



Puerto Rico  
Science, Technology  
& Research Trust



Annual Report  
FISCAL YEAR 2018-2019



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Science, Technology  
& Research Trust



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# ANNUAL REPORT

## FISCAL YEAR 2018-2019

### CONTENTS

LETTER TO OUR STAKEHOLDERS	6
ABOUT THE TRUST	10
OUR TRUSTEES	12
PROGRAMS AND PROJECTS	16
EVENTS AND MEDIA COVERAGE	128
IN THE NEWS	136
DESIGN MARKETING COMMUNICATIONS	160
ADDENDUM	164
FINANCIAL STATEMENTS	178

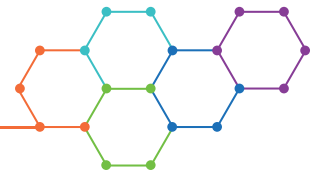
# LETTER TO OUR STAKEHOLDERS



**Lucy Crespo**

CEO Puerto Rico Science, Technology  
and Research Trust

**Welcome to the 2018-2019 Annual Report of the Puerto Rico Science, Technology, and Research Trust (PRSTRT). I'm pleased to report that we are making significant progress in advancing Puerto Rico's science, technology, research, and entrepreneurial agenda by strengthening our program offerings and diversifying our financial resources. We continue serving our stakeholders, contributing to Puerto Rico's economic development and the wellbeing of our community through the commitment and contributions of our associates and partners, with the guidance and support of our Board of Trustees.**



The Puerto Rico Science, Technology, and Research Trust has extended its footprint and physical presence into the city of Ponce. This year, we've also increased our strategic collaborators to include key private sector members and funders, such as the American Red Cross and the Medtronic Foundation. In the interest of enhancing our governance processes, we added three new private sector members to our Board of Trustees: Dr. Dara Schuster, Dr. Esther Alegria, and Dr. Ubaldo Córdoba.

On April 2, 2019, in celebration of National Public Health week, we officially launched the Puerto Rico Public Health Trust (PRPHT). The vision of the PRPHT is to achieve sustainable health and equity for Puerto Rican communities and to improve their quality of life through innovation, collaboration, and community engagement. PRPHT's initiatives include:

- a. Hurricane Response Hub Technical Assistance Center (HRHTAC), which provides training and technical assistance to health departments, emergency management agencies, and community-based organizations in the Caribbean. PRPHT is one of five regional technical assistance centers for the Hurricane Response Hub (HRH) initiative, led by the National Network of Public Health Institutes (NNPHI). Funded by the Centers for Disease Control and Prevention (CDC), this national program is designed to enhance disaster-related surveillance. It will also improve environmental and occupational health recovery efforts in areas affected by Hurricanes Harvey, Irma, and María by building disaster-related public health workforce capacity.
- b. Under the slogan of Building Resilience with Equity, Caribbean Strong was the first post-Maria resilience summit, held at the Convention Center Sheraton Hotel from February 27 to March 1, 2019. It emphasized on the lessons learned after the two devastating hurricanes that hit Puerto Rico and the Caribbean Region in 2017. At the summit, various entities and leaders from key sectors inside and outside Puerto Rico shared their experiences, lessons learned, and recommendations to improve resilience in health and public health systems.
- c. Capacity Building for Jurisdictional Hurricane Recovery – Puerto Rico Staffing Capacity Enhancements Program is supporting the Centers for Disease Control and Prevention (CDC), the Association of State and Territorial Health Officials (ASTHO), and the Puerto Rico Department of Health in the collaborative task of rebuilding Puerto Rico's public health infrastructure and capabilities.
- d. Community Engagement Initiative, to empower leaders in all fields and areas of work within the community –such as churches, schools, businesses, academic institutions, and municipalities– to challenge systems, tackle the root causes of health inequities, and build healthier communities in Puerto Rico. We are engaging the community in conversations, facilitating the growth of local health coalitions; asset and data mapping; identifying community leaders and improving their leadership skills. Through positions known as Promotores de Salud/ Community Health Workers and Community Research Liaisons, we aim to understand existing community networks (community and system), strengths and gaps, and support the necessary infrastructure, resources, and technology to meet identified needs.
- e. We sponsored 30 students and professionals to complete their Data Science Professional Certification with UPR.

In collaboration with and funded by the American Red Cross, we launched Recuperación Agrícola, a program designed to provide support and resources for the recovery of productive small farms affected by Hurricanes Irma and María to improve food production and increase capabilities. This program allows farmers to be successful in the face of the challenges caused by the economic crisis, natural disasters, and climate change. By integrating the latest drone technology with agricultural data from the USDA Forestry Service, we are including our small farmers in the realm of precision agriculture. In the capacity-building area, our partner InPrende provided participants of this program the experiences of the second edition of *Mujer Innova\_Agroempresarial and InPrende – Agroturismo Ecológico*, with the objective to boost commercial added-value activities in farms.

The STEM and CTE (Career Technical Education) Program signed a MOU with Secretary of Education Dr. Eligio Hernández to develop, in collaboration with the Puerto Rico Department of Education, a strategic plan to address changes and improvements in the STEM/CT Education pipeline. The STEM team visited Oregon to meet their STEM Council, as well as Atlanta, to meet Georgia Tech STEM leaders and identify best practices and knowledge. The STREAM Girls Challenge with Microsoft was launched, and the winner, in addition to getting



prizes from Microsoft, also had the opportunity to present their projects to the scientific community participating in the Sea Level Rising presentation by oceanographer John Englander. For third year in a row, we hosted **5 sessions of the Virtual Reality Summer Camp**. This year we had the collaboration of Ponce Health Science University and Sagrado Corazón University. In collaboration with Casa Grande, we launched the *Aedes aegypti* Vector Education in the Escuela Virtual platform, for 3rd, 7th, and 10th grades, to provide education about the *Aedes aegypti* vector. We hosted the first “Comunicación Científica” Meetup, with the co-sponsorship of Sagrado Corazón University.

The Puerto Rico Consortium for Clinical Research (PRCCI) grew its membership by six entities: Universidad Central del Caribe, Advanced Medical Concepts, Endowed Health Services Research Center, Oncology Health Group, Panamerican Center for Oncology Trials, and Santa Cruz Behavioral Research Center Corp. PRCCI now have 31 members. The biological samples storage project was completed to increase the resiliency of our organizations. Twenty-nine (29) PRCCI members attended the TransCelerate trainings. We are providing a Patient Education Program partially funded by a Merck grant. **The Clinical Research Summit**, held on May 9-10, 2019, was a total success with over **350 participants**. The DDEC approved the proposal for Clinical Trial Coordinator, with WIOA (Workforce Innovation Opportunity Act) funds for 25 participants. We are currently in the proposal implementation phase.

We completed Gen 6 with Parallel18, achieving the following cumulative results: **177 companies accelerated**, plus 40 Pre18, out of 2700 applicants; 720 jobs created; **revenues during P18 of \$70M**, with Puerto Rico-based revenues of **\$26M**; 40% of the companies are established or have operations in Puerto Rico. They **raised over \$40M in investments, \$13M in Puerto Rico**. We completed the second generation of Pre18 with the participation of 35 new local companies and a partial sponsorship from CNE and Fundación Banco Popular. We also completed the first generation of Facebook Startup Hub Caribbean with 10 companies participating in the combined virtual and physical acceleration program. The latest investments of Parallel18 Venture Fund includes : GoPanza, Vozy, Adventure Bucket List, and Molcayete Food.

We completed a memorable year for Colmena66 as Puerto Rico’s entrepreneurial ecosystem builder. Inspired by the theme of rebuilding a better and more resilient Puerto Rico, Colmena66 kicked off the year with *‘Juntas de la Red Colmena66’*, which were meetings around the Island to inspire and enhance hive capabilities. Gathering Colmena66’s partners to share their services and identify potential areas of collaboration served as an unprecedented booster for the hive. One major accomplishment during this period was the development and deployment of *‘Tu Camino Empresarial’*, a wonderful tool that helps members of the ecosystem identify the right resources for their type of business and stage of development. Tu camino empresarial, available both in print and interactive digital formats, make it easier for everyone to access the right resources at the right time, wherever they are. Colmena66 expanded their reach and audience by partnering with the team from Puerto Rico Science, Technology and Research Trust to increase the number of SBIR and STTR applications, and winning proposals. We just won, for the second time ever, phase II SBIR with re3D, and the second and third Parallel18 SBIR with CleanCult and Agrobreads. On Nov 15th, 2019, we will have the first SBA Road Tour.

Colmena66 is also working with our Economic Development Department and PRIMEX in the Manufacturing Policy Academy, with the purpose of identifying next steps to encourage growth in manufacturing through innovation, entrepreneurship, and investment. I’m very proud to announce that Colmena66’s performance is among the top third of all the US SourceLink affiliates in United States, and in three categories, Colmena66 is among the top 5 for performance. The customer satisfaction feedback at each of the events they coordinated points at the relevance and importance of the topics being addressed. Colmena66 is effectively using multiple communication channels to address their audience needs in a very effective manner. The last key accomplishment for this period was the incredible success of **BE Fest (Boricua Entrepreneurs Fest)**, an event that gathered members from our entrepreneurial ecosystem to learn and share how we can unleash the power within. With a participation of over **1,100 participants**, this was a very high-impact event for the Puerto Rico entrepreneurial ecosystem.

