

Natasha Talago (Bonilla)

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EDUCATION

San Diego State University, San Diego, California

Master of Science in Microbiology

Expected May 2015

University of Puerto Rico, Rio Piedras, Puerto Rico

Bachelor of Science in Biology

June 2011

Colegio La Piedad High School, Isla Verde, Carolina, Puerto Rico

High School Diploma

May 2006

PROFESSIONAL EXPERIENCE

University of Puerto Rico, Rio Piedras Campus – San Juan, PR

June 2008 – June 2011

- *Environmental Sample collection and water analysis specialist*
- *Environmental Microbiology Laboratory instructor and supervisor of undergraduate students*
- *Microbe World Podcasts (“El mundo de los microbios”) Spanish speaker for the American Society for Microbiology (ASM) webpage*

San Diego State University, Main Campus – San Diego, CA

June 2012 – Present

- *The interactions of bacteriophage with the human mucosal immune system (thesis project)*
- *SDSU certified radioactive worker*
- *BSL2+ lab manager*
- *Teaching Assistant (TA) for Fundamentals of Microbiology Lab course*

Procedures and Techniques:

- *Aseptic techniques, sterilization and bacteriology procedures*
- *Characterization and detection of microbial indicators of fecal contamination*
- *Detection of antibiotic resistant genes and virulence factors in bacteriophages*
- *Preparation of lab reagents and ordering lab chemicals/supplies*
- *DNA extraction, purification and quantification*
- *PCR and gel electrophoresis*
- *Biochemical and physiological identification methods for methicillin-resistant *Staphylococcus aureus* (MRSA)*
- *Epifluorescent microscopy of bacteria and viruses*
- *Tissue culture*
- *Protein extraction, precipitation and purification*
- *Phage isolation and purification*
- *P³² radiolabeling*
- *SDS-PAGE*
- *Chromogenic endotoxin assay (LAL test)*

RESEARCH EXPERIENCE

San Diego State University – San Diego, CA

June 2012 – Present

Graduate student in the Rohwer Lab and Teaching Assistant (TA) in Microbiology

University of Puerto Rico, Rio Piedras Campus – San Juan, PR

BS student and assistant in the Environmental Microbiology Laboratory

May 2008 - June 2011

University of Washington – Seattle, WA

Environmental Health Research Experience Program (EH REP)

Summer 2010

PUBLICATIONS IN PEER-REVIEWED JOURNALS

- **N. Bonilla, T. Santiago, P. Marcos, M. Urdaneta, J. Santo Domingo and Gary Toranzos.** 2010. *Enterophages, a group of phages infecting Enterococcus faecalis and their potential as alternate indicators of human fecal contamination.* 2010. *Water Science and Technology.* 61:293-300.
- Tasha M. Santiago-Rodríguez, Catalina Dávila, Joel González, **Natasha Bonilla**, Patricia Marcos, Miguel Urdaneta, Manuela Cadete, Sílvia Monteiro, Ricardo Santos, Jorge Santo Domingo and Gary A. Toranzos. 2010. *Characterization of Enterococcus faecalis-infecting phages (enterophages) as markers of human fecal pollution in recreational waters.* *Water Research.* 44:4716-4725.
- Emily Levin-Edens, **Natasha Bonilla**, J. Scott Mescke and Marilyn C. Roberts. 2011. *Survival of environmental and clinical strains of methicillin-resistant Staphylococcus aureus (MRSA) in marine and fresh waters.* *Water Research.* 45:5681-5686.
- Santiago-Rodríguez TM, Ly M, **Bonilla N** and Pride DT (2015). *The human urine virome in association with urinary tract infections.* *Front. Microbiol.* 6:14. doi: 10.3389/fmicb.2015.00014.

