

CAREER OBJECTIVES To secure a position in a leading private or government agency, providing significant challenges and career growth opportunities.

EDUCATION

- August 2009-Present **University of Puerto Rico, Río Piedras Campus, Río Piedras, Puerto Rico.**
Doctorate, Environmental Science Graduate Program.
- August 2003-May 2005 **University of Puerto Rico, Campus of Medical Sciences, Río Piedras, Puerto Rico.**
Master of Science, Environmental Health, Environmental Health Department.
- March 2004-November 2008 **University of Puerto Rico, Río Piedras, Puerto Rico.**
Law Certificate and Environmental Permissions.
- July 2002-May 2003 **University of Medicine and Dentistry of New Jersey, New Jersey.**
Graduate School of Biomedical Sciences, Molecular Genetics, Microbiology and Immunology Department.
- August 1998-May 2002 **Pontifical Catholic University of Puerto Rico, Ponce, Puerto Rico.**
Bachelors of Sciences, Biology.
Cum Laude. Dean's List.

EXPERIENCE

- July 2007-June 2009 **Research Associate, University of Puerto Rico, Río Piedras, Puerto Rico.**
Duties:
- Supervise four graduate students in their master thesis.
 - Preparing training and educative materials related to security programs.
 - Develop a manual to prepare a vulnerability assessment and an emergency response plan in Non-PRASA potable water systems in Puerto Rico.
 - Visit Non-PRASA potable water aqueducts to provide technical support.
 - Identify solutions to assist 25 Non-PRASA potable water aqueducts to comply with the Safe Drinking Water Act.
 - Assessment of 25 Non-PRASA potable water aqueducts using Comprehensive Performance Evaluation, Capacity Development Checklist.
 - Management of the "Capacity Development" handbook provided by the Department of Health of Puerto Rico.
 - Development of material to target technical, administrative and financial deficiencies in the 25 Non-PRASA potable water aqueducts.
 - Provide orientation and technical support to the 25 Non-PRASA potable water aqueducts.
 - Preparing training material related to vulnerability assessments and emergency response plan on Non-PRASA potable water aqueducts, such as guide manuals, brochures, PowerPoint presentations, reference CDs and others.
 - Coordinating trainings by preparing logistical work such as attendance, place, food and any other material reservation.
- January 2006- May 2006 **Lecturer, Turabo University, Gurabo, Puerto Rico.**
Duties:
- Instruct and teach sciences concepts to undergraduate students on their laboratory classes. Prepare, submit and correct tests, quizzes and other materials.

EXPERIENCE (CONTINUED)

- November 2005-Sept. 2006 **Scientific and Clinical Research Specialist, University of Puerto Rico, Río Piedras, Puerto Rico.**
Duties:
- Preparing training material related to bioterrorism vulnerability assessments and emergency response management, such as guide manuals, brochures, PowerPoint presentations, reference CDs and a web page.
 - Coordinating trainings by preparing logistical work such as attendance, place, food and any other material reservation.
- August 2004-May 2005 **University of Puerto Rico, Campus of Medical Sciences, Río Piedras, Puerto Rico.**
Master Thesis
- *Evaluation and Time Comparison of the Functioning of Slow Sand Filters in the Island of Cayo Santiago, Puerto Rico*
The main objective of the thesis was to evaluate and compare the actual functioning of Cayo Santiago's slow sand filters with the functioning on 1994, year when they were built. The second objective was to study the efficiency of the slow sand filters through the years and what conditions can affect them.
- February 2005-April 2005 **Environmental Scientist, Office of Federal PRASA Monitor, San Juan, Puerto Rico.**
Wastewater Monitoring
- *Collecting water samples from a wastewater treatment plant of Puerto Rico.*
Sample collection consisted of taking samples: one at the influent and the other at the effluent of the plant each hour during a period of 24 consecutive hours. Based on the flow, different amounts of each influent samples were mixed to make a 24 hours representative sample. The same was done with effluent samples. The purpose of this sampling was to monitor the compliance of water quality standards by the wastewater treatment plants.
- July 2002-May 2003 **University of Medicine and Dentistry of New Jersey, New Jersey.**
Laboratory Rotations
- *Cloning of Soc 2⁺ into pRep 4x*
The main objective of this rotation was to construct the plasmid that will contain the *soc2⁺* gene (a novel essential gene of the fission yeast *Schizosaccharomyces pombe*) under the *nmt1* thiamine regulatory promoter and the *ura4* nutritional marker gene.
 - *Differences in mRNA decay between THP-1 Cells Treated and Untreated with TPA*
The objective of this rotation was to find out if there was a difference in mRNA decay rates using THP-1 cells and treating them with and without TPA (tetradecanoylphorbol acetate), which is a way to reproduce what happened with primary monocytes.
 - *CD40 Ligand RNA Stability*
The objective of this study was to look at the rapid decay of CD40L (39-kD protein expressed on activated CD4⁺T cells) message as seen in early activated T cells. We wanted to know if and how CD40L is regulated in the rapid decay pathway.
- August 2001-May 2002 **MARC U* Star NIH Honor Program, Pontifical Catholic University of Puerto Rico, Ponce, Puerto Rico.**
Independent Research