In January 2019, Dr. Grayson Brown was hired to lead the Puerto Rico Vector Control Unit (PRVCU). A renowned entomologist expert, Dr. Brown is bringing the unit to cutting-edge frontiers in vector management and vector control. This year, the unit has developed an excellent working relationship with vector management personnel in significant metropolitan areas, such as Bayamón, Carolina, Caguas, Dorado, and Ponce. They completed an award-winning investigation on insecticide tolerance by the mosquito *Aedes aegypti* to common adulticides used in Puerto Rico.



They also established collaborative relationships with strategic partners, including major national organizations (ASTHO, NACCHO, NEHA, et al.), Rotary Club chapters in Puerto Rico (San Juan and Dorado), and vector control vendors (Superior Angran, Clarke Mosquito Control, Rentokill PR, Adapco, et al.). The unit deployed a new VCU Service Center in Ponce to support vector management operations in the southern region of the island. Facilities include a laboratory, community outreach/meeting rooms, field/surveillance areas, etc. A new virologic mosquito testing capability within the VCU San Juan laboratory was recently deployed to test mosquito samples for the presence of virus from throughout the Caribbean basin. The unit started providing GIS and laboratory support to the USVI.

In summary, this was a transformative year, growing and expanding the innovative programs of the Puerto Rico Science, Technology, and Research Trust to deliver on our mission of investing, facilitating, and building capacity to constantly advance Puerto Rico's economy and its citizens' well-being through innovation-driven enterprises, science, and technologies, working hand-in-hand with our industrial base. I'm very optimistic that our focus on execution and creating value is helping us advance, in a sustainable way, the vision of Puerto Rico as a globally recognized innovation hub that develops, attracts, and retains scientists, technology entrepreneurs, and enterprises, to unlock world-class creativity and competitiveness.

I want to express my deepest appreciation to our dedicated and talented team of professionals who, with their exceptional capabilities, character, and expertise, are devoted to advancing our strategic plan and agenda; to our outstanding board of directors and members of our various advisory committees, who with their wisdom guide us and set the path to follow; and to all our donors and collaborators who believe in what we do: **creating a better future for all through science and innovation.**

### Lucy Crespo

CEO Puerto Rico Science, Technology and Research Trust.



From Left to right: Dr. Johnny Lugo, Dr. Abel Baerga, Andreica Maldonado, Camelia Jiménez, Dr. Amarilys Silva-Boschetti, Jerry Meléndez, Lucy Crespo, Gilberto Márquez, Dr. Marianyoly Ortiz, Dr. Grayson Brown, Bárbara Rivera, César Piovanetti, Annie Mustafá, Lupe Vázquez, Dr. José Rodríguez Orenge, Doira Díaz Rivera Esq., Sebastián Vidal, Denisse Rodríguez, Dr. Martin Montoya.

# ABOUT THE TRUST



P 1 8



Colmena66  
Tu Conexión Empresarial



Unidad de Control de  
Vectores de Puerto Rico



Puerto Rico  
Public Health Trust



Hurricane Hub  
Technical Assistance Center



CENTER FOR TROPICAL  
BIODIVERSITY  
A program of Puerto Rico Science, Technology & Research Trust



RESEARCH GRANTS  
PROGRAM  
FUNDS TO GROW



TECHNOLOGY  
TRANSFER OFFICE



STEM  
EDUCATION PROGRAM



PR RESEARCH  
& INNOVATION  
Meet-ups



Cultural Heritage  
Innovation Program



RECUPERACIÓN  
AGRÍCOLA



Puerto Rico Consortium  
for Clinical Investigation



Puerto Rico Brain Trust  
for Tropical Diseases  
Research & Prevention

Science City



Resiliency and  
Business Innovation



RESPONSE  
INNOVATION  
LAB



PROYECTO  
AGUA LIMPIA

## **Mission**

We invest, facilitate and build capacity to continually advance Puerto Rico's economy and its citizens' well-being through innovation-driven enterprises, science and technology and its industrial base.

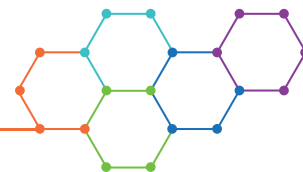
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## **Vision**

By 2022, Puerto Rico is a globally recognized innovation hub that develops, attracts, and retains scientists, technology entrepreneurs, and enterprises to unlock world class creativity and competitiveness.

# OUR TRUSTEES





Our Council of Trustees is composed of distinguished professionals who support and oversee our work and provide guidance to ensure that the Trust is managed to accomplish its mission and vision.



### **Esteban Santos**

Mr. Santos is the Senior Vice President of Manufacturing Operations at Amgen Inc., where he is responsible for Amgen's global commercial manufacturing operations. As a Puerto Rican who ranks among the top 16 executives at Amgen's worldwide, Santos offers extensive experience and access to networks that are instrumental for the Trust. He has also been part of several initiatives geared toward improving biotechnology education on the island. Santos holds an Electrical Engineering BSEE from the UPR-Mayagüez and an MS in Management from the Rensselaer Polytechnic Institute in New York.



### **Daniel Colón Ramos**

Dr. Colón Ramos is an Associate Professor of Cellular Neuroscience at Yale University and co-founder of Ciencia Puerto Rico. His lab at Yale studies the development and function of the nervous system, and his work has been recognized by a number of awards, including the Sloan Fellowship for "outstanding promise", an award given to recognize the best researchers of the United States and Canada. Ciencia Puerto Rico is a non-profit organization that promotes scientific research and education in the Puerto Rican archipelago.



### **Gualberto Medina**

Mr. Medina, a licensed attorney, CPA, and real estate broker, was New Jersey's former Secretary of Commerce. He also served as the co-founder, president, or general counsel for many technology and biotechnology startups. Because of his successful career in government and business sectors, Mr. Medina was named one of Hispanic Business Magazine's 100 Most Influential Hispanics. He has ample experience serving as a Trustee for the Trust.



### **Manuel Laboy**

Department of Economic Development and Commerce of Puerto Rico (DDEC) and Puerto Rico Industrial Development Company (PRIDCO).



### Salvador Moncada

From 1975 to 1995, Professor Moncada worked at the Wellcome Research Laboratories, first as Head of Prostaglandin Research and then as Director of Research. He described the structure of prostacyclin, which acts as an effective vasodilator and also prevents blood platelets from clumping. In 1980 came the discovery by Robert Furchgott of 'endothelium-derived relaxing factor' (EDRF) which causes smooth muscle in the vessel walls to relax. Moncada and his team showed that EDRF was, in fact, Nitric oxide, which has since become appreciated as a neurotransmitter, a modulator of inflammation and a sensor of cellular distress as well as a regulator of vessel tone. Nitric oxide is both the target and effector of a range of compounds now being used for the treatment of cardiovascular and rheumatic diseases. Professor Moncada was appointed Director of the Wolfson Institute for Biomedical Research at University College in 1995. He has won numerous awards from the international scientific community including a Dart/NYU Biotechnology Achievement Award, the Prince of Asturias Scientific and Technological Research Award and the Dr AH Heineken Prize for Medicine from the Royal Netherlands Academy of Arts and Science.



### Alfredo Casta

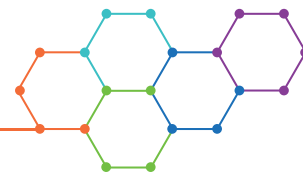
Founder and Chairman of Cascades Technologies, Inc. (CTi), Alfredo Casta led the organization to become one of Inc. 5000 magazine's fastest growing companies for eight years. Mr. Casta combined his technical expertise, solid management skills and an unrelenting mission focus to accomplish results in the service of the American public. Under the tenants of Think – Build – Measure, CTi delivers IT Governance services, Technical Solutions, Data Management, Agile Development, and IT Organization Analysis including Cyber Security expertise to key cabinet agencies such as NIH, CDC, Labor, GSA, US Army, DHS, Justice, and Financial Regulatory Agencies.



### Glorimar Ripoll

Glorimar Ripoll Balet is the Chief Innovation Officer of the Government of Puerto Rico and Executive Director of the Puerto Rico Innovation and Technology Service office in La Fortaleza.

Mrs. Ripoll Balet holds Bachelor of Science and Master of Engineering degrees from the Massachusetts Institute of Technology (MIT). Her focus is to enable the transformation of Puerto Rico through an innovative approach that focuses on collaboration and leverages the use of modern technology and design. She envisions Puerto Rico evolving into a world-class innovation ecosystem that optimizes the development of human capital and results in economic growth.



