saavedra-Collado (University of Puerto Rico-Mayagüez Campus)

Prof. Antonio Ventosa (University of Sevilla, Department of Microbiology and Parasitology, Faculty of Pharmacy)

Dr. Rafael Montalvo-Rodríguez (University of Puerto Rico-Mayagüez Campus)

Difference in Glycosyl Hydrolase Expression at Different Carbon Sources in the Haloarcheon *Halogeometricum borinquense*; a Possible Carbon Catabolite Repression System

Mr. Aldo Salazar-Morales (University of Puerto Rico-Mayagüez Campus)

Ms. Mara Cuebas-Irizarry (University of Puerto Rico-Mayagüez Campus)

Dr. Rafael Montalvo-Rodríguez (University of Puerto Rico-Mayagüez Campus)

Isolation and Purification of Agarases from Marine, Saline and Hypersaline Environments in Puerto Rico

Mr. Miguel X. Oyola-Rivera (University of Puerto Rico-Mayagüez Campus)
Ms. Giovanna Santiago-Pieretti (University of Puerto Rico-Mayagüez Campus)
Mr. Bryan J. Rodríguez-Colón (University of Puerto Rico-Mayagüez Campus)
Dr. Rafael Montalvo-Rodríguez (University of Puerto Rico-Mayagüez Campus)

Microbial Diversity of Hypersaline Fraternidad Lagoon in Cabo Rojo, Puerto Rico

Ms. Jariselle Pietri-Toro (University of Puerto Rico-Mayagüez)
Ms. Coralís Rodríguez-García (University of Puerto Rico-Mayagüez)
Mr. Ricardo Couto-Rodríguez (University of Puerto Rico-Mayagüez)
Dr. Rafael Montalvo-Rodríguez (University of Puerto Rico-Mayagüez)

Metagenomic Analysis of Prokaryotic Communities from Hypersaline Environments in Cabo Rojo, Puerto Rico

Ms. Coralís Rodríguez García (University of Puerto Rico-Mayagüez Campus)
Dr. Rafael Montalvo-Rodríguez (University of Puerto Rico-Mayagüez Campus)

Diversity of Halophilic Archaeal Populations Capable of Growing in Simple Carbon Sources from the Solar Salterns of Cabo Rojo, Puerto Rico

Mr. Rubén L. Sánchez-Nieves (University of Puerto Rico-Mayagüez Campus)
Mr. Roy Joel Rodríguez-Carrero (University of Puerto Rico-Mayagüez Campus)
Ms. Sofía María Saavedra-Collado (University of Puerto Rico-Mayagüez Campus)
Dr. R. Thane Papke (University of Connecticut, Department of Molecular and Cell Biology, 06269 Storrs)
Dr. Rafael Montalvo-Rodríguez (University of Puerto Rico-Mayagüez Campus)

Molecular and Biochemical Characterization of a Novel α -glucosidase (MalA) from the Halophilic Archaeon *Haloquadratum walsbyi*

Ms. Mara Cuebas-Irizarry (University of Puerto Rico-Mayagüez Campus)
Mr. Ricardo Irizarry-Caro (University of Texas Southwestern Medical Center)
Mrs. Carol López-Morales (University of Puerto Rico-Mayagüez Campus)
Dr. Rafael Montalvo-Rodríguez (University of Puerto Rico-Mayagüez Campus)

Diversity of Halophilic and Halotolerant Prokaryotic Endophytes from the Mangrove *Avicennia germinans* at the Solar Salterns of Cabo Rojo, Puerto Rico

Ms. Jéysika Zayas-Rivera, (University of Puerto Rico-Mayagüez Campus)
Ms. Jessalyn Pla-Tenorio, (University of Puerto Rico-Mayagüez Campus)
Mr. Cristian Vázquez-Collado, (University of Puerto Rico-Mayagüez Campus)
Dr. Rafael Montalvo-Rodríguez, (University of Puerto Rico-Mayagüez Campus)

May 2015 (Poster)

Mara F. Cuebas-Irizarry, L. M. Rodríguez-Dávila, J. M. Pietri-Toro, M.C. Abreu-Díaz, **R. Montalvo-Rodríguez**. “Initial Studies to Understand Regulation of Glycosyl Hydrolase Expression in the Halophilic Archaeon *Halogeometricum borinquense*” American Society for Microbiology – 115th General Meeting, May 2015, New Orleans, LA.