EXPERIENCE (CONTINUED)

- *Contributions of NK Receptors to Epithelial Function in Normal and Inflamed Colon.*

The aim of this study was to assess the possible regional variations in the contributions of neurokinin receptor subtypes in mediating the responses of the rat colonic mucosa to Substance P in inflamed tissue, and compare this to normal.

May 2001-August 2001

University of Texas Health Science Center at Houston, Texas.

Internship Program (Summer 2001)

- *Altered Cytokine Profile in Simulated Microgravity and its Modulation by Supplemental Nucleotides.*

The objective of this work was to investigate the role of nucleotides on cytokines in modulation of immune response under simulated microgravity (SMG) conditions. In this study, we cultured normal lymphocytes in normal gravity of tissue culture flasks and in SMG of rotating wall vessel bioreactor developed by NASA.

July 2000-May 2001

MARC U* Star NIH Honor Program, Pontifical Catholic University of Puerto Rico, Ponce, Puerto Rico.

Independent Research

- *The Impact of the Cabo Rojo Landfills Lixiviates in Crassostrea Rhizophorae (Guilding 1928) of Boquerón, Cabo Rojo, Puerto Rico and in Public Health.*

The aim of this study was to measure concentrations of heavy metal on oysters with atomic absorption spectrometry.

August 1998-May 2000

MARC U* Star NIH Honor Program, Pontifical Catholic University of Puerto Rico, Ponce, Puerto Rico.

Laboratory Rotations

- Responsibilities included participating in scientific rotations (histological techniques, study of Diatoms, atomic absorption techniques, study about Asthma, and a study involving the Superoxide Dismutase). Also working on research and assisting and presenting the results on different scientific meetings.

PUBLICATIONS

A. Alicea, J.C. Robles, H. Guillont and R. A. Rios. "Performance Evaluation of Three Slow Sand Filters." Recent Progress in Slow Sand and Alternative Biofiltration Processes. 2006. IWA Publishing. London, UK. Pags. 206-211.

N.W. Hales, K. Yamauchi, A. Alicea, A. Sundaresan, N.R. Pellis, A.D. Kulkarni. "A countermeasure to ameliorate immune dysfunction in vitro simulated microgravity environment: role of cellular nucleotide nutrition." In Vitro Cellular and Developmental Biology-Animal. April 2002; Vol. 38(4): 213-217.

M. Sultenfuss, A. Alicea, K. Yamauchi, M. Taga, N. Pellis, A. Kulkarni. "Nutrition and Differential Cellular Immune Function in Stimulated Microgravity." The Federation of American Societies for Experimental Biology Journal. March 2002; Vol. 16(5), Part II.

C. Santiago, M. Morales, A. Alicea & C.B. Appleyard. "Role of Neurokinin Receptors in Epithelial Function in the Inflamed Rat Colon Neurogastroenterology and Motility." Twelfth Biennial Meeting American Motility Society. 2002; Vol. 14 (4): 448.

POSTERS AND PRESENTATIONS

- April 2002 **Experimental Biology 2002, New Orleans, Louisiana.** Coauthor of the poster titled: *“Nutrition and Differential Cellular Immune Function in Stimulated Microgravity”*.
- April 2002 **Pontifical Catholic University of Puerto Rico, Ponce, Puerto Rico.** *“Contributions of NK Receptors to Epithelial Function in Normal and Inflamed Colon.”*
- November 2001 **Annual Biomedical Research Conference for Minority Students 2001, Orlando, Florida.** *“Altered Cytokine Profile in Stimulated Microgravity and Its Modulation by Supplemental Nucleotides.”*
- October 2001 **Pontifical Catholic University of Puerto Rico, Ponce, Puerto Rico.** *“Altered Cytokine Profile in Stimulated Microgravity and Its Modulation by Supplemental Nucleotides.”*

CONVENTIONS

- October 2001 2002 SACNAS National Conference in Atlanta, Georgia.
- November 1999 National Minority Research Symposium in Phoenix, Arizona.
- November 1998 Neuroscience Convention in Los Angeles, California.