### Ubaldo Córdoba

Dr. Ubaldo M. Córdoba-Figueroa completed his BS degree in Chemical Engineering at the University of Puerto Rico at Mayagüez (UPRM) in 2003. That same year, he went to Pasadena, CA to pursue a MS and PhD in Chemical Engineering at the California Institute of Technology. Under Prof. John F. Brady's advisement, he studied recent experiments showing catalytically driven propulsion at nano- and micro-scales appearing as a possible mechanism for the transport of colloidal particles. During his PhD work, he also devoted time to study macro- and microrheology of colloidal suspensions using Brownian dynamics simulations and propulsion mechanisms at low Reynolds number flow. This experience gave him the opportunity to become an expert in colloidal transport, the exploitation of chemical reactions, and in the use of analytical and computational methods. Nevertheless, the most important outcome of this stage in his life was the sudden deep and genuine interest in transport phenomena and colloidal hydrodynamics and the need to teach others what he was learning. In 2008 he obtained his PhD and returned to UPRM where he is now an Associate Professor in Chemical Engineering. In 2011, he was awarded the prestigious NSF CAREER award, and in 2013 as Distinguished Professor in Chemical Engineering. His research experience includes the authoring of peer-reviewed articles in Physics Review Letters, Soft Matter, Journal of Fluid Mechanics, Advanced Functional Materials, and Nature Chemistry.

Research Interests: Fluid Dynamics, Transport Phenomena, and Colloidal Physics: Brownian and Stokesian Dynamics Simulations, Low Reynolds Number Flow, Microrheology, Complex Fluids, Colloidal Suspensions, Colloidal Devices, and Granular Flows.



### Dara Schuster

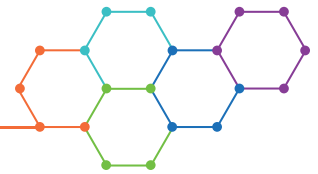
Healthcare executive with extensive clinical, pharmaceutical industry and leadership experience. During my career, I have worked to improve healthcare delivery, educated medical professionals, performed clinical research, been a senior leader in medical affairs in diabetes for a major pharmaceutical company and ran a diabetes research organization. My strengths include clinical care, strategic planning and team management.



# RESEARCH GRANTS PROGRAM

*FUNDS TO GROW*





A **structured, systematic, open and competitive** funding mechanism to support the development of science and technology research projects in Puerto Rico.

We empower scientists and researchers to take Puerto Rico's knowledge economy to a higher level of excellence.

## Strategic Sectors



**Biotechnology and  
Natural Sciences**



**Income**



**Agriculture**



**Aerospace**



**Information and  
communication  
technologies**



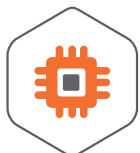
**Academia**



**Clean Technologies  
and/or Renewable Energy**



**Environmental Sciences**



**Electronics**



**Medical Devices**

## Funding Mechanisms



**ADVANCED RESEARCH  
GRANTS PROGRAM**



**CATALYZER RESEARCH  
GRANTS PROGRAM**



**CDTI**

**Centro para el  
Desarrollo  
Tecnológico  
Industrial**



## The Catalyzer Research Grant Program (CRG)

Previously known as the Small Research Grant Program, aims to help local researchers increase their probabilities of success in securing federal funding for their research and development activities. In particular, the CRG will provide bridge funding to help researchers to position their R&D proposals competitively prior to the submission, or resubmission, to private or federal agencies.

**Awards up to \$70,000/year.**

The CRG is open to researchers in public and private universities, colleges, and affiliated non-profit research institutions located in Puerto Rico. Ideal candidates fall into one of the following categories:

- Junior faculty (within their first five years of their faculty appointment) with a competitive publication record, seeking to secure their first grants\*
- PIs with a successful track record of securing funding in their primary research topic, but now embarking on a new research topic and seeking to secure a grant\*
- PIs that applied for highly competitive federal funding\*, that had their proposal favorably reviewed, but fell short of being funded. In this case, the PI should provide a copy of the evaluated proposal and the evaluations.

## The Advanced Research Grants Program

Aims to advance the most innovative Research & Development (R&D) projects in Puerto Rico.

Who is eligible:

**Awards up to \$150,000/year.**

- Startups
- Established companies
- Private and State Academic Institutions
- Other Non-Profit Research Institutions

## Collaboration Agreement with the Technological and Industrial Development Center of Spain

This call will allow the selection and financing of R&D projects in effective collaboration between a Puerto Rican entity (Research Center, University or Company) and a Spanish company.

**Prizes of up to \$50,000/year.**

## SBIR/STTR Matching Funds

1-to-1 matching funds for **Phase I & II SBIR/STTR proposals**: to promote and increase commercialization of research.

**Match up to \$100,000 for Phase I and \$200,000 for Phase II.** Since 2014 the Trust offers a SBIR/STTR Proposal Preparation Workshop to assist participants to prepare competitive proposals.



## Achievements



**Grants Awarded**  
\$7,790,000

**ROI**  
\$21,010,230



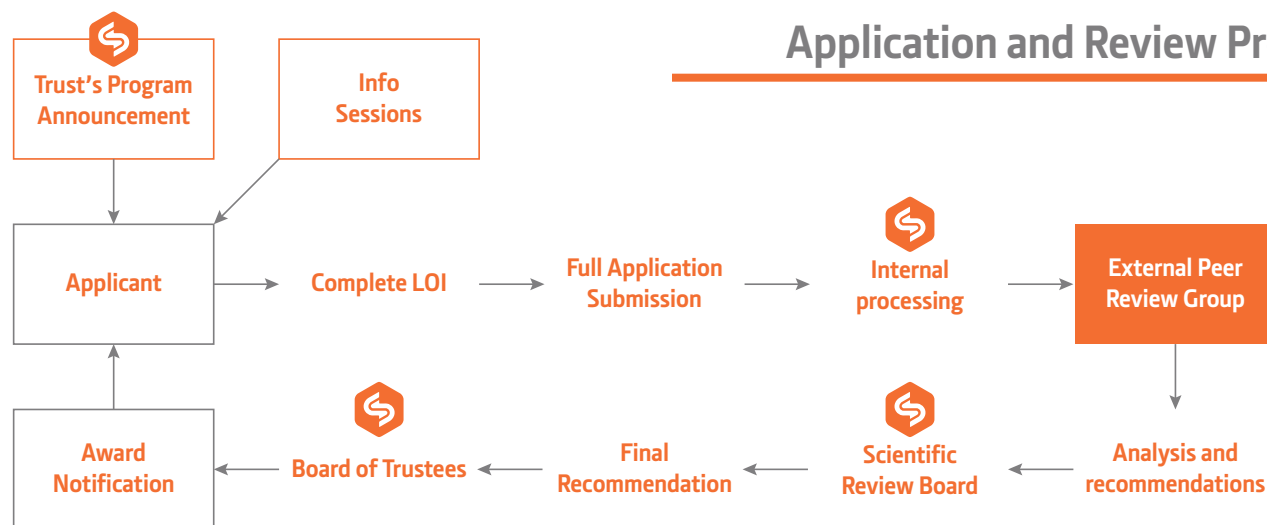
The National Science Foundation has the Faculty Early Career Development (CAREER) Program which is a Foundation-wide activity that offers the National Science Foundation's **most prestigious awards** in support of the early career-development activities of those teacher-scholars who most effectively integrate research and education within the context of the mission of their organization. Such activities should build a firm foundation for a lifetime of integrated contributions to research and education.

Thanks to the Research Grants Program funds the following researchers were able to secure this prestigious award:

**Dr. Sylvia Rodríguez-Abudo** from the University of Puerto Rico at Mayaguez. She is the first Puerto Rican female that received the Career Award for her project entitled: "Scalar Transport at the Sediment Water Interface in Coastal Benthic Boundary Layers: An Integrated Plan to Advance Nearshore Processes Research and Education in Puerto Rico".

**Dr. Sean Locke** from the University of Puerto Rico at Mayaguez received the Career Award for his project entitled: "Higher systematics and co-evolution in the Diplostomoidea (Platyhelminthes, Digenea)". Dr. Locke received a \$70K grant and was able to secure \$798K from federal sources.

**Dr. Catherine Hulshof** from the University of Puerto Rico at Mayaguez received the Career Award for her project entitled: "Climate change and plants on unusual soils".



## Application and Review Process

The Grants Program uses Zengine, a managing platform from the WizeHive company. This platform allows us to manage the grants cycle in a centralized way. Also it is a robust tool that gives access to a customizable dashboard that shows research trends, demographics, and reports.

