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Dear friends,

The last two years brought a lot of challenges to Puerto Rico. Despite these challenges, or perhaps in light of them, the past two years have also borne witness to the great strength, innovativeness, and resilience of la #CienciaBoricua.

The commitment of this community to science and Puerto Rico has inspired CienciaPR to think big and do more. Starting with our new strategic plan, we have doubled down on our most important resource: empowered minds who can contribute to solving the problems of Puerto Rico through science. I hope you will appreciate the fruits of this renewed commitment in the following pages.

I’d like to thank the hundreds of educators, STEM professionals and scientists-in-training that have participated in our programs. You are all critical for our success. I’d also like to thank our funders, collaborators and champions, who have opened doors for the organization and believe in our vision. Together, we are building a better Puerto Rico. 

Juntos, estamos haciendo patria.

Sincerely,

Giovanna Guerrero-Medina, Ph.D.
A global community of scientists, students, educators and allies who believe that science can empower individuals with the knowledge, capacity, and agency to improve their lives and society.
Our Vision

A society where individuals are empowered by science to think critically, solve problems, and be agents of change in their communities.

Our Mission

To democratize science and transform science education by engaging and empowering a diverse global community of scientists, students, educators and allies.
By making science more engaging and culturally relevant, our goal is to enable people to become critical thinkers and problem solvers.

We leverage our rich and diverse community to fuel solutions that democratize science, and transform science education and career training.

Focus on evidence-based interventions to ensure we are transforming how people relate to and learn from science.

Our Differentiating Factors

Committed Experts

Cultural Relevance

Impact
A New Strategic Direction: Transforming Science Education in Puerto Rico

Over the next 10 years we will engage our rich and diverse community of scientists, educators, students and allies to:

- Bring discovery and experimentation to classrooms
- Connect science to the culture and reality of students
- Foster problem-solving and critical thinking skills
- Convey the excitement of science and provide role models

Read our 10-year Strategic Plan: [bit.ly/CienciaPRStrategicPlan](bit.ly/CienciaPRStrategicPlan)
A New Strategic Direction: Local Focus, Global Impact

While focused on Puerto Rico, our innovative approaches will address a universal challenge: making science education more engaging, relevant to the social and cultural context of students, based on inquiry, and ultimately, more effective.
Our strategies will focus on making the process of science accessible and culturally relevant, to improve students’ proficiency, critical thinking, and attitudes toward science.

Our most important asset is our global network of scientists, educators, students and allies. To meet our strategic goals we will foster a strong, engaged, proactive, and dynamic CienciaPR community.

To accomplish our new strategic direction, we defined 3 strategic goals:

1. **FOCUS ON THE PROCESS OF SCIENCE**
   - Our strategies will focus on making the process of science accessible and culturally relevant, to improve students’ proficiency, critical thinking, and attitudes toward science.

2. **AN ENGAGED CIENCIAPR COMMUNITY**
   - Our most important asset is our global network of scientists, educators, students and allies. To meet our strategic goals we will foster a strong, engaged, proactive, and dynamic CienciaPR community.

3. **A STRONG ORGANIZATION**
   - To achieve our strategic goals, CienciaPR must have the organizational, human resources and financial capabilities to be a sustainable and thriving non-profit entity.
STRATEGIC GOAL 1

Focus on the Process of Science
To fulfill our new strategic direction, in early 2018 we created Ciencia al Servicio de Puerto Rico (Science in Service of Puerto Rico).

Ciencia al Servicio brings together scientists and teachers to co-create science lessons relevant to the Puerto Rican context and to empower students to solve problems they observe in their communities.
Scientists

- Want to give back to their community
- Can benefit from science communication and education skills

Students

- Lack scientific role models they can identify with

Educators

- Rarely have scientific research experience
- Lack the tools and training to incorporate project-based learning and experimentation in the classroom

Science

- Often taught passively, without engaging students in the process of inquiry and discovery
- Often taught disconnected from the social and cultural context of the students

Ciencia al Servicio de Puerto Rico
After Hurricanes Irma and Maria, we received a grant from the National Science Foundation (NSF), through our partnership with Yale University, to implement lessons to encourage students to create and apply low-cost scientific solutions to challenges created by the storms.