July 2014 (Poster)

Mara F. Cuebas-Irizarry, Eduardo L. Tosado-Rodríguez, Miguel X. Oyola-Rivera, Robertson Thane Papke and **Rafael Montalvo-Rodríguez**. “Characterization of Microbial Populations Responsible for Nitrification at The Solar Salterns of Cabo Rojo, Puerto Rico” International Union for Microbiological Societies Congress (IUMS 2014), July 2014, Montreal, Canada.

Coralis del M. Rodríguez-García and **Rafael Montalvo-Rodríguez**. “Microbial diversity of hypersaline lagoons in Puerto Rico using culture-independent techniques”. International Union for Microbiological Societies Congress (IUMS 2014), July 2014, Montreal, Canada.

Miguel X. Oyola-Rivera¹, Eduardo L. Tosado Rodríguez¹, **Rafael Montalvo-Rodríguez¹**
¹University of Puerto Rico, Mayagüez Campus, Biology Department. “**ISOLATION AND PURIFICATION OF AGARASES FROM THE CABO ROJO SALTWORKS**”
International Union for Microbiological Societies Congress (IUMS 2014), July 2014, Montreal, Canada.

Eduardo L. Tosado-Rodríguez, **R. Montalvo-Rodríguez** “Autotrophic Lifestyle at Hypersaline Environments: abundance and diversity of the biotin dependent acetyl CoA carboxylase using culture dependent and culture independent approaches” International Union for Microbiological Societies Congress (IUMS 2014), July 2014, Montreal, Canada.

June 2013 (Poster)

Eduardo L. Tosado-Rodríguez, M. X. Oyola, J. Clavel, A. Acevedo, **R. Montalvo-Rodríguez** “Determination of Microbial Populations Responsible for Ammonia Oxidation at Saline Environments in Cabo Rojo, Puerto Rico”. **Halophiles Conference 2013 in Storrs, CT, USA (Selected best poster presentation of the conference)**

Santiago-Correa, J., **R. Montalvo-Rodríguez**. Glycosyl Hydrolase Expression in the Halophilic Archaeon *Halogeometricum borinquense*: a Signature of Catabolite Repression-like System. **Halophiles Conference 2013 in Storrs, CT, USA**

May 2013 (poster)

Santiago-Correa, J., Badillo, K.M., **R. Montalvo-Rodríguez**. Partial Characterization of a beta-glucosidase from *Halogeometricum borinquense*. **ASM 113th General Meeting Meeting Denver, Colorado.**

Tosado-Rodríguez E., M. X. Oyola, J. Clavell, L. Alemán, **R. Montalvo-Rodríguez** “Characterization of Microbial Populations Responsible for Ammonia Oxidation in Saline Environments from Cabo Rojo, Puerto Rico”. **ASM 113th General Meeting Meeting Denver, Colorado.**

Miguel X. Oyola, J. Clavell, L. Alemán, Eduardo L. Tosado-Rodríguez, **R. Montalvo-Rodríguez** “Isolation and Characterization of Ammonia Oxidizing Organisms in Marine, Saline and Hypersaline Environments”. **ASM 113th General Meeting Meeting Denver, Colorado.**

April 2013 (Poster)

Eduardo L. Tosado-Rodríguez, M. X. Oyola, J. Clavell, L. Alemán, **R. Montalvo-Rodríguez** “Characterization of Microbial Populations Responsible for Ammonia Oxidation in Saline Environments from Cabo Rojo, Puerto Rico”. **1st Puerto Rico Society of Microbiologists Symposium “Passing the Torch of Research and Ethics to the Next Generation” Puerto Rico Society of Microbiologists Symposium (ASM Branch)**

March 2013 (Poster)

Eduardo L. Tosado-Rodríguez, M. X. Oyola, J. Clavell, L. Alemán, **R. Montalvo-Rodríguez** “Characterization of Microbial Populations Responsible for Ammonia Oxidation in Saline Environments from Cabo Rojo, Puerto Rico”. **33th Puerto Rico Interdisciplinary Scientific Meeting (PRISM)**

February 2013 (Poster)

Eduardo L. Tosado-Rodríguez, **R. Montalvo-Rodríguez** “Characterization of Microbial Isolates Capable of Ammonia Oxidation and Autotrophic Growth of Saline Environments from Cabo Rojo, Puerto Rico”. **North East Alliance Science Day 6th NEA Science Day**