- Centralized
- Great for reporting
- Paperless
- Customizable



**RESEARCH GRANTS**  
PROGRAM  
FUNDS TO GROW

**+ Zengine™**  
by wizehive

## Advanced and Catalyzer Grants Call

### Advanced Research Grants

- LOIs were due on November 7, 2018
- Notification of Invitation for Full Proposal - January 25, 2019
- Full Proposal Due – February 27, 2019

### Catalyzer Research Grants

- Partial Applications were due on November 14, 2018
- Full Proposal Due – December 14, 2018

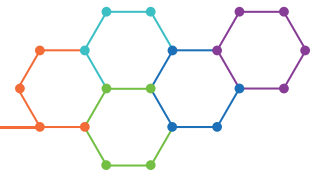


55 ARG  
34 CRG

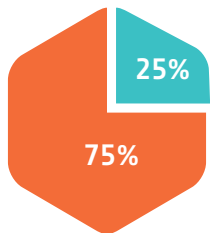
**89** proposals



**267** assignments



## ADVANCED RESEARCH GRANTS PROGRAM



Technology/Product Development  
for Commercialization

Basic/Translational Research



Biotechnology and  
Life Sciences

51%



Environmental Sciences

11%



Information and  
communication technologies

9%



Agriculture

9%



Clean Technologies and  
Renewable Energy

5%



Medical Devices

4%



Aerospace

2%

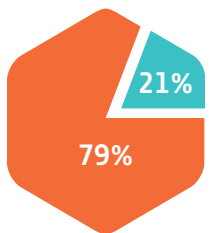


Other

2%



## CATALYZER RESEARCH GRANTS PROGRAM



Resubmission to a Federal Grant

New Submission to a Federal Grant



Biotechnology and  
Life Sciences

59%



Environmental Sciences

3%



Information and  
communication technologies

15%



Electronics

3%



Clean Technologies and  
Renewable Energy

9%



Aerospace

3%



Other

9%



## Peer Review Process

The goal of peer review is to assess the scientific merit of Trust grant applications in a fair, independent, expert-driven, and free from inappropriate influences, so the Trust can fund the most promising research or development work.

Each proposal was evaluated by three primary reviewers.

For the Advanced Research Grant, the proposals were divided into 5 groups based on their topics and discussed during a panel meeting teleconference where the primary reviewers as well as other reviewers were present.

## Score System

Each criteria was evaluated on a scale of 1 (best) – 9 (worst). The Average Total Score was calculated in order to rank the applications. We use the NIH Scoring System.

### Categories (ARG)

6 basic and translational and 7 commercialization

- Approach and technical merit
- Innovation
- Significance
- Investigators
- Environment and collaboration
- Budget justification
- Commercialization plan

### Categories (CRG)

- Innovation and relevance
- Project status and feasibility
- Approach and technical merit
- Investigators and environment
- Budget justification

## Subject Matter Experts

- Research Scientists
- Engineers
- Deans
- Directors of Research
- Company Presidents
- Chief Executive Officers
- Chief Scientific Officers
- Chief Innovation Officers
- Lab Chiefs



Argentina



Australia



Brazil



Canada



Denmark



France



Germany



India



Ireland



Italy



Mexico



Portugal



South Africa



Spain



United Kingdom



United States



## 130+ Research Institutions



### United States

- Columbia University
- Cornell University
- Harvard University
- University of Pennsylvania
- Princeton University
- Yale University
- Stanford
- Duke
- MIT
- Purdue
- Rutgers University
- Georgia Tech
- Mayo Clinic
- MD Anderson Cancer Center
- Florida International University
- University of Florida
- University of South Florida
- Stony Brook University
- Feinstein Institution
- Syracuse University
- Tisch Research Center of New York
- University of Alaska Fairbanks
- Northwestern University
- University of Illinois
- Illinois Institute of Technology
- Toyota Technological Institute - Chicago
- New Mexico Tech
- Ohio State University



### Canada

- University of Toronto
- University of Calgary
- McGill University
- University of Manitoba
- University of Alberta



### South America

- Universidad Tecnológica Nacional, Argentina
- Centro de Investigación Científica de Yucatán, México
- Federal University of Rio Grande do Sul, Brasil
- The Oswaldo Cruz Foundation, Brasil



### Europe

- Universidad de Valencia, Spain
- Universidad de Sevilla, Spain
- Universidad de Alcalá, Spain
- Universidad Complutense, Spain
- University of Cambridge, United Kingdom
- University of Exeter, United Kingdom
- University of Aberdeem, United Kingdom
- National University of Ireland Galway
- Pasteur Institute of Lille, France
- University of Copenhagen, Denmark
- University of Trieste, Italy



### Asia

- Delhi Technological University
- Institute of Technology, Nirma University



## What our reviewers said



"Thank you very much for the opportunity to participate in the evaluation process. It was a great experience and an opportunity to learn from different areas and from the other panelists." - Centro de Investigación Científica de Yucatán, MX



It was a pleasure serving in this well-organized panel and contributing to the evaluation of scientific proposals in PR. I was raised in Mayaguez and San Juan and have been living in California for the past 36 years, and is always a pleasure to help in whatever I can to advance science in the Island. Thank you again for the invitation. - Loma Linda University, CA



"Good work you folks are doing – I am happy to offer my services as a reviewer for free." - Duke University, NC

"I thought this was a great panel and I appreciate being included. I am certainly open to being involved again in the future."  
-Robert Wood Johnson Medical School, Rutgers Cancer Institute, NJ



"I enjoyed the review process. Clearly, there are many high level science projects at the universities in Puerto Rico and the science trust is an important organization to help the progress of these projects. I will be happy to help with the grants and other scientific issues in the future." - Marquette University, WI



## SCIENTIFIC REVISION BOARD



### Dr. Andrés García

Executive Director, Parker H. Petit Institute for Bioengineering and Bioscience  
Georgia Institute of Technology



### Eng. Olga González

Retired - Director of Engineering at the National Aeronautics and Space Administration's (NASA) Glenn Research Center in Cleveland, Ohio.



### Dr. Annette Sobel

Former Major General in the Arizona Air National Guard  
Associate Professor in the Department of Medical Education, and Graduate School of Biomedical Sciences  
Texas Tech University



The Scientific Revision Board was established on May 2019 and their role is to:

- Guide the mission and purpose of the Research Grants Program, articulating the goals, and means;
- Provide technical, administrative, and scientific expertise;
- Help us determine which research projects better fit our funding priorities as an organization;
- Provide program staff with fresh perspectives and paradigms on emerging scientific research trends;
- Revise proposals and provide recommendations on which research projects we should present to the Board of Trustees for funding, and
- Connect the program with potential subject matter experts that could serve as reviewers.

## Updates → Boost Grants

The Puerto Rico Boost Grant, was an initiative under the Post Hurricane Maria Aid for Researchers program, offered by the Puerto Rico Science, Technology and Research Trust (the “TRUST”) in partnership with the AAAS Caribbean Division (“AAAS-CD”) to support the recovery efforts of graduate students and postdoctoral fellows (Puerto Rico and the U.S. Virgin Islands).

The funds were offered to buy materials, repair equipment, and/or rehabilitate spaces in order to give continuity to research projects that were impacted by the aftermath of Hurricane Maria.

A total of **64 applications were received**, and **24 grants of \$1,000 were awarded** to the following institutions:

- **11** to University of Puerto Rico, Mayaguez
- **4** to University of Puerto Rico, Río Piedras
- **3** to University of Puerto Rico, Medical Science Campus
- **4** to Universidad Central del Caribe
- **1** to Ponce Health Sciences University
- **1** to Universidad Ana G. Méndez, Gurabo





## Research Grants Program

The Research Grants Program granted **\$3.1M to 24 researchers** in Puerto Rico. Which is the only local funding mechanism that supports the development of science and technology research projects on the Island.

Among the institutions awarded this year are the University of Puerto Rico, Río Piedras Campus with six winning proposals; the Mayagüez Campus with five proposals; Ana G. Méndez University with one proposal; the UPR Medical Sciences Campus with six proposals; the Arecibo Observatory with one proposal; Ponce Health Science University with four proposals; the Universidad Central del Caribe, with one proposal and two startup companies.

Each proposal was evaluated by three subject matter experts from more than 130 institutions in the continental United States, Europe, Latin America, Asia and Africa that have academic, scientific and technological expertise.

Among the institutions that collaborated in the evaluation process were Cornell University, Harvard University, Princeton University, the Massachusetts Institute of Technology, the MD Anderson Cancer Center, the Mayo Clinic, the University of Toronto in Canada, Universidad Complutense in Spain, the University of Cambridge in England, the Pasteur de Lille Institute in France, the University of Copenhagen in Denmark, the National Technological University of Argentina, and the Technological Institute of Delhi, among others.

