

Guillermo Luis Raimundi Rodríguez

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Profile Industrial Microbiology Graduate from the University of Puerto Rico, Virginia Tech's NIH 18th PREP alumni, and current NIH Academy Enrichment Program (NAEP) and Yale's Program to Advance Training in Health & Sciences (PATHS) scholar.

Education **B.S., University of Puerto Rico at Mayagüez**
Major: Industrial Microbiology
Overall GPA: 3.28
Major GPA: 3.40
Graduated: June 2020

Research Interests

- Immunopathology
- Viral Host-pathogen Interactions
- Public Health and Epidemiology

Research *Summary: 5 months of undergraduate academic research experience and 10 months of postbaccalaureate experience in biomedical research accrued across 3 rotations and an independent project.*

Present - **NIH Academy Enrichment Program (NAEP)**
Trainee and Researcher
Postbaccalaureate researcher at the NIH Intramural Research Program (IRP), exploring important elements of the basic, translational, and clinical research enterprise by matching with a laboratory specialized in biomedical sciences, and examining the role of science, policy, and community engagement in the elimination of health disparities as part of the program's curriculum and training.

July 2020 - June 2021 **NIH Postbaccalaureate Research Education Program**
Student Researcher
Selected as one of the 9 scholars in the NIH funded program for students who aspire graduate studies in the biomedical field, under which a full scholarship and intensive training in research-related environments were offered. Our primary goal was to enhance our laboratory techniques and critical thinking skills through different rotations and participation in seminars and forums offered by other graduate students and leading scientists across the nation. Rotations comprised as follows:

- **Dr. Zachary Mackey:** study of the protein structure of TbPCNA and its interaction with TbERK8 in *Trypanosoma brucei* for further assessment on cellular arrest.

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- **Dr. Lijuan Yuan:** assessing the effectivity of a multivalent vaccine against Rotavirus in germ-free pigs.
- **Dr. X.J. Meng:** analyzing the functional and molecular mechanisms of HEV during pregnancy using rabbits.
- **Dr. Ann Stevens:** evaluation of the microbiome in aquaculture fish through means of bioinformatics using R Studio.

Independent Project on HEV:

Dr. X.J. Meng's laboratory at Virginia Tech's Corporate Research Center Hepatitis E Virus (HEV) is an important public health pathogen that infects humans through fecal-oral transmission and causes higher mortality in HEV-infected pregnant women in developing countries with little to no access to clean water. Additionally, HEV is considered a zoonotic disease that has been detected in domestic pigs, wild boars, wild deer, camels, and, most recently, in rabbits. USRab-14 and RC39 are two rabbit HEV strains identified in previous studies using pregnant (PR) and non-pregnant rabbits (NPR). In this study, we will assess the infectivity of both strains replicate in the placenta, liver, spleen, and large intestine of pregnant and non-pregnant rabbits. This animal model will help us elucidate how it ultimately affects the gestation cycle through assays and techniques such as ELISA, RNA extraction, cDNA synthesis and RT-qPCR, gel electrophoresis, HEV RNA Titer, and Delta-Delta Ct Method.

Jan 2019
-Dec 2019

Microbial Ecology Research Assistant

Dr. Alejandro Ruiz Acevedo's Laboratory, University of Puerto Rico at Mayagüez

Our study was conducted with the means to determine if the fungal growth of *Cryptococcus gatii* in the Guánica Dry Forest Reserve was due to either a result of high levels of humidity during the rainy season, or as a byproduct of insect-plant interaction. We aimed to understand if the geographical distribution of the fungal spore presented itself as a significant cause of cryptococcosis in the Southern region of the island.

- Studied the physiology of the fungal species through its production of phenoloxidase, which capacitates it to feed off lignin in plants.
- Participated in the expedition to extract the samples from the infected *Cephalocereus royenii* cactus in the Reserve.
- Contributed to the biochemical testing through the design of Sabouraud and potato agars (SDA and PDA, respectively) with the adequate pH along with specific quantities of cycloheximide for the *C. neoformans* and *C. gatii* differentiation.

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Service *representation positions. I began as Councilman of the College of Arts & Sciences Student Government and escalated to become Senator of the Academic Senate of my university.*

Aug 2019
-June 2020

Academic Senate UPRM:

Senator for the College of Sciences

Elected as the Student Senator for the College of Sciences in the Academic Senate as a full member in which I took part in the designation and fiscal analysis of budget granting and cuts of approximately 50% of its overall financial allocation, imposed by the Congressional Fiscal Oversight and Management Board of Puerto Rico, and examined the administration's partaking of laboratories and the structural maintenance, curriculum adjustment, financial distribution, and student tuition.

Faculty Affairs Committee, Member:

- Consulted with my university's legal advisors on the faculty members of the senate's salary and their constitutional recognition as full members.
- Reviewed and adjusted the institutional regulation of the faculty with the means to assure the students' safety and wellbeing.

Search and Consultation for the Dean of Students Ad-Hoc Committee, Member:

- Elected as the student representative, along with 5 other senators of the faculty, for the committee in which we coordinated the interviews and designed the format of evaluation for each candidate. We conducted the aforementioned based on the university's chancellor's specificities and the profile he requested.

Student Government, General Student Council (STUCO), Member:

- *Ex-officio* member of the UPRM-STUCO along with 5 other senators as part of a 24-student institutional body in charge of supervising the campus' needs and general welfare. As part of the STUCO, I assisted and took part of several other committees:
 - Laws & Regulations Committee, Member
 - Assistant Coordinator to the General Assemblies for Students

Aug 2018
-June 2020

Student Government, College for the Arts & Sciences:

Councilman

Elected as one of nine student councilmen for the College of Sciences and later became Senator for the College of Sciences. Our tasks consisted of assessing the needs of our different departments and the structural conditions of our buildings, verification of the student aid deposit, and

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supervision over the campus's overall maintenance. As part of this Council, I assisted and took part in several of its committees:

- Pro-Diversity Committee, President
- Infrastructure and Sustainability Committee, Member
- Law & Regulations Committee, Member

Multisector Committee Against Sexual Harassment:

Student member of the committee in charge of Title IX implementation and regulation in the campus. Coordinated with the Student Attorney different talks about Sexual Harassment and equity in the campus. We assured that every member of the faculty and staff received the adequate instruction in the regulation and further assured safety between student and faculty. We also assisted in projects that were aimed to promote gender and non-gender-conformative equality, such as the designation of gender-neutral restrooms.

Leadership & Community *Summary: Two selected organizations through which I facilitated support groups and became part of my department's Honor Society.*

Aug 2017
-June 2020

TriBeta Honor Society, Zeta Alpha Chapter Member

Became a student member of my campus's chapter upon completing the adequate requirements, which composed of 2 community service activities, 20 conferences and student trips to academic sites.

Aug 2017
-May 2018

SIEMPREVIVAS Organization against Domestic Violence Facilitator and Mentee

Volunteered as facilitator in support groups for gender-based violence survivors in collaboration with social workers and other student mentees, all located around the Western area of Puerto Rico. We were provided with literature-based mentorship, evaluated by our program director, social workers and scrupulously instructed by several attorneys on the policy and legal assistance to the victims through legal education seminars.

Professional Development *Summary: Participated in a National Forum, a month-long Summer Program, and a pipeline program that provided me thorough exposure and practical experience in the scientific and medical field.*

Pipeline Programs

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Present - **Yale Program to Advance Training in Health & Sciences (PATHS)**

Scholar

Mentee at an 11-month pipeline program in which its scholars participate in workshops, seminars, training modules, one-on-one conversations with mentors and additional resources specifically tailored to enhance academic profiles prior to their application and admission to an advanced degree track.

Summer Programs

Summer 2014 **García Rinaldi Foundation Summer Program** – Several rotations through hospitals and CDC centers, June 1 – July 2.

- A 5-week program in which we were instructed to visit 2 hospitals, 2 CDC's and 1 university.
- Observed invasive procedures up close and received lectures about multiple disciplines related to biology and health sciences, along with performing over 20 hours of community services.
- Received thorough orientation on hospital policies and services that ensured the patient's wellbeing and protection.

Forums

Summer 2013 **National Youth Leadership Forum in Medicine** – Babson College, Wellesley, MA, June 30 – July 9.

- Participated in several activities in which we were instructed about the ethics in the field of medicine, the processes of evaluation and diagnostics of different illnesses, visual orientations about invasive procedures and surgeries, and visits to medical institutions around the area.
- Received lectures and mentorship from doctors, professors and lecturers who visited the campus to discuss their career development and the specialty they worked on.
- Received training and orientation in medical policies, hospital administration, healthcare management and how the law protects and ensures the general welfare.

Work Experience

Summary: Experience in customer service as a bartender and a waiter.

July 2018

Romano's Macaroni Grill

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-Dec 2018

Waiter

Worked as a waiter in the evenings after class for 6 months.

Dec 2018

La Cueva de Tarugos

-Dec 2019

Bartender

Worked as a bartender in a college bar next to campus during late afternoons and some evenings.
