

YARIELA GUMÁ-CINTRÓN

(787) 602-7799 • yariela.guma@gmail.com

EDUCATION

MS in Biological Oceanography, Conc. in Molecular Biology | GPA: 3.45

| December 2015

University of Puerto Rico at Mayagüez (UPRM)

Thesis approved December 4, 2015

Publications: Transcriptomic Analysis of Cobalt Stress in the Marine Yeast *Debaryomyces hansenii* (DOI 10.1093/femsyr/fov099)

BS in Industrial Biotechnology | magna cum laude

| May 2012

University of Puerto Rico at Mayagüez (UPRM)

SKILLS

Software: Artemis • Spotfire • Arlequin • Mr. Bayes • BEAST • tnt • sequin • Mesquite • MEGA • dnasp • MS Office

Laboratory: Expression Cloning • qRT-PCR • DNA Sequencing • RNAseq • Fluorescence Spectroscopy • Bioinformatics • Anaerobic Bacteria Collection and Isolation • Bioprospecting/Field Work

Languages: English & Spanish Bilingual (Written and Spoken)

EXPERIENCE

RESEARCH ASSISTANT | UPRM MOLECULAR MARINE BIOLOGY LAB

| May 2012 – Dec 2014

Project Title: Transcriptomic Analysis of Cobalt Stress on the Marine Yeast *Debaryomyces hansenii*

- RNAseq data analysis of extremophilic marine yeast exposed to subtoxic levels of cobalt.
- Use of bioinformatic software and databases in the transcriptomic approach for analysis of the genetic response of the yeast.
- Performed yeast cultivation, growth, exposure to cobalt, and RNA extraction; sequence mapping, expression analysis, and functional annotation.
- Expression confirmed via qRT-PCR approach via the Mx3005P analyzer (Stratagene). Performed primer design.
- Research paper on subject in submission process for FEMS Yeast Research.

Project Title: EFRI-HyBi-0938157: Bioengineering a System for the Direct Production Biological Hydrocarbons for Biofuels

- Performed cloning and heterologous expression of plant hydrocarbon producing gene in a marine yeast.
- Performed chemical mutations, DNA extraction, TA cloning, southern blot, western blot, and qRT-PCR for the expression and detection of target gene in the heterologous system.

UNDERGRAD RESEARCH ASSISTANT | UPRM MOLECULAR MARINE BIOLOGY LAB | Jan 2012 – June 2012

- Performed analysis of 40+ marine yeast strains for high level production of lipids and identification of oleaginous strains.
- Performed Nile red staining and fluorescence spectrometry detection of lipids.

UNDERGRAD RESEARCH ASSISTANT | UPRM DPT OF BIOLOGY

| Jan 2010 – Dec 2012

- Identify bacterial acquisition of type I integrons (sulfua resistant genes) in environmental samples.
- Isolation of samples, growth in antibiotic containing media, PCR amplification of gene (integrase), and TA cloning.

AWARDS

RISE 2 BEST PROGRAM AT UPRM |

| Nov 2012 – Dec 2014

NIH funded grant for research in biomedical science or biomedical engineering. Supported by grant number NIH-R25GM088023 from the National Institute of General Medical Sciences.