### New Grantees



#### ADVANCED RESEARCH GRANTS PROGRAM

**1. Elucidation of a novel therapeutic target against HIV via solid-state NMR spectroscopy**

PI: Marvin Bayro, PhD

Institution: University of Puerto Rico - Río Piedras

Strategic Sector: Biotechnology and Life Sciences

**2. The molecular and chemical basis of host plant choice**

PI: Riccardo Papa, PhD

Institution: University of Puerto Rico - Río Piedras

Strategic Sector: Biotechnology and Life Sciences

**3. Recombinant 14.5kDa fatty acid binding protein (Fh15) from the parasitic helminth *Fasciola hepatica*: A promising anti-inflammatory drug against endotoxemia.**

PI: Ana A. Espino, PhD

Institution: University of Puerto Rico - Medical Sciences

Strategic Sector: Biotechnology and Life Sciences

**4. Culebra Aerosol Research Lidar Project (CARLA)**

PI: Jens Lautenbach, PhD

Institution: Arecibo Observatory - The University of Central Florida Board of Trustees

Strategic Sector: Other - Atmospheric Research

**5. Investigating the role of E2F-regulated mitotic kinases in hormone-receptor resistant breast cancers.**

PI: Harold I. Saavedra, PhD

Institution: Ponce Health Sciences University

Strategic Sector: Biotechnology and Life Sciences

**6. Blood-based epigenetic markers to estimate DNA repair levels in women with breast cancer**

PI: Jaime L. Matta

Institution: Ponce Health Sciences University

Strategic Sector: Other - Clinical/Translational Research



**7. Efficacy of a Novel Zika Vaccine in Non-human Primates and its Potential to Stop the Sexual Transmission of the Virus.**

PI: Carlos A. Sariol, MD, MSc  
Institution: University of Puerto Rico - Medical Sciences  
Strategic Sector: Biotechnology and Life Sciences

**8. From the University to a CMDO: Real Time Monitoring of Drug Concentration at the Feed Frame in Commercial Pharmaceutical Manufacturing**

PI: Rodolfo J Romanach, PhD  
Institution: University of Puerto Rico - Mayagüez  
Strategic Sector: Biotechnology and Life Sciences

**9. Center for Computerized Experimental Mathematics, Combinatorics and Information Theory**

PI: Luis A. Medina, PhD  
Institution: University of Puerto Rico - Río Piedras  
Strategic Sector: Information and Communications Technology

**10. Defining the genetic basis of neural circuit development**

PI: Andrew Seeds, PhD  
Institution: University of Puerto Rico - Medical Sciences  
Strategic Sector: Biotechnology and Life Sciences

**11. Unlocking Puerto Rico's renewable ocean energy potential: mapping our wave energy, ocean currents and ocean thermal energy resource availability.**

PI: Miguel Canals, PhD  
Institution: University of Puerto Rico - Mayagüez  
Strategic Sector: Clean Technologies/ Renewable Energy

**12. Pre-clinical Development of the anti-metastatic cancer drug MBQ-167**

PI: Suranganie Dharmawardhane, PhD  
Institution: University of Puerto Rico - Medical Sciences  
Strategic Sector: Biotechnology and Life Sciences

**13. Discovery of potential immune-preventative targets for ovarian cancer**

PI: Idhaliz Flores, PhD  
Institution: Ponce Health Sciences University  
Strategic Sector: Biotechnology and Life Sciences

**14. Meta-Omic Approaches to Study Microbiome Dynamics for Cervical Cancer Prevention**

PI: Filipa Godoy-Vitorino, PhD  
Institution: University of Puerto Rico - Medical Sciences  
Strategic Sector: Biotechnology and Life Sciences

**15. Honey Bee Genetics and Health Diagnostic Panels.**

PI: Rosanna Giordano, PhD  
Company: Know Your Bee, Inc.  
Strategic Sector: Biotechnology and Life Sciences

**16. Puerto Rico Address Database Operations Support Platform (PRADOS).**

PI: Raúl Ríos-Díaz  
Company: ZIPDatum, Inc.  
Strategic Sector: Information and Communications Technology



**CATALYZER RESEARCH**  
GRANTS PROGRAM

**1. Assessing the extent and functioning of structural genome variation**

PI: Riccardo Papa, PhD  
Institution: University of Puerto Rico - Río Piedras  
Strategic Sector: Biotechnology and Life Sciences

**2. Metrics, Analytical Models, and Maximization of Information Availability/ Survivability on Vulnerable Stochastic Networks**

PI: José A. Santiváñez, PhD  
Institution: Universidad Ana G Mendez - Gurabo  
Strategic Sector: Information and Communications Technology

**3. Rac and Cdc42 inhibitor in metastatic cancer**

PI: Suranganie Dharmawardhane, PhD  
Institution: University of Puerto Rico Medical Sciences  
Strategic Sector: Biotechnology and Life Sciences



**4. The effects of aerobic exercise on cocaine-induced cellular adaptations in the reward circuitry.**

PI: Marian Talimar Sepúlveda Orengo, PhD  
Institution: Ponce Health Sciences University  
Strategic Sector: Biotechnology and Life Sciences

**5. DNA repair mechanisms and long term memory storage in the social brain**

PI: Tugrul Giray, PhD  
Institution: University of Puerto Rico - Río Piedras  
Strategic Sector: Biotechnology and Life Sciences

**6. New Honeycomb Geometries for Impact Energy Absorption in Aerospace Applications**

PI: Marco Menegozzo, PhD  
Institution: University of Puerto Rico - Mayagüez  
Strategic Sector: Aerospace

**7. Environmental Inequality, Social Vulnerability and Resilience in the Wake of Climate Disasters**

PI: Gustavo García López, PhD  
Institution: University of Puerto Rico - Río Piedras  
Strategic Sector: Environmental Sciences

**8. Approaches to Establishing Research Practice Partnerships for the Teaching of Computer Science in Rural Economically Challenged Communities**

PI: Bienvenido Vélez, PhD  
Institution: University of Puerto Rico - Mayagüez,  
Strategic Sector: Information and Communications Technology

**9. HIV-1 gp120 promotes glioma tumor growth and chemotherapy resistance via unfolded protein response**

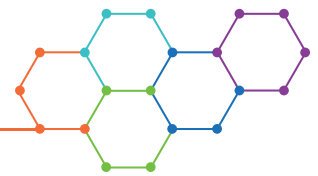
PI: Nawal Boukli, PhD  
Institution: Universidad Central del Caribe  
Strategic Sector: Biotechnology and Life Sciences

**10. Influence of Virtual Reality Product Representations on Subject Preference via Discrete Choice Experimentation**

PI: José E Lugo, PhD  
Institution: University of Puerto Rico - Mayagüez  
Strategic Sector: Other - Virtual Reality

## Future Plans

- The program will be hosting scientific communication, personal branding, grant writing workshops, among other talks and activities, for the benefit of the grantees and the scientific community in the island.
- By early 2020, the Research Grants Program will be launching a new call for the Advanced and Catalyzer Research Grants.
- On October 2020 the Forward Research and Innovation returns!
- The program will be integrating a digital platform to showcase and report the scientific activity of local researchers.

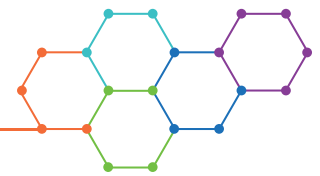


**At the Recent Grants Announcements on September, 26 investigators were funded for a diversity scope of science & research areas.**



# Puerto Rico Consortium for Clinical Investigation





Established in April 2016, PRCCI is a 501 c3, not-for-profit cooperative of top academic and private research sites. We enhance clinical research speed and quality by driving performance and efficiencies across our sites, leveraging strategic partnerships, and establishing world-class capabilities.

## Mission

To improve the impact, quality, and speed of clinical research in Puerto Rico through:

- Building a collaborative network of investigators
- Establishing best practices for the conduct of clinical trials
- Educating sponsors and researchers

## Vision

To promote and enhance clinical research and development for the benefit of patients, the Puerto Rican economy and global scientific innovation.

## Achievements

The Puerto Rico Consortium for Clinical Investigation (PRCCI) successfully completed its third year of operations on June 30th, 2019. During this year the consortium grew to 27 members/clinical research sites in Puerto Rico with more than 71 on boarded physicians/investigators at three Universities, hospitals, family practices and specialized research centers across the island, covering more than twenty therapeutic areas. PRCCI brought to the island more than 300 clinical trial opportunities and as capacity is being built executed 17 clinical trial agreements on oncology, infectious diseases, pulmonology, cardiovascular, and dermatology.

During FY 2018-19, PRCCI focused on expanding the Consortium membership and developing new business relationships with Sponsors, Clinical Research Organizations and other important partners and vendors to bring more clinical study opportunities to Puerto Rico. The Consortium has been strengthened with the onboarding of new sites and investigators with different therapeutic expertise, specialties and various clinical trial settings. Similarly, active evaluation of internal needs and opportunities within the PRCCI network resulted in the identification of new areas of opportunities. As a result, new initiatives emerged towards a stronger educational component and the exploration of other research opportunities via extramural grants to complement our business model.

During this year PRCCI organized a world-class event called the 2019 Puerto Rico Clinical Research Summit, held on May 2019 bringing together **over 366 attendees**. There was representation from pharmaceutical, medical devices companies, information booths with PRCCI site members, pharmaceutical sponsors, the FDA, YCCI and patient advocacy groups.

The activity was awarded 16 hour credit of continuing education for various healthcare professionals. The agenda included **45 speakers coming from 3 continents** sharing their expert knowledge on Quality/Compliance, Industry Trends and Diversity in Clinical Trials.