October 2012 (Poster)

Eduardo L. Tosado-Rodríguez, **R. Montalvo-Rodríguez** “Characterization of Microbial Populations Responsible for Ammonia Oxidation in Saline Environments from Cabo Rojo, Puerto Rico”. **NASA Puerto Rico Space Grant Consortium**

March 2009 (Poster)

Rivera Calo J, G. Jiménez and **R. Montalvo-Rodríguez**. Extremophilic Diversity in Mangrove’s Rhizosphere; a source of putative novel microorganisms with biotechnological potential. **Biominds Research Day UPRM**

Velazquez A., G. Dávila, P. Sánchez and **R. Montalvo-Rodríguez**. Recombinant Expression of Glycosyl Hydrolase Genes from Hyperthermophiles Isolated from Puerto Rico and Their Possible Role in Biotechnology. **Biominds Research Day UPRM**

November 2008 (Poster)

Rivera Calo J., G. Jimenez and **R. Montalvo-Rodríguez**. Extremophilic Diversity in Mangrove's Rhizosphere; a source of putative novel microorganisms with biotechnological potential. Annual Biomedical Research Conference for Minority Students.

October 2008 (Oral Presentation by Dr. Sandra Maldonado)

Maldonado S. and Rafael Montalvo (co-PI). Endophytic Microbial Diversity in Sea Grass Beds of *Thalassia testudinum* from Cabo Rojo, Lajas and Vieques, Puerto Rico. 3rd Symposium for Coastal and Marine Applied Research. Sea Grant at UPRM

October 2008 (Poster)

Castro Z, C. Rodríguez and **R. Montalvo-Rodríguez**. Distribution of Integrons Among Extreme Environments in Puerto Rico. **AAAS General Meeting Rio Piedras PR**

Lopez, C. and **R. Montalvo-Rodríguez**. Catabolite Repression in the Extremely Halophilic Archaea. **AAAS General Meeting Rio Piedras PR**

September 2008 (Poster)

Sánchez-Porro C, R. de la Haba, N. Soto-Ramírez, M. Carmen-Márquez, **R. Montalvo-Rodríguez** and A. Ventosa. *Kushneria aurantia* gen. nov. sp. nov. A novel member of the family Halomonadaceae. **Extremophiles 2008, Cape Town South Africa.**

August 2008 (Poster)

Maldonado-Ramírez, S; **R. Montalvo (6th author)**. Interactions among the endophytic microflora of foliar tissue of *Thalassia testudinum*. Mycological Society of America. State College, Pennsylvania

June 2008 (Poster)

C. Sánchez-Porro, N. Soto Ramírez, **R. Montalvo-Rodríguez**, and A. Ventosa. *Halobacillus mangrovi*, *Kushneria (Halomonas) avicenniae* y *Kushneria aurantia*, nuevas bacterias halófilas aisladas del manglar negro. **XII Reunión del Grupo de Taxonomía Filogenia y Biodiversidad Microbiana. Tarragona, España**

May 2008 (Poster)

C. Sánchez-Porro, N. Soto-Ramírez, **R. Montalvo-Rodríguez**, and A. Ventosa. Bacterias halófilas en las salinas de Cabo Rojo, Puerto Rico. VIII Reunión Red Nacional Microorganismos Extremófilos. **Universidad de Sevilla España**

May 2008 (Poster)

Mara Couto-Rodríguez, Agnes Martínez, Lorena Cuebas, Sandra Maldonado-Ramírez and **R. Montalvo-Rodríguez** DIVERSITY OF PROKARYOTIC ENDOPHYTES IN SEA GRASS

**BEDS OF *THALASSIA TESTUDINUM* FROM CABO ROJO, LAJAS AND VIEQUES,
PUERTO RICO 108th ASM General Meeting 2008 in Boston, MA**

March 2008

Seminar: Microbial Diversity Associated with the Leaf Surface of *Avicennia germinans* at the Solar Salterns of Cabo Rojo. Department of Biology Seminar Series

May 2007 (Posters)

Nelís Soto Ramírez, Ernie X. Pérez Karinna Amodóvar, and **R. Montalvo Rodríguez**
A survey of halophilic aerobic prokaryotes associated to the leaf surface of *Avicennia germinans* at the Solar Salterns of Cabo Rojo, Puerto Rico **107th ASM General Meeting 2007 in Toronto, Canada**

