

Rice iGEM Meta-Analysis Questions

1. What university is your team associated with, location of university, project name, and project track?

Our team is associated with the University of Puerto Rico-Mayagüez (UPRM or RUM) located at Mayagüez, Puerto Rico. Our project is titled “SynBio101: Road to Coli CTRL” and is enrolled in the Open track.

2. How many PIs, advisors, and undergraduate team members does your team have?

We have 2 PI's, 1 advisor, 2 instructors and 22 undergraduate team members.

3. What were the primary reasons why you chose your project?

Our team wanted to promote Synthetic Biology among our fellow colleagues for we believe it is an amazing tool for solving long-standing complex issues that our society faces. Synthetic Biology can become an economic and technological development tool for university students and young adults that want to become part of the bioscience cluster locally and globally. Because Synthetic Biology is a relatively recent discipline, we had the mission to educate and promote its usage in the island so other people could become aware and become part of the emergent Synthetic Biology community of Puerto Rico and the Caribbean we are honor to lead as the first iGEM team from such places.

4. What was the process you went through in choosing your project?

Because of the nature of our project we have particularly given most of our efforts towards developing good Human Practices and Integrated Human Practices components since the beginning. This doesn't mean we skipped the laboratory component. Our team designed in silico a genetic prototype for *E. coli* that can serve as a biomanufacturing biobricks system that is activated with red light called Coli CTRL. We have planned and performed the following activities:

- General Public
 - Educational weekend activities for La Via community, in Aguadilla, Puerto Rico
- High School Students
 - High School Students Shadowing Program
 - SynBio101 Summer Camp 2019
 - Intensive Laboratory Techniques Workshops
 - Synthetic Biology Caribbean Talk 2019
- University Students (Undergraduate and Graduate Students)
 - BIOL 4991-070 Principles and Applications of Synthetic Biology
 - BIOL 4991-051 Synthetic Biology Laboratory
 - Synthetic Biology Week 2019

- SynBio Caribbean Talk 2019
- High School Teachers
 - Weekend Professional Development in Synthetic Biology
- Puerto Rico's Law Makers
 - SynBio: PROBETA Town Hall 2019

5. Do you think your location or local environment influenced your project selection? If so, how might these influences be described? (For example, after flooding in the Houston area, teams in that region gravitated toward flood-related projects)

Absolutely, our location is lagging in terms of Synthetic Biology development and it had much to do with ignorance about the subject among educated and non-educated subjects. After Hurricane Maria and the State Government Bankruptcy many people, most of the well-educated and professional individuals, had to flee the island because opportunities for growth and development were lacking. Although Puerto Rico's GDP comes mainly from the bioscience industry, little to no attention was given to educate our fellow citizens about Synthetic Biology as an opportunity for economic and technological development. It is our intention to promote and use Synthetic Biology as a development tool to revert the instability effects caused by Hurricane Maria and the State Government Bankruptcy that led to the massive fled of professional individuals out of the island.

6. Were there any other projects you would have wanted to do, but were unable to do for any reason? Please explain.

Yes, we had a lot of different project ideas. Everyone in the team had a different project idea in mind. Most of them were very complex and require a lot of resources and experience we lacked, so we decided to look for common grounds. The result was a project that focused heavily in promoting and educating our society so further people can participate of Synthetic Biology and help us [Puerto Rico] develop as the economic and technological leader of the Caribbean in this discipline.