## Metrics

### Key Performance Indicators (KPI's) for 2018-2019

Area	Description	Target
Business Development and Financial Performance	Number of Study awards	<b>19 studies awarded YTD</b> <b>2 new studies this fiscal year</b>
	Trial opportunity conversion rate	<b>13%</b>
	Collective strength of Consortium members	<b>22 active sites; 100% quality validated by YCCI.</b>
	Patient engagement and recruitment target	<b>Over 120 patients enrolled</b> in studies. Time from green light to first patient consent: <30 day. <b>60%</b> of studies completed met the recruitment target.
Quality assurance and training	Yale Center for Clinical Investigation (YCCI) contract compliance	<b>90% adherence</b> to visits schedule; reports on time and follow ups as per contract.
	Clinical Research community training events run through PRCCI	<b>11 training events;</b> >400 health care professionals participants and a satisfaction score of over 9 (out of 10).



## 2019 Objectives

As we enter the third year of operations there are 4 major strategic objectives:

### Patient interaction and engagement

We continued focusing on patient advocacy and engagement. Educating patients about clinical research and its benefits is crucial to raise awareness of clinical study and will increase study participation. We continued engaging with selected organizations and explore new needs, and opportunities. We are partnering with the pharmaceutical sector and Advocacy groups to continue with initiatives to reach more patients and sponsor events that address patient needs. We are launching a Patient educational pilot program for oncologists and evaluate expanding to the rest of the specialties.

### Quality Assurance

We have continued the valuable partnership with Yale Clinical Center for Investigation (YCCI).

During this fiscal year we engaged and completed the on boarding process of two (2) new PRCCI members.

PRCCI has also closely monitored study recruitment targets and other important performance indicators for PRCCI.

In addition, we have focused on internal monitoring through our Clinical Trial Management System, training, publications, sharing of tools on best practices. We have established new quality services customized for our site member's particular needs resulting in increased efficiencies reducing onboarding timelines.

### Business development through quality and diversity

The Business Development team facilitated the exposure of PRCCI sites to our strategic alliance partner, Parexel, and several other pharmaceuticals and medical devices companies. As a CRO, Parexel is now better informed about the capabilities of the PRCCI network, which has already resulted in several clinical study opportunities of interest to our member sites. Attending various national conventions, PRCCI members had the opportunity to meet and liaise with key stakeholders in this industry. Marketing strategies that were revamped during FY 2018-19 included the active and structured use of social media (LinkedIn, Facebook, Tweeter, and Instagram), an updated and redesigned webpage ([www.prcci.org](http://www.prcci.org)) to promote PRCCI and each individual member site. PRCCI was able to engage with Sponsors and organizations with strong potential for new study opportunities such as RenovoRx, OncoTherapeutics, Sanofi, Novartis, Milestone Pharmaceuticals, Lundbeck, Nexeon MedSystems, SilkPro USA, IQVIA, Pharm-Olam, Syneos Health, among others. Another strategic initiative was the involvement in communication and promotional strategies for a successful Clinical Research Summit and the celebration of the Clinical and Translational Research Week. In addition to participation at various local medical conventions, PRCCI members attended key national meetings including SCRS, MAGI, DIA and BIO, identifying opportunities to bring new clinical studies to Puerto Rico and networking with important stakeholders.

A new clinical study was implemented with one of our newest member sites, Manati Medical Center (MMC). The MMC and PRCCI teams worked together to start the Mino-Lok trial, in record time, bringing an important clinical study to the MMC faculty which is now in the recruitment phase. Another new member site (Puerto Rico Medical Research Center) was selected for a new breast cancer study sponsored by Sanofi. This clinical study will start in September 2019. We finalized contract and budget negotiations for a Multiple Myeloma study with Oncotherapeutics, and with Nexeon MedSystems for a study with a medical device that addresses symptoms related to opioid withdrawal.

As part of our educational efforts, PRCCI submitted a proposal for the training of new clinical research coordinators. This grant proposal was recently approved by the Department of Economic Development and Commerce. The grant is part of a federal initiative known as WIOA (Workforce Innovation and Opportunity Act). The professional certificate program will start in the second half of 2019.



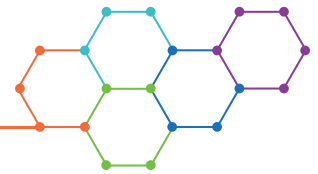
To further influence the clinical research ecosystem, PRCCI initiated various efforts to engage patient advocacy groups, and connect with representatives of medical affairs teams from sponsors with active business in Puerto Rico. At the end of FY 2018-19, PRCCI established a strategic partnership with BlueCloud Technologies, an innovative platform for the management of clinical research personnel credentials and access to training modules with the objective to increase the capabilities of our member sites and expose them to global sponsors.

The Operations team continued to strongly support ongoing clinical trials in our network. The team supported the upgrade of the PRCCI's Clinical Trials Management System (CTMS) from a basic Portal version to a full Site version for one of our member sites, which will provide enhanced capabilities and tools for the execution of clinical trials. Along with the Quality team, new investigators and clinical trial units completed their onboarding process. An operational effort was dedicated to evaluating and selecting a Customer Relations Management platform that would continue to serve as the key tool to manage and track all our business relationships and contacts.

Operations also supported the transition of the team from Google to Microsoft Office, which brings operational efficiencies, among other benefits. On the other hand, Operations collaborated with the Finance team to support the revenue cycle management for various clinical studies. Two of these studies just completed their activities so they moved to the close-out phase.

The outlook for next year's operations and business development growth and evolution is quite stimulating and promising. We will see a significant increase in the number and diversity of new clinical study opportunities to pursue innovation in areas of biological products, pharmaceuticals, medical devices and diagnostic tests. There will also be a strong contribution to enrich and strengthen Puerto Rico's research ecosystem by training new clinical coordinators, establishing new strategic partnerships and alliances as well as new funding opportunities in investigator-initiated research proposals.

Furthermore, stronger relationships and business partnerships with various key companies and organizations will further support our vision towards a stronger clinical research ecosystem that will impact our knowledge-based economy. Clinical Coordinators are critical for the implementation of clinical trials and for the performance of the sites affecting PRCCI business development. PRCCI has a unique opportunity to close this gap by implementing a Clinical Research Coordinator Professional Certificate Training program. We will continue offering selected trainings to increase capacities in clinical research in the island. We will continue engaging with Medical Schools that are part of the consortium and develop plan to expose students to the clinical investigation field.



## Events



**PR Consortium for Clinical Investigations team participated at the Puerto Rico Pavillion in BIO Philadelphia Conference, last summer.**

**The 2019 edition for the Clinical Research Summit, got over 366 attendees and 45 Speakers from 3 continents.**



## Unidad de Control de Vectores de Puerto Rico



The Puerto Rico Vector Control Unit (PRVCU) was established as of September 2016 as part of a cooperative agreement between the Centers for Disease Control and Prevention (CDC) and the Puerto Rico Science, Technology and Research Trust (PRSTRT). The PRVCU aims to leverage Puerto Rico's capacity to control the *Aedes aegypti* mosquito, the vector for the diseases zika, chikungunya, and dengue in Puerto Rico. The Unit focuses on strengthening the capacity for vector control in Puerto Rico as well as implementing vector surveillance, creating innovative information systems, carrying out vector control operations, and boosting community engagement through citizen mobilization and education programs.

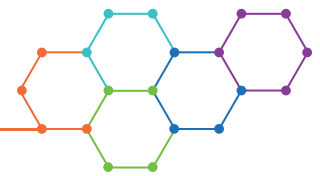


Figure 1: Representation of the three core pillars established by the Unit to implement an Integrated Vector Management model for Puerto Rico.

## Mission & Vision

The mission of the PRVCU is to protect the people of Puerto Rico from the *Aedes aegypti* mosquito, while educating and empowering everyone to reduce mosquito populations across Puerto Rico dramatically and sustainably.

By 2022, Puerto Rico has a modern and dynamic territory-wide integrated vector management program that serves as a local and regional research, evaluation and training center.

## Achievements

### Workforce recruitment and development

Since January 2017, 66 employees have been recruited to be part of PRVCU. Of these, 10 were recruited during this reporting period (Figure 2). In January 2019, Dr. Grayson Brown, a former entomology professor from the University of Kentucky with more than 40 years of experience in vector control, joined the executive team as Executive Director of the Unit. Our staff includes laboratory and field technicians, educators/outreach specialists and GIS and data management experts to support the diversity of activities conducted by the Unit. More recently, an evaluator was hired to determine the impact of PRVCU activities in the community and in vector control.

Given the limited expertise in Puerto Rico for vector control, building capacity is one of the most important objectives for PRVCU administration. Up to June 2019, PRVCU employees had participated in more than 70 trainings in diverse topics provided by internal and external resources, of these 26 were offered during this year.

Safety and Health procedures and protocols continue to be developed and implemented to ensure the program is conducted in compliance with local and federal agencies. Following regulations and guidelines from the Operational Health and Safety Administration (OSHA), CDC, local EQB (Environmental Quality Board), and internal policies, the PRVCU safety and security specialist has developed over 15 protocols that includes Laboratory Safety Manual, Fleet Safety Manual, Emergency Action Plan, among others.