Mara Couto-Rodríguez, Agnes Martínez, Lorena Cuebas, Sandra Maldonado-Ramírez and **R. Montalvo-Rodríguez** ENDOPHYTIC PROKARYOTIC DIVERSITY IN SEA GRASS BEDS OF *THALASSIA TESTUDINUM* FROM CABO ROJO, LAJAS AND VIEQUES, PUERTO RICO **107th ASM General Meeting 2007 in Toronto, Canada**

Aned M. Burgos Figueroa, Joan Marcano, Patricia Sánchez, Carlos Torres and **Rafael Montalvo Rodríguez** Bacterial Diversity Present at the Alkaline Thermal Waters of Coamo, Puerto Rico **107th ASM General Meeting 2007 in Toronto, Canada**

February 2007

Seminar: Extremophiles from Puerto Rico. SEMI University of Puerto Rico Mayaguez

September 2006 (Poster)

Aned M. Burgos Figueroa, Zilka Varela Torres, Joan Marcano, Carlos Torres and Rafael Montalvo Rodríguez. DETERMINATION OF THE PROKARYOTIC COMMUNITY OF THE COAMO'S ALKALIPHILIC THERMAL WATERS. **Extremophiles 2006 conference in Brest, France**

May 2006 (Poster)

Nelís Soto Ramírez, Karinna Amodóvar, and Rafael Montalvo Rodríguez
MODERATELY HALOPHILIC AEROBIC PROKARYOTIC DIVERSITY PRESENT IN THE LEAF SURFACE OF *AVICENNIA GERMINANS* **106th ASM General Meeting 2006 in Florida, USA.**

May 2006 (Poster)

Aned M. Burgos Figueroa, Zilka Varela Torres, Joan Marcano, Carlos Torres and Rafael Montalvo Rodríguez. DETERMINATION OF THE PROKARYOTIC COMMUNITY OF THE

COAMO'S ALKALIPHILIC THERMAL WATERS. **106th ASM General Meeting 2006 in Florida, USA.**

July 2005 (Poster)

Greetchen Díaz-Muñoz and **Rafael Montalvo Rodríguez**. Determination of the Fungal Diversity Present at a Hypersaline Environment in Cabo Rojo, Puerto Rico by Phylogenetic Analysis of Isolates and Environmental rRNA Genes Clones Libraries. **International Union of Microbiological Societies General Meeting in San Francisco.**

September 2004 (Poster)

Aned M. Burgos Figueroa, Natalia Ramos Hernández and **Rafael Montalvo Rodríguez**. STUDY OF THE PROKARYOTIC COMMUNITY OF A SOLAR SALTERN USING 16S rDNA AMPLIFICATION OF TOTAL POPULATION GENOMIC DNA. **Latin American and Caribbean Biotechnology Congress 2004 in Mayagüez, P.R.**

September 2004 (Poster)

Greetchen M. Díaz-Muñoz and **Rafael Montalvo-Rodríguez**. Fungal communities present at the solar salterns of Cabo Rojo, Puerto Rico determined by internal transcribed spacers (ITS) regions of rRNA genes clone libraries. **Extremophiles 2004 Conference in Maryland, USA.**

July 2004

Workshop offered at the Star Partners Conference offered by NASA's "Solar Terrestrial Probes" y "Living With a Star" programs. Workshop offered to High School Teachers from Puerto Rico and the United States at Anchorage, Alaska

May 2004 (Poster)

Greetchen M. Díaz-Muñoz and **Rafael Montalvo-Rodríguez**. Taxonomical Studies of Fungi Isolated from a Hypersaline Environment in Cabo Rojo, Puerto Rico. **103rd ASM General Meeting 2004 in New Orleans, USA.**

April 2004 (Poster)

Iehsus Flores Pérez and **Rafael Montalvo Rodríguez**. DETERMINATION OF GLYCOSYL HYDROLASE ACTIVITY IN HALOPHILIC MICROORGANISMS ISOLATED FROM THE SOLAR SALTURNS OF CABO ROJO PUERTO RICO. **SIGMA Xi IX Poster Day 2004 at UPRM in Mayagüez, P.R.**