Read more: bit.ly/CienciaAlServicioPilot
Ciencia al Servicio de Puerto Rico Pilot by the Numbers

- 20 Public Schools
- 3 Boys & Girls Club of Puerto Rico Centers
- 242 Foldscopes
- 23 Educators
- 374 Middle School-aged students impacted
- 9 Student-led projects completed
Ciencia al Servicio de Puerto Rico Project

In the summer of 2018, we launched Ciencia al Servicio with a two-day workshop, where teachers and scientists were trained in project-based learning (PBL), contextualized education, and science communication.

During the workshop, teachers and scientists collaborated to create lessons on topics such as mosquito control, climate change, space exploration and more.

Read more: bit.ly/CienciaAlServicioPR
Ciencia al Servicio de Puerto Rico Project by the Numbers

14 STEM professionals
37 teachers from 33 schools across Puerto Rico
32 lessons created and being implemented
1,100+ students impacted
CienciaPR partnered with the Puerto Rico Science Trust, the Department of Education, and Ponce Health Sciences University to bring world-renowned scientist and inventor Dr. Manu Prakash to Puerto Rico.

More than 90 educators were trained on the use of the origami microscope Foldscope, of which 340 were distributed, and now, more than 2,700 students have the opportunity to explore the microcosmos of our forests, rivers, and seas.

Read more: bit.ly/Manu_PuertoRico
Astronomía al Servicio

Astronomía al Servicio is a collaborative project between CienciaPR, Astronomers Without Borders, the Office of Astronomy for Development of the International Astronomical Union, the Instituto Nueva Escuela and the Puerto Rico Astronomy Society.

The project seeks to promote education, scientific exploration, and citizen participation through the training of teachers and the establishment of astronomy clubs in schools.

Read more:
bit.ly/AstronomiaAlServicio
bit.ly/TallerAstronomiaAlServicio
Astronomía al Servicio by the Numbers

20 telescopes
814 students
15 astronomy clubs
21 teachers
STRATEGIC GOAL 2

An Engaged CienciaPR Community
CienciaPR Co-Organizes March for Science Puerto Rico

In partnership with Earth Day Puerto Rico and AAAS Caribbean Division, CienciaPR co-organized the March for Science Puerto Rico.

More than 500 people took part of the march in Old San Juan, to celebrate and defend the role of science in Puerto Rican society.

As a preamble to the March for Science, we also hosted Historias de Ciencia Boricua at Lote 23, a night of personal stories about science.

Read more: bit.ly/MfSPuertoRico
Immediately after Hurricanes Irma and Maria, we created a registry to collect offers and requests for aid to support scientists and students impacted by the disasters. More than 450 offers were received from around the world.

We also created a resource bank with information about where to make donations, shared a public health campaign created by Yale School of Medicine, and provided resources to help members advocate for support for Puerto Rico at their institutions.

Read more: bit.ly/PostMariaEfforts
Supporting the Scientific Community After Hurricane Maria

CienciaPR collaborated with the American Association for the Advancement of Science (AAAS) Caribbean Division and the Puerto Rico Science Trust to create a small grants program for scientists and students affected by the hurricanes.

65 grants totalling $99,363 were awarded to help scientists restore and repair laboratory equipment, travel to continue their research, and complete impacted dissertation research.

The grants fund was also supported by AAAS, the American Chemical Society (ACS) and the Society for Neuroscience (SfN).
On September 1st, 2018, over 100 people participated in Ciencia en Acción, an event organized by the AAAS Caribbean Division, CienciaPR and the Union of Concerned Scientists that presented tools, strategies, and role models to empower scientists to advocate for science-based policies.

The event served to launch of the Puerto Rico Science Policy Action Network (PR-SPAN), which aims to activate the scientific community in Puerto Rico and the US to help inform the deliberation of evidence-based policies with an impact on our community.
The Yale Ciencia Academy, created by CienciaPR and Yale University in 2016, is a competitive year-long career development program for doctoral students from underrepresented backgrounds in biomedical and behavioral sciences.

Read more: CienciaPR.org/YCA
Projects included articles, podcasts, op-eds, lesson plans and school visits, public lectures, career workshops and panels, symposia and a new blog for El Nuevo Día newspaper.

In 2017, several students used their outreach projects to respond and contribute to relief and recovery from Hurricanes Irma and Maria.

As part of their year, YCA Fellows completed outreach and public engagement projects, through which they practiced science communication and leadership skills and impacted their communities.