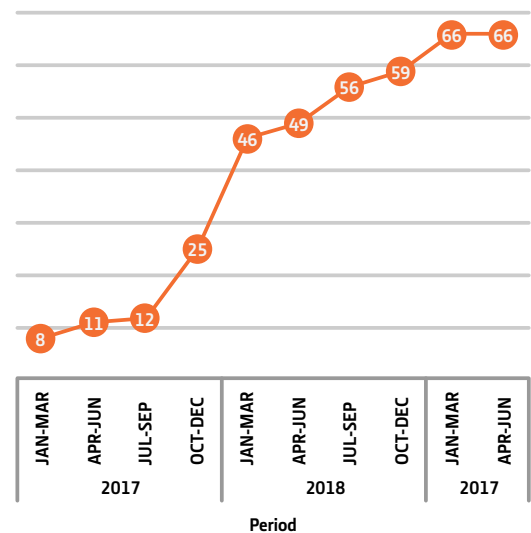


Figure 2: Cumulative number of PRVCU employees over time.



## Laboratory Capacity

Last year a fully functional entomological and surveillance laboratory was established at the PRSTRT's Laboratory for Environmental Research, located at PRSTRT's Science City Research Park in San Juan. The facilities in San Juan have in place a fully operational insecticide resistance testing laboratory, mosquito extraction and identification laboratory, and insectary.

In August 2018, a second facility was opened in the Municipality of Ponce, at the south region of the Island. These facilities include laboratory space for mosquito identification and surveillance as well as office space for community engagement activities. Final outfitting of the space is expected for the end of this year, which will include office space for other programs of PRSTRT.

## Technology Platforms

One of the first accomplishments of PRVCU was establishing agreements with ESRI and Microsoft to license their state of the art ArcGIS software and Microsoft Azure Cloud space, respectively. Using ArcGIS software, an electronic platform was initially developed to support surveillance activities from workforce management and tasks assignments to data capture and reporting. However, in the last year, the platform has evolved to support all activities conducted by PRVCU staff, not only surveillance, but community and vector control efforts as well.

Surveys have been developed to collect data of all the educational activities, and dashboards were put in place to manage and visualize these data. Likewise, a tool to identify and assign priority for vector control interventions was also developed and implemented as part of the source reduction and larviciding project. The incorporation of the ArcGIS platform for vector control activities by the PRVCU GIS team has been so effective and unique that was **recognized by ESRI in 2018, and in 2019 by the Puerto Rico IT Cluster with the Societal Impact Award in IT.**

Given the success and recognition of the GIS platform developed for the PRVCU program, **the Department of Health of the United States Virgin Islands approached PRVCU team to customize and develop a GIS platform for their vector control program.** The proposal was approved and the collaboration officially started in April 2019.

Some of the tools developed for PRVCU during the past year are listed below and were primarily focused on data visualization and reporting.

- **WALS Dashboard App:** This dashboard shows all the historical and statistical data for the activities carried out in the Wide Area Larvicide Spray (WALS) project in Bayamón, Puerto Rico (more details below). In this app, users are able to see trap location and mosquito surveillance historical data for each maintenance cycle. Statistics are provided for each of the WALS zones.
- **Surveillance Zones Statistics App:** This dashboard shows historical averages of mosquito surveillance data for all surveillance zones. In this app, users are able to see and compare the weekly averages of mosquito counts. Additional functionalities developed allows users to create and export graphs, charts, and data exports for all zones (Figure 3).
- **Custom Data Export Tool:** This tool was developed to provide users with the capability of creating on demand export of mosquito surveillance data in table format. Users can pick from a date picket the custom date ranges they would like to export, select the surveillance zones and submit the request. This tool will provide excel and other table formats.
- **Meteorological & Mosquito Surveillance Data Visualization Tool:** In this app, users are able to view mosquito surveillance data combined with meteorological data gathered from PRVCU weather stations.
- **Operations Metrics App:** in this app, both Laboratory and field surveillance teams can view the operation metrics for each of the team and team members. This allows supervisors to monitor each workers progress in the assigned task.

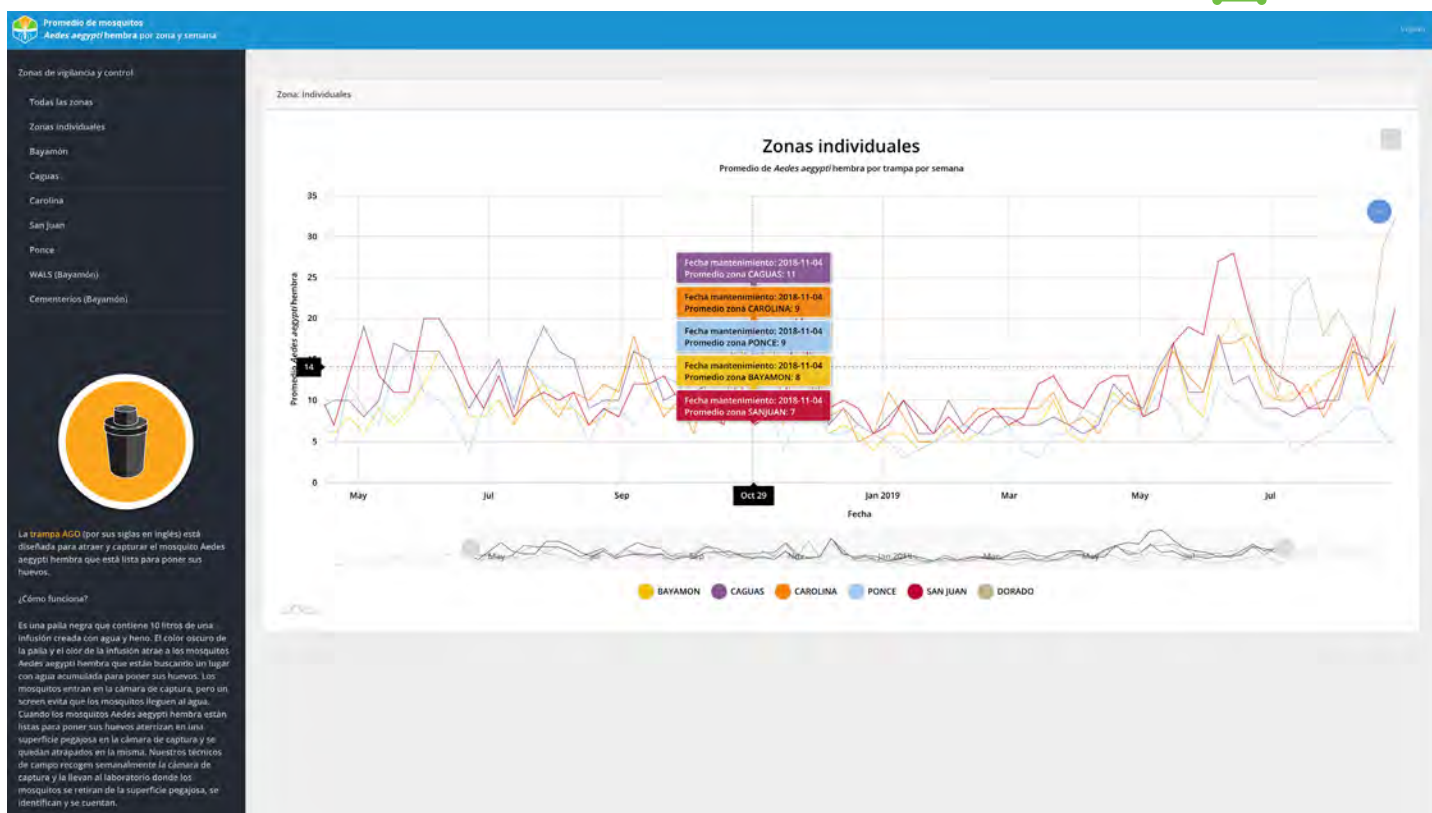
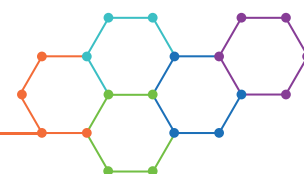


Figure 3: Example of a dashboard displaying results of the adult mosquito surveillance activities.