PRESENTATIONS IN LOCAL, NATIONAL, AND INTERNATIONAL CONFERENCES

- **Poster presentations:**
 - **Natasha Bonilla, Tasha Santiago, Patricia Marcos, Ricardo Santos, Silvia Monteiro, Miguel Urdaneta and Gary A. Toranzos. Developing methods for the detection of Enterococcus faecalis-infecting phages (Enterophages) as Microbial Indicators of Water Contamination at the 29th Puerto Rico Interdisciplinary Scientific Meeting / 44th Junior Technical Meeting (December, 2008).**
 - **Natasha Bonilla, Tasha Santiago, Patricia Marcos, Ricardo Santos, Silvia Monteiro, Miguel Urdaneta and Gary A. Toranzos. Ecology and prevalence of a novel group of viruses infecting Enterococcus faecalis at PRMS Semiannual Convention (December 2009) and ABRCMS (November 2009).**
 - **Catalina Dávila, Tasha Santiago, Natasha Bonilla, Miguel Urdaneta, Joel Gonzalez, Carlos Toledo, Patricia Marcos, Manuela Cadete, Ricardo Santos, Silvia Monteiro and Gary Toranzos. Prevalence, survival and characterization of enterophages at the Water Research Conference, Portugal (April 2010).**
 - **T. M. Santiago-Rodríguez, C. Dávila, J. González, N. Bonilla, P. Marcos, M. Urdaneta, M. Cadete, S. Monteiro, R. Santo, J. Santo Domingo and G.A. Toranzos. Enterococcus faecalis-infecting phages: their characterization as markers of human fecal pollution in recreational waters at Viruses of Microbes Conference, Institute Pasteur, France (June 2010).**
 - **Natasha Bonilla, Emily Levin-Edens and Marilyn C. Roberts. Survival of clinical and environmental strains of methicillin-resistant Staphylococcus aureus (MRSA) in marine waters at University of Washington Summer Undergraduate Research Poster Session, Seattle (August 2010) and ABRCMS (November 2010).**
 - **Natasha Bonilla, Jessica Rivera, Jean M. Carraquillo, Marilyn C. Roberts and Gary A. Toranzos. Prevalence of Methicillin-resistant Staphylococcus aureus (MRSA) in Tropical Marine, Fresh and Sewage Waters at EPA's National Beach Conference, Miami, Florida (March 2011).**
 - **Emily Levin-Edens, Natasha Bonilla, J. Scott Meschke and Marilyn C. Roberts. Survival of methicillin-resistant Staphylococcus aureus [MRSA] in Pacific Northwest marine and fresh water at ASM General Meeting, New Orleans, LA (May 2011).**
 - **Jessica Rivera, Natasha Bonilla, Jean M. Carrasquillo, Mariel Coradin, Tasha Santiago, Marilyn C. Roberts and Gary A. Toranzos. Prevalence of Methicillin-resistance genes and Methicillin-resistant Staphylococcus aureus (MRSA) in tropical recreational waters and sewage in the 16th International Health-Related Water Microbiology at Rotorua, New Zealand (September, 2011).**
 - **Talago (Bonilla), N., Rohwer, F. and Barr, J. The interaction of bacteriophage with the human mucosal immune system at the SDSU 2013 Cell Molecular Biology Graduate Student Symposium (April 2013).**
 - **Talago (Bonilla), N., Rohwer, F. and Barr, J. The interaction of bacteriophage with the human mucosal immune system at the SDSU 2014 Cell Molecular Biology Graduate Student Symposium (April 2014).**
- **Oral presentations:**
 - **Bonilla, N., C. Dávila, J. Cuevas, P. Marcos, J. Rosado, D. Vargas, A. Silva and G.A., Toranzos. Prevalence of enterophages as indicators of fecal water contamination in tropical waters at 29th Puerto Rico Interdisciplinary Scientific Meeting / 44th Junior Technical Meeting**

- *Bonilla, N. **Fecal contamination on El Balneario de Carolina** in Alliance for the Teaching in Science and Math at University of Puerto Rico, Rio Piedras Campus (Summer 2008).*
- *Bonilla, N., T. Santiago, C. Dávila, J. Cuevas, P. Marcos, J. Rosado, M. Urdaneta and G.A., Toranzos. **Enterophages, a group of phages infecting Enterococcus faecalis and their potential as alternate indicators of human fecal contamination** in the 15th International Health-Related Water Microbiology at Naxos, Greece (June, 2009). Winner of Best Oral Presentation.*
- *Talago (Bonilla), N., Rohwer, F. and Barr, J. **The interaction of bacteriophage with the human mucosal immune system** at the SDSU 2013 Student Research Symposium (March 2013).*
- *Talago (Bonilla), N., Rohwer, F. and Barr, J. **The interaction of bacteriophage with the human mucosal immune system** at the SDSU 2014 Student Research Symposium (March 2014).*

AWARDS

- *Harold and June Grant Memorial Scholarship* 2014-2015
- *Graduate Equity Grant* 2013-2015
- *MARC NIH PROGRAM (Minority Access to Research Careers)* June 2009 – May 2011
- *Best Oral Presentation at the 15th International Health-related Water Microbiology, International Water Association (IWA) in Naxos, Greece* June 2010
- *Award from the Notre Dame College at Maryland, Baltimore as the most outstanding undergraduate researcher in biology at the University of Puerto Rico, Rio Piedras* November 2010
- *Puerto Rico Math and Science Partnership (ALACiMA) Undergraduate Fellow* Summer 2005

COMPUTER/STATISTICAL SKILLS

- *Introduction of Statistics with computers course*
- *Minitab*
- *The R Project for Statistical Computing*
- *Endnote*
- *Microsoft Office*
- *Power Point for oral and poster presentations*
- *Creating Excel Worksheets for data analysis*
- *Image Pro Plus software*
- *PRISM*
- *Illustrator*
- *Photoshop*

LANGUAGES

- *Spanish*
- *English*