30 in 2017, 30 in 2018 outreach projects

11,400+ people impacted

Yale Ciencia Academy

In 2017, several students used their outreach projects to respond and contribute to relief and recovery from Hurricanes Irma and Maria.
UPR-IPERT

This project, led by the University of Puerto Rico, Cayey, provides a community of practice to expand students’ access to research training and enhance educational opportunities and mentoring throughout the UPR system.

Through CienciaPR, UPR-IPERT students can connect with mentors, learn about professional development opportunities, and get certified for online trainings and webinars.

Over 1,200 students and 100 faculty members have registered for UPR-IPERT through CienciaPR.

Read more:
CienciaPR.org/UPR-IPERT
STRATEGIC GOAL 3

A Strong Organization
Shaping a New Strategic Direction for CienciaPR

CienciaPR’s strategic planning process culminated with a 2-day staff and volunteer retreat at Yale University on March 2017 where our new strategic direction to transform science education in Puerto Rico took shape.

A heartfelt thank you to our volunteers for their commitment, time, and ideas; to Dana Montenegro and Mariela Martinez from Seriously Creative who led the design thinking sessions; to Mariko Ryono for being our strategic planning guru.

We also thank the civic leaders who provided insights and advice; and to the almost 1,000 CienciaPR members who gave feedback through a survey.
A New Board of Directors

In 2017, we announced a new Board of Directors composed of leading scientists, educators, innovators and members of the community.

This stellar group complements our existing expertise, and is helping us secure new sources of funding, and increase the visibility, recognition and impact of CienciaPR.

Read more: bit.ly/CienciaPR-New-BoD
Two New Science Education Staff Members

To successfully implement our new strategic direction of transforming science education to promote a culture of science, critical thinking and problem-solving in Puerto Rico we hired two new staff members.

Dr. Greetchen Díaz-Muñoz became CienciaPR’s Director of Science Education Programs and Community Partnerships in July 2017.
bit.ly/GDM_joins_CienciaPR

Elvin Estrada García, M.S. joined us as Educational Programs Specialist and Social Media Coordinator in March 2018.
bit.ly/Elvin_CienciaPR
Funding and Support for Our New Strategic Direction

We are extremely grateful to the following foundations and organizations for their support of our science education efforts in 2017 and 2018:
CienciaPR Staff Participate of National Committees and Boards

Giovanna Guerrero-Medina
EXECUTIVE DIRECTOR

Served on the National Academies of Sciences, Engineering and Medicine's Committee Next Generation Initiative
bit.ly/GDM-NextGen-Committee

Mónica Feliú-Mójer
DIRECTOR OF COMMUNICATIONS

Participated of a series of workshops on Supporting Systems for Scientists Communication and Engagement
bit.ly/MFM-SciComm-Workshops

Greetchen Díaz-Muñoz
DIRECTOR OF SCIENCE EDUCATION PROGRAMS

Was re-elected to serve of the American Society for Microbiology's Board of Directors
bit.ly/GDM-ASM
In 2018, CienciaPR was recognized as one of five “Science Defenders 2018” by the Union of Concerned Scientists.

Specifically, we were recognized by our recovery efforts after Hurricane Maria and the creation of the Puerto Rico Science Policy Action Network (PR-SPAN).
CienciaPR Selected to Participate of SAP Social Sabbatical

At the end of 2018, CienciaPR was selected to participate of the SAP and PYXERA Social Sabbatical Global Program. Consultants spent the month of February 2019 in CienciaPR headquarters developing a roadmap for advancing CienciaPR’s strategic goal #3: increasing our human and financial resources.
Elvin Estrada-García's interview with Radio Uruguay about his visit to offer a workshop about science communication in the face of natural disasters and CienciaPR's efforts
bit.ly/Elvin-Radio-Uruguay

Dr. Mónica Feliú-Mójer published an op-ed in Scientific American about opportunities to rebuild science education in Puerto Rico after Hurricane María

In an interview with news icon Dan Rather, founder and president of the Board of Directors Dr. Daniel Colón-Ramos talked about his life, research and CienciaPR
bit.ly/CIS_DACR

El Nuevo Día interviewed Drs. Díaz-Muñoz and Feliú-Mójer about Ciencia al Servicio de Puerto Rico
bit.ly/2DbUILx

Got Science? Podcast interviewed Dr. Giovanna Guerrero-Medina about her journey and CienciaPR's efforts to transform science education in Puerto Rico
bit.ly/2D78Cyu

Media Coverage Highlights 2017-2018