EXTENDED EDUCATION

- November 19, 2008 **Certificate on “Reglamento y Permisos Ambientales II”.** 30 Hours.
University of Puerto Rico, Río Piedras Campus, Río Piedras, Puerto Rico.
- May15, 2008 **Certificate on “Reglamentación y Permisos sobre el Manejo de Desperdicios Sólidos, Peligrosos y No Peligrosos”.** 21 Hours.
University of Puerto Rico, Río Piedras Campus, Río Piedras, Puerto Rico.
- May14, 2008 **Certificate on “Conflictos y Mediación Ambiental”.** 21 Hours.
University of Puerto Rico, Río Piedras Campus, Río Piedras, Puerto Rico.
- April 17, 2008 **Certificate on “Reglamento y Permisos Ambientales I”.** 30 Hours.
University of Puerto Rico, Río Piedras Campus, Río Piedras, Puerto Rico.
- March 31, 2008 **Certificate on “Conceptos de Planificación Ambiental”.** 21 Hours.
University of Puerto Rico, Río Piedras Campus, Río Piedras, Puerto Rico.
- March 26, 2008 **Certificate on “Fundamentos de Ciencias Ambientales”.** 21 Hours.
University of Puerto Rico, Río Piedras Campus, Río Piedras, Puerto Rico.
- March, 2005 **Certificate on Vulnerability Assessment in Potable Water Treatment Plants.** 40 Hours.
University of Puerto Rico, Medical Sciences Campus, Río Piedras, Puerto Rico.
- March 15, 2005 **Certificate on Biosafety.** 3 Hours.
University of Puerto Rico, Medical Sciences Campus, Río Piedras, Puerto Rico.
- February 24-25, 2005 **Certificate on “VII Congreso Puertorriqueño de Ingeniería Sanitaria y Ciencias del Ambiente”.** 13 Hours.
Carolina, Puerto Rico.

EXTENDED EDUCATION (CONTINUED)

- December 3, 2004 **Certificate on Decentralized Wastewater Systems for Puerto Rico.**
(EPA, USDA, University of Puerto Rico, Cornell University, Rutgers University, University of Virgin Islands), San Juan, Puerto Rico.
- June 5, 2004 **Certificate on “Evaluaciones de Impacto Ambiental”. 24 Hours.**
University of Puerto Rico, Río Piedras Campus, Río Piedras, Puerto Rico.
- May 29, 2004 **Certificate on “Fundamentos de Salud Ambiental”. 21 Hours.**
University of Puerto Rico, Río Piedras Campus, Río Piedras, Puerto Rico.
- April 21, 2004 **Certificate on “Mitigación Ambiental y el Regalmento 25”. 12 Hours.**
University of Puerto Rico, Río Piedras Campus, Río Piedras, Puerto Rico.
- June 5, 2001 **Certificate on Basic Radiation Safety.**
University of Texas Health Science Center at Houston, Texas.
- May 29, 2001 **Certificate on Health and Safety Orientation.**
University of Texas Health Science Center at Houston, Texas.

EXTRACURRICULAR ACTIVITIES

- May 2001-May 2002 **Ateneo de Ponce**
President of the Science Chapter
- Organized and coordinated different Science-related activities and conferences.
- August 2000-May 2001 **Biological Society Luis A Escabí (SBLAE)**
Treasurer
- Compiled and updated a financial statement for the organization.
- Managed the budget of 500 hundred dollars for the organization events like conferences, field trips, gifts, social and extracurricular activities, and others.
- August 2000-August 2001 **“La Resurrección” Methodist Church, Ponce, Puerto Rico**
President of the Young Adults Society
- Organized and coordinated different activities for young people related to spiritual and personal growth, group and social activities and church activities.

HONORS

- Member of the Golden Key International Honour Society
- Merit Certificate at the University of Puerto Rico, Medical Sciences Campus for the presentation of the poster titled “Performance Evaluation of Three Slow Sand Filters” at the *4th International Slow Sand and Alternative Biological Filtration Conference*, in Mülheim on der Ruhr, Germany, from May 3 to 5, 2006.
- MARC U* Star NIH Honor Program
- Dean’s List
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SOCIETIES

- Tri Beta Honor Society, Zeta Delta Chapter
- Chemistry Club-Student Affiliate Chapter of the American Chemical Society
- Ateneo de Ponce
- Biological Society Luis A. Escabí (SBLAE)
- Kairós Chorus

SKILLS

Computer: Microsoft Office 2000 (Word, Excel, PowerPoint, Access), Microsoft Office 2007 (Word, Excel, PowerPoint), Word Perfect, Internet Explorer, ESRI's Arc View GIS.

Research Applications: Research Methods; Safety in Research Laboratories; Microscopy Techniques; Electrophoresis; Spectrophotometry; Atomic Absorption Technique; Histological Techniques; Using Chamber Technique; Handling Animal Course.

Other Applications: Graphic calculator skills.

Languages: Fluent Spanish and Fluent English.

REFERENCES

Available upon request.