Aned M. Burgos Figueroa, Natalia Ramos Hernández and **Rafael Montalvo Rodríguez**. STUDY OF THE PROKARYOTIC COMMUNITY OF A SOLAR SALTERN USING 16S rDNA AMPLIFICATION OF TOTAL POPULATION GENOMIC DNA. **SIGMA Xi IX Poster Day 2004 at UPRM in Mayagüez, P.R.**

Arianne Vicens Rivera, Aned Burgos Figueroa and **Rafael Montalvo Rodríguez**
Characterization of Halophilic Microorganisms Isolated from a Solar Saltern in the Dominican Republic. **SIGMA Xi IX Poster Day 2004 at UPRM in Mayagüez, P.R.**

January 2004

Workshop: "Extremophiles" for the STP/LWS Pre-Service and In-Service Professional Development program. Sponsored by NASA's "Solar Terrestrial Probes" y "Living With a Star" programs. Workshop offered in Springfield, Massachusetts

July 2003

Workshop for High School Teachers from Puerto Rico and the US; **Title "Extremophiles, in search for life in other planets"**. Sponsored by *NASA - Goddard Space Flight Center*. Workshop offered in San Juan, PR.

June 2003

Workshop for High School Teachers; Title "The importance of **extremophiles** in Microbiology". Sponsored by Bristol-Myers Squibb. Workshop offered at the University of Puerto Rico Mayaguez Campus.

April 2003 (Poster)

Tania Rodríguez, Aned Burgos Figueroa, and **Rafael Montalvo Rodríguez**. ISOLATION AND CHARACTERIZATION OF A HALOPHILIC MICROORGANISM FROM THE SOLAR SALTERNS OF CABO ROJO, PUERTO RICO. **SIGMA Xi IX Poster Day 2003 at UPRM in Mayagüez, P.R.**

Suzette Vélez Rivera, Myrna Ortiz Ruiz, Joaquín Rodríguez Torres and **Rafael Montalvo Rodríguez**. ISOLATION AND CHARACTERIZATION OF THE MICROFLORA PRESENT AT THE UNDERGROUND THERMAL WATERS OF COAMO, PUERTO RICO. **SIGMA Xi IX Poster Day 2003 at UPRM in Mayagüez, P.R.**

Gretchen M. Díaz-Muñoz and **Rafael Montalvo-Rodríguez**. Characterization of Filamentous Fungi from the Solar Salterns of Cabo Rojo, Puerto Rico. **SIGMA Xi IX Poster Day 2003 at UPRM in Mayagüez, P.R.**

Marian Quiñones Rodríguez, Wildaomaris Gonzalez Ruiz, and **Rafael Montalvo Rodríguez**. HALOPHILIC MICROFLORA PRESENT IN THE SALT CRYSTALS ON THE *LAGUNCULARIA RACEMOSA* AND *AVICENNIA GERMINANS*'S LEAVES. **SIGMA Xi IX Poster Day 2003 at UPRM in Mayagüez, P.R.**

October 2002 (Poster)

Gretchen M. Díaz-Muñoz and **Rafael Montalvo-Rodríguez**. Isolation and Characterization of Filamentous Fungi from the Solar Salterns of Cabo Rojo, Puerto Rico **Latin American and Caribbean Biotechnology Congress 2002 in Mayagüez, P.R.**

June 2002

Workshop for High School Teachers; Title “Introducing Biotechnology in the classroom”. Sponsored by Bristol-Myers Squibb. Workshop offered at the University of Puerto Rico Mayaguez Campus.

April 2002 (Poster)

Gretchen M. Díaz-Muñoz and **Rafael Montalvo-Rodríguez**. Isolation and Characterization of Filamentous Fungi from the Solar Salterns of Cabo Rojo, Puerto Rico. **SIGMA Xi IX Poster Day 2002 at UPRM in Mayagüez, P.R.**

January 2002 (Poster)

Gretchen M. Díaz-Muñoz and **Rafael Montalvo-Rodríguez**. Isolation and Characterization of Filamentous Fungi from the Solar Salterns of Cabo Rojo, Puerto Rico. **Industrial Advisory Board Meeting 2002 in Mayagüez, P.R.**

May 1999

Haseltine C., R. Montalvo-Rodriguez, E. Bini, A. Carl and P. Blum. (Poster presentation). A global gene regulatory system of the **hyperthermophilic archaeon *Sulfolobus solfataricus***. 99th General Meeting of the American society for Microbiology. Chicago, IL.