## Vector Surveillance

### Autocidal Gravid Ovitrap (AGO) Surveillance Program

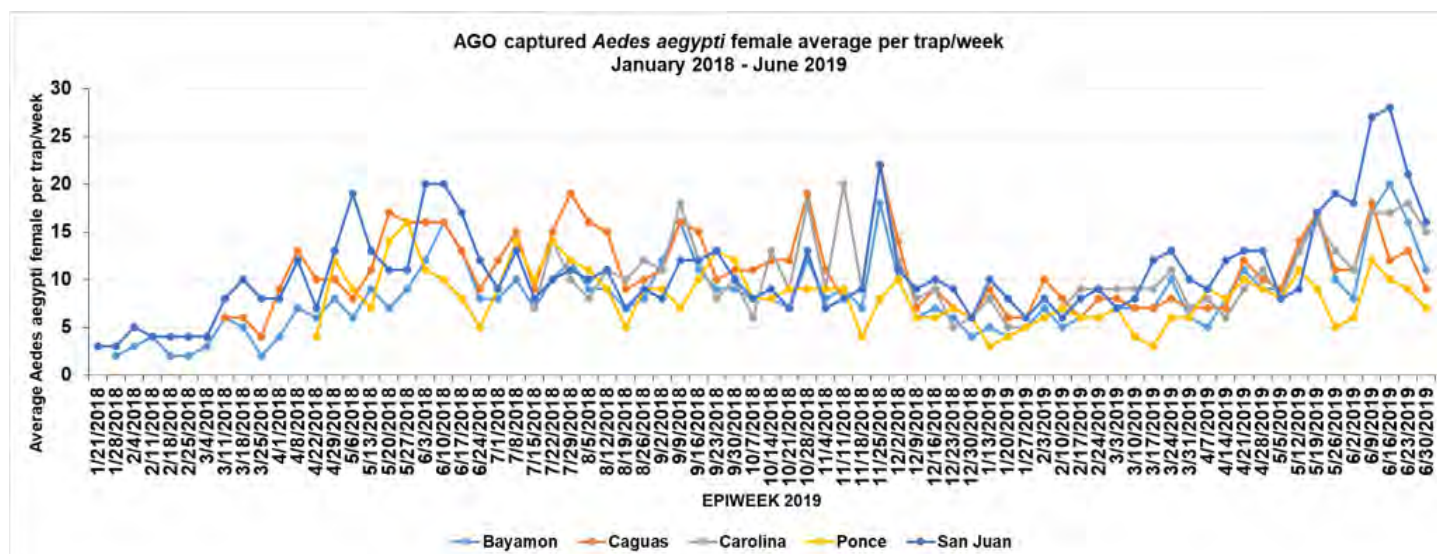
In January 2018, PRVCU implemented a mosquito surveillance system using the Autocidal Gravid Ovitrap (AGO). By March 2018, 567 were installed in selected locations within the municipalities of San Juan, Bayamón and Caguas. In the summer of that same year, PRVCU had deployed additional 636 AGO traps in some new areas of Bayamón and extended surveillance to the Municipality of Ponce. At the time of this report, the PRVCU surveillance system consists of 1,714 AGO traps that are processed on a weekly basis, in seven municipalities (Table 1). This surveillance program also involve monitoring cemeteries as part of a collaboration with the PRDH in five of these municipalities.

Table 1: Distribution of AGOs per municipality.

Municipality	Zones	Cemeteries	Number of AGOs
Bayamón	5	3	578
Caguas	8	1	367
Carolina	1	2	73
Dorado	2	0	19
Guaynabo	0	2	18
Ponce	14	0	506
San Juan	3	3	153



Up to June 2019, over 82,000 AGO capture chambers have been processed by PRVCU laboratory technicians and have captured more than **782,145 *Ae. aegypti* female** mosquitoes from the areas under surveillance. The information collected over a year, has served to gain a better understanding of the mosquito population dynamics in the Island over time (Figure 4).





## Insecticide Resistance Assays

Using the eggs collected in different parts of the Island, CDC bottle assays were conducted in the PRVCU laboratory. After determining the appropriate diagnostic doses and times, insecticide resistance testing was conducted for seven communities in different parts of Puerto Rico (Table 2). PRVCU tested the technical grade active ingredients (labeled for laboratory use only) of those commercially available products that are approved for use in Puerto Rico which were: permethrin, deltamethrin, etofenprox, lambda-cyhalothrin, phenothrin, chlorpyrifos, and malathion.

All the Puerto Rican populations of *Ae. aegypti* that were tested were resistant to the full range of pesticides, with the exception of malathion. Out of seven pesticides tested, Malathion was the only pesticide that was effective, in just one location (Bairoa), per the World Health Organization (WHO) standards. This study suggests that these active ingredients are losing their effectiveness and can no longer be used as the only mosquito control method in Puerto Rico.

These results were presented at the 2019 American Control Mosquito Association (AMCA) Annual Meeting, on the Latin American Symposium Oral presentations and in the Poster Competition, winning second place on the poster competition (Figure 6).

## Field Cage Assays

Caged mosquito bioassays were conducted on the Rio Bayamón golf course, Bayamón using the municipality's Ultra Low Volume (ULV) sprayer. On each day, three missions (or replicates) were applied using a single pesticide at maximum label rate. The equipment and pesticide were always managed by municipality personnel with Category 9 pesticide applicator certification.

Three different strains of *Ae. aegypti* female mosquitoes were used in the assays, two wild types from Puerto Rico (Irlanda, Bayamón and Reparto Metropolitano, San Juan) and a susceptible lab strain (MR734 Rockefeller). All mosquitoes used in the assays were females, reared in PRVCU insectary, between 3-5 days old.

Preliminary results indicate that ULV application of currently-registered adulticides are unlikely to be effective in the control of local *Ae. aegypti* mosquitoes, since **none of the products tested resulted in a greater than 52% kill in local mosquitoes sprayed per label rate by ULV.**

## Community Mobilization and Education

### Formal and Informal Education about Biology and Behavior of *Aedes aegypti*

PRVCU has developed an education program targeted to reach school children and teachers. It is important that children are aware of the problems caused by the mosquito *Ae. aegypti* and how they can contribute to its control and to protect themselves from its bite. In addition, children have the power to educate their parents in a specific topic if well taught and relevant to them. This program includes one-hour lectures, summer camp activities, storybook readings, project based learning (PBL) and the development of curricula to be implemented by school teachers. Table 3 summarizes the main activities and the number of students reached.

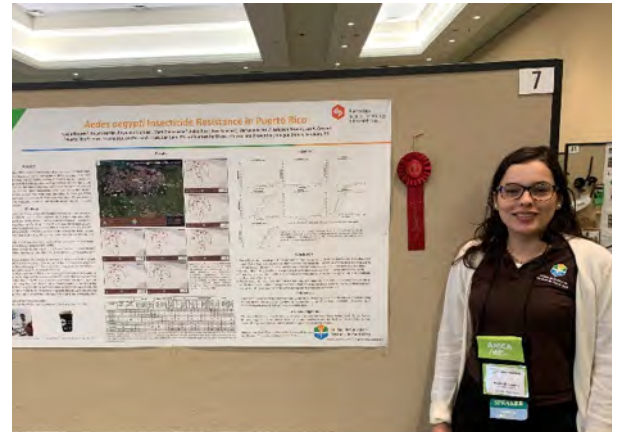


Figure 6: Nicole Nazario, PRVCU Laboratory Supervisor, next to her award-winning poster at the 2019 AMCA Annual Meeting.



Figure 7: Golf car spraying over the field cages holding mosquitoes.



Table 3: Summary of the education program activities conducted by PRVCU staff from April 2018 to June 2019.

Activity	Number of students	Number of municipalities
One-hour lecture	22,858	21
Summer Camp	2,214	11
Kindergarten storybook	845	9
PBL	492	5
Pilot of the Interactive Curricula	185	3

### Kindergarten storybook

The Environmental Education Program from the Lee County Mosquito Control District in Florida, partnered with the PRVCU Education Team to develop a story book about the *Ae. aegypti* for Kindergarten in English and Spanish.

The children's book was printed in a 17" x 22" size, as 8 ½" x 11 version and as coloring book. The Mosquito Children book is currently been used by PRVCU Educators and Outreach Specialists in schools and daycares (Figure 8) and by the Lee County team.



Figure 8: Lee County staff reading the kindergarten storybook to the students.

### 5-day curriculum

Casa Grande Interactive developed curriculums for 3rd, 7th, and 10th grade. The curriculums are divided in five (5) classes of approximately one (1) hour and were aligned to the Science Core Standards of the Department of Education. The PRVCU education team conducted a pilot project in local schools to adapt and implement the curriculum to the classroom. Educators visited the school for a week to provide the interactive lectures. At the end of the week an activity of divulgation was done by the students to provide information to the rest of the school.

The lessons learned during this pilot were used to develop a training for teachers that will be conducted in September 2019. This interactive educational tool (Figure 9) can be found on the PRVCU website to serve as a tool for teachers.



Figure 9: Screenshot of the interactive curriculum developed by Casa Grande.



### Interactive Apps

The company Gladius LLC developed interactive apps (Figure 10) to be used for the informal education offerings such as educational booths and outreach events. In addition, the Apps will be used as part of the collaboration with the EcoExploratorio and its mobile exhibitions.

Four Apps described below, were developed to target students from 3rd to 8th grade and the general public.

- **Trivia:** 10-question roulette for pre and post assessment. Each person will answer 5 questions and the answers will be sent to an email for recording. It is currently used in booths and other activities to evaluate increase in knowledge in the participants.
- **Virtual Reality Mosquito Game:** The user will become a female mosquito searching for breeding sites to lay their eggs. In 3 minutes, the user should infect all the breeding sites present in the backyard.
- **Eliminate the Breeding Sites Game:** Now, the backyard is full of breeding sites and mosquitoes, and the user will need to eliminate all of them in 3 minutes.
- **Informative Video and Interactive Life cycle:** A short video explains how mosquitoes transmit diseases and is then followed by an interactive app about the mosquito life cycle, distribution, