

# PAULA M. MAÑÁN MEJÍAS

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## EDUCATION

University of Puerto Rico Mayagüez Campus, August 2016 – present

Graduation Date: December 2021

### B.S. in Industrial Biotechnology

**Relevant Courses:** Microbiology, Clinical Microbiology, Medical Mycology, Microbial Physiology, Genetics, Biochemistry, Analytical Chemistry, Statistics, Bioseparation Engineering, Bioprocess Engineering Laboratory, Bioreactor Engineering.

Participated in the **first** Synthetic Biology class and Laboratory offered in the University of Puerto Rico in by Dr. Carlos Ríos Velázquez and Dr. Patricia Ortiz Bermúdez.

## RESEARCH EXPERIENCE

### Antioxidant Capacity and Bioactivity of *Petiveria alliacea* (Anamú)

February 2018- May 2020

Undergraduate Researcher | Natural Products Laboratory | Dr. Nilka Rivera Portalatín | Chemistry Department UPRM

- Performed DPPH assays to determine the free radical scavenging activity of *Petiveria alliacea* leaf extracts.
- Conducted Brine Shrimp Lethality Assay to evaluate the bioactivity and potential cytotoxicity of *Petiveria alliacea* leaf extracts.
- Carried out a Qualitative Phytochemical Analysis on various fractions of Anamu leaf extracts to identify the type of compounds present.

### Docking of RSK-1 inhibited by dibenzyl trisulfide (DTS), a compound found in *Petiveria alliacea* L.

August 2020-present

Undergraduate Researcher | Natural Products Laboratory | Dr. Nilka Rivera Portalatín | Chemistry Department UPRM

- Performing molecular docking studies to determine the inhibitory interaction of dibenzyl trisulfide (DTS) against RSK-1.

### iGEM Synthetic Biology Lab | iGEM RUM-UPRM Team Member | Biology Department UPRM

April 2019-March 2020

- Participated in the design of DNA fragments and practiced molecular biology and microbiology techniques such as bacterial cloning, DNA digestion and ligation, bacterial transformation, preparation of buffer solutions and medium for bacterial growth, electrophoresis, DNA extraction, and preparation of competent cells.

## EXTRACURRICULAR ACTIVITIES AND LEADERSHIP

### iGEM RUM-UPRM 2019 | Biology Team Member

April 2018-November 2019

- **First** iGEM and Synthetic Biology team from Puerto Rico and Caribbean that has competed in the Giant Jamboree.
- Worked with the development of the team's prototype in the lab.
- Contributed to Synthetic Biology education efforts in the University and in Puerto Rico.
- **1 of 377** teams that participated in the 2019 Giant Jamboree and **Silver Medal** Winners & First Runner Up in Open Track.

### iGEM RUM-UPRM 2020 | Research Director

November 2019-November 2020

- Managed **23** team members in the development of the prototype and adapted it to a virtual platform due to the pandemic.
- **1 of 249** teams that participated in the 2020 Virtual Giant Jamboree and **Bronze Medal** Winners.

### iGEM RUM-UPRM 2021 | Undergraduate Team Advisor

January 2021-present

- Offer advice to improve the team's prototype and help in activities.

### SynBio101: Summer Camp 2019 & 2020 | Volunteer as Staff Member

- The **first** Synthetic Biology Summer Camp for high school students in Puerto Rico.
- Responsible for **50** high school students for one week in the 2019 Summer Camp
- Responsible for **80** high school students in the 2020 Virtual Summer Camp.
- Contributed to the coordination of the activities, workshops, and lab experience both years.

June-July 2019

July 2020

### Health Fair "AESI: Es pa' ti" | Promotions Committee

August 2018-November 2018

- Participated in the organization of the **first** student-organized health fair celebrated in the University.

### Instarz Internship | Biotechnology Intern

September-December 2018

- Conducted research in Life Support technologies for self-sustainable space habitats.

### National Honor Society of Biology βββ: Zeta Alpha Chapter | Member

August 2017- May 2019

- Participated in community service activities and conferences about different topics in the field of science.

### Pre-medics Circle UPRM Chapter | Member

August 2016- May 2019

- Engaged in community service activities and conferences about the different opportunities in the medical field.

### UPRM Institute for the Development of Communities | Volunteer

August 2017-February 2018

- Along a group of **5** students, carried out a participatory-action investigation in a local community Mayagüez to assess its necessities.

## WORKSHOPS

### Integrative Workshops of MARC Program | Participant

January 2018

- Mammalian Cell Toxicity Assays | Offered by Dr. Maribella Domenech
- Antioxidant Activity Assays | Offered by Dr. Nilka Rivera-Portalatín
- Molecular Genetics | Offered by Dr. Juan Carlos Martínez Cruzado

### IPERT- Quantitative Analysis Workshop: Introduction to R/RStudio | Participant

February 2021

## SKILLS

- **Scientific:** Data Analysis, Natural product extraction and isolation, Antioxidant assays, Solvent Extraction, Soxhlet Extraction, Rotary Evaporation, Molecular Docking, Chromatography, UV-Vis Spectroscopy, Biosafety, Molecular Biology and Microbiology Lab Techniques, PCR.
- **Software:** Minitab, R Studio, MatLab, AutoDock 4, Pymol, Benchling, Microsoft Office (Word, PowerPoint, Excel).
- **Language:** Fluent in Spanish and English (Bilingual).
- **Soft Skills:** Leadership, Teamwork, Communication, Adaptability, Problem Solving.