April 1996

Poster Presentation at the Sigma Xi Student Day
University of Puerto Rico, Mayaguez Campus

March 1996

Oral presentation at the Third Congress on Biotechnology (Caribbean Society of Biotechnology)
Title: Taxonomic studies on halobacteria from the solar salterns of Cabo Rojo, Puerto Rico

March 1996

Oral Presentation at the National Alliance of Research Centers of Excellence. Eighth Annual Conference at Nashville, Tennessee. Title: Taxonomic studies on halobacteria from the solar salterns of Cabo Rojo, Puerto Rico

May 1994

Poster Presentation at the American Society for Microbiology (ASM) Annual Convention at Las Vegas, Nevada. Title: Isolation of Halophilic Bacteria from the Solar Salterns of Cabo Rojo, Puerto Rico.

March 1994

Oral Presentation at the American Chemical Society (ACS) Technical Meeting at UPRM. Title: Different types of Halophilic Bacteria in the Salterns of Cabo Rojo.

May 1993

Oral Presentation at Río Grande Plantation at Río Grande, Puerto Rico.RCMS Program. Title: Isolation of Halophilic Bacteria from the solar Salterns of Cabo Rojo, Puerto Rico.

GRADUATE STUDENTS SUPERVISED AND THESES TITLES

Gretchen Díaz Muñoz 2006. *Fungal Diversity Present at a Hypersaline Environment in Cabo Rojo, Puerto Rico, Determined by Characterization of Isolates and Analysis of Environmental rRNA Genes Clones Libraries.*

Nelis Soto Ramírez 2007. *A Survey of Halophilic Aerobic Prokaryotes Associated to the Leaf Surface of Avicennia Germinans at the Solar Salterns of Cabo Rojo, Puerto Rico.*

Aned Burgos Figueroa 2007. *A Survey of the Alkalithermophilic Prokaryotic Diversity from the Hot Spring Waters in Coamo Puerto Rico.*

Mara Couto Rodríguez 2009. *Endophytic Prokaryotic Diversity Associated with Sea Grass Beds of Thalassia testudinum from Cabo Rojo, Lajas, and Vieques, Puerto Rico.*

Carol López Morales 2010. *Initial Approaches Towards the Understanding of Catabolite Repression in Halophilic Archaea and the Characterization of an alpha-glucosidase (Maltase) from Haloquadratum walsbyi.*

Gina Jiménez Santiago. 2011. *Halophilic microbial diversity associated with the roots of black mangrove, Avicennia germinans*

Zenaida Castro Díaz. 2012. *Detection of Integron-encoded Integrases in Environments with Moderate Anthropogenic Impact from Puerto Rico*

Eduardo L. Tosado Rodríguez 2016. *Phylogenetic and Taxonomical Characterization of Microbial Populations Putatively Capable of Autotrophic Ammonia Oxidation from Marine, Saline and Hypersaline Environments at the Cabo Rojo Salterns, Puerto Rico.*

Coralis del M. Rodríguez García 2016. *Analysis of Prokaryotic Communities Using 16S rDNA Pyrosequencing from Hypersaline Environments at Cabo Rojo, Puerto Rico*

Ruben Sanchez Nieves. 2017. Diversity of the Cabo Rojo solar saltern utilizing culture-dependent methods and description of two novel species

Mara Cuebas Irizarry. 2017 Initial studies to understand glycosyl hydrolase expression and regulation in the Halophilic archaeon Halogeometricum borinquense

Miguel Oyola Rivera. 2017. Partial Purification of Agarases from Halophilic Microorganisms Isolated from Marine and Hypersaline Environments in Puerto Rico

AWARDS

2003

Ten Outstanding Young People of Puerto Rico Award (TOYP) in the Science and Technology field. Award granted by the Junior Chamber of Puerto Rico at San Juan, Puerto Rico

1997

GEMS Scholarship Epscor (Research Award)

1990 to 1993

Honor Student of the Arts and Sciences Faculty at the University of Puerto Rico, Mayaguez Campus

1990 to 1993

University of Puerto Rico Honor Roll

ORGANIZATIONS

2005 to 2008

Member of Society for Applied Microbiology

2004 to 2009

Member of International Society for Extremophiles

2004 to 2006

Member of International Society for Salt Lake Research

1994 to present

Member of the American Society for Microbiology