

Liz M. García Peterson

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EDUCATION:

Universidad Del Este (UNE) School of Science and Technology, Bachelor in Science, mayor in Biology. GPA: 3.45 Aug 2008-Present.

REASEACH EXPERIENCE:

Study of the Antibiotic Resistance among Fecal Coliforms Isolated from Freshwaters near Human Health Facilities in the Northeast Area of Puerto Rico. Under the mentorship of Dr. Mariel Perez I am assessing the antibiotic resistance in enteric bacteria in the environment due to the fact that these microorganisms cause infections in humans. Our main purpose is to compare antibiotic susceptibility of coliforms isolated from freshwater bodies far and near to hospitals in Puerto Rico. Undergraduate Student **Universidad Del Este.** Aug 2011- Present

Response of BV-2 Microglial Cells to Purinergic Find-Me Signals from Apoptotic Cells. Under the mentorship of Dr. Michael Elliot I conducted a study in order to determine whether adenosine, as a product of extracellular ATP hydrolysis, had an effect on pro-inflammatory cytokine production by BV-2 microglial cells using ELISA and qPCR technique. Undergraduate Student **University of Rochester.** May 2012- Aug 2012

Molecular Evolutionary analysis of Genetic Variation in Skeletal Muscle Sodium-Channel Gene (SCN4A). Under the mentorship of Dr. Alan Filipski and Dr. Sudir Kumar I conducted a study to directly evaluate interspecific sequence alignments that reveal common attributes of deleterious mutations observed in humans using the Skeletal-muscle sodium-channel gene SCN4A. Genetic defects in voltage-gated sodium channels are responsible for several hereditary diseases. My objective was to determine if there existed a difference in the rate of disease- associated mutation between highly conserved sites and less conserved sites. I hypothesized that disease mutations occur more frequently in sites that were highly conserved. Undergraduate Student **Arizona State University.** Jun 2011- Aug 2011

Localization of Tyrosine Hydroxylase immunoreactive Neurons in the Snail Nervous System. Under the mentorship of Dr. Mark Miller I did immunohistochemistry on the Central Nervous System of the Helisoma trivolvis snail, localizing dopaminergic neurons in order to understand the synaptic connections that were involved in the functions of these neurotransmitters Undergraduate Student **Institute of Neurobiology Medical Science Campus University of Puerto Rico.** Jun 2010- May 2011

GCAT Microarrays: Qualitative and Quantitative Analysis of RNA and 3DNA. Under the mentorship of Dr. Roig, Our interest was to analyze the *in vitro* expression profile of different classes of AAS using the GT1-7 hypothalamic cell line as a model system. General expression profile will guide us to understand the differences in responses at the molecular level. Initially we compared the basal profile expression of testosterone propionate and its control by using microarrays technology. Undergraduate Student **Universidad Del Este**. March 2010- May 2010

Meetings Poster/Oral Presentation:

Junior Technical Meeting Puerto Rico Interdisciplinary Scientific Meeting. Localization of Tyrosine Hydroxylase immunoreactive Neurons in the Snail Nervous System, authors:**Liz M.Garcia Peterson**, Mark Miller, Bayamon, Puerto Rico Mar 12/2011.(Oral Presentation)

Universidad Del Este Symposium. Localization of Tyrosine Hydroxylase immunoreactive Neurons in the Snail Nervous System, authors:**Liz M.Garcia Peterson**, Mark Miller, Carolina, Puerto Rico Oct /1/2010. (Oral Presentation)

Annual Biomedical Research Conference for Minority Students. Localization of Tyrosine Hydroxylase immunoreactive Neurons in the Snail Nervous System, authors:**Liz M.Garcia Peterson**, Mark Miller, North Carolina, Charlotte Nov /12/2010. (Poster Presentation)

Universidad Del Este Symposium. Localization of Tyrosine Hydroxylase immunoreactive Neurons in the Snail Nervous System, authors:**Liz M.Garcia Peterson**, Mark Miller, Carolina, Puerto Rico Agust/6/2010. (Poster Presentation)

Arizona State University Meeting. Molecular Evolutionary analysis of Genetic Variation in Skeletal Muscle Sodium-Channel Gene (SCN4A), authors: Liz M. Garcia Peterson, Alan Filipski and Sudir Kumar, Phoenix, Arizona Jul/30/2011. (Oral Presentation)

AGMUS Symposium. Molecular Evolutionary analysis of Genetic Variation in Skeletal Muscle Sodium-Channel Gene (SCN4A), authors: Liz M. Garcia Peterson, Alan Filipski and Sudir Kumar, San Juan, Puerto Rico Sept/16/2011. (Poster Presentation)

Universidad Del Este Symposium. Molecular Evolutionary analysis of Genetic Variation in Skeletal Muscle Sodium-Channel Gene (SCN4A), authors: Liz M. Garcia Peterson, Alan Filipski and Sudir Kumar, Carolina, Puerto Rico Sept/30/2011. (Oral Presentation)

SACNAS National Conference. Molecular Evolutionary analysis of Genetic Variation in Skeletal Muscle Sodium-Channel Gene (SCN4A), authors: Liz M. Garcia Peterson, Alan Filipski and Sudir Kumar, San Jose, California Oct/27/2011. (Poster Presentation)

Annual Biomedical Research Conference for Minority Students. Molecular Evolutionary analysis of Genetic Variation in Skeletal Muscle Sodium-Channel Gene (SCN4A), authors: Liz M. Garcia Peterson, Alan Filipski and Sudir Kumar, Missouri Nov/8/2011. (Poster Presentation)

Junior Technical Meeting Puerto Rico Interdisciplinary Scientific Meeting. Study of the Antibiotic Resistance among Fecal Coliforms Isolated from Freshwaters near Human Health Facilities in the Northeast Area of Puerto Rico. authors: **Liz M. Garcia Peterson**, Juliana Falero and Mariel Perez Carolina, Puerto Rico Mar 12/2012.(Oral Presentation)

University of Rochester Medical Center Summer Scholar Poster Session. Response of BV-2 Microglial cells to Purinergic Find-Me Signals from Apoptotic Cells. authors: **Liz M. Garcia Peterson**, Patrick Murphy and Michael Elliott, Rochester, NY Aug 4/2012. (Poster Presentation)

American Society for Microbiology. Study of the Antibiotic Resistance among Fecal Coliforms Isolated from Freshwaters near Human Health Facilities in the Northeast Area of Puerto Rico. authors: **Liz M. Garcia Peterson**, Juliana Falero and Mariel Perez, San Francisco, California Jun 16-19 2012. (Co-author) (Poster Presentation)

Universidad Del Este Symposium. Response of BV-2 Microglial cells to Purinergic Find-Me Signals from Apoptotic Cells. authors: **Liz M. Garcia Peterson**, Patrick Murphy and Michael Elliott, Carolina, Puerto Rico Sept/30/2012. (Oral Presentation)

GRANTS/AWARDS:

Minority Biomedical Research Support-Research Initiative for Scientific Enhancement (**MBRS-RISE**), Universidad Del Este. Undergraduate research training program funded by NIH 2R5GM066250-05A.Jun 2009-Present.

Honor Student, Universidad Del Este, 2008- Present.

Travel Award, SACNAS National Conference, California, Oct 27-30 2011.

Judge, Spring 2011 Pre-College Research Symposium, May 14 2011.

NSF, Summer Scholar, May-Aug 2012.

Judge, AGMUS 2012 Research Symposium, Sept 21 2012.

LABORATORY AND GENERAL SKILLS:

- Language:
 - Spanish (Primary; Writing – Very good; Reading – Very good; Verbal fluency – Very good)
 - English (Secondary; Writing – Very good; Reading Very good; Verbal fluency – Very good)
- Immunocytochemistry
- Snail Dissection
- Snail Backfills
- Microarrays
- Microbiology basic techniques for isolation, cultivation and cultural characterization of microorganisms
- Microscopy
- Kirby Bauer method
- Filtration membrane technique
- Cryopreservation
- Bioinformatics
- ELISA technique
- Quantitative PCR
- Cell Culture
- Microsoft Office: Power Point, Word and Excel

Science Course Work:

General Biology I, General Biology II, Pre-Calculus I, Pre- Calculus II, Chemistry I, Chemistry II, Plant Biology, General Microbiology, Biostatistics for Science, Research Methodology, Modern Genetics, Scientific Writing, Ecology, Animal Biology, Organic Chemistry I, Organic Chemistry II, Immunology, General Physics I, General Physics II, Cell and Molecular Biology and Analytical Chemistry.

WORKSHOPS AND CERTIFICATION:

- Laboratory Safety. Universidad Del Este, Puerto Rico. Jan/26/2010
- Occupational Health & Safety in the Animal Resources. University of Puerto Rico, Medical Science Campus, Puerto Rico. May/7/2010
- Bioethics, Scientific Integrity and Responsible Conduct in Scientific Research. 25 Hrs\workshop.Universidad Del Este. Jan/11-18/2011

EXTRACURRICULAR ACTIVITIES/VOLUNTARY WORK:

- **Hogar Cuna SanCristóbal.** Assist Mr. Roberto Paniagua with the delivery of mattress and blankets. Nov 2007- present (Once a year).
- **Dominican Republic.** Assist Mr. Roberto Paniagua with the preparation of the baskets of food and toys to give away for those in need. Jan 2007- present (Once a year).
- **Universidad Del Este.** Assist preparing Thanksgiving baskets for people in need with the Science and Technology department. Nov 2011
- **San Pablo Medical Center.** Assist women with cancer during chemotherapy giving them coffee, snacks and quotes of inspiration to maintain them happy during the procedure. August 2008-2010 (two times a week)
- **Universidad Del Este.** Tutor, reader and writer for students with disabilities. Nov2008-2010 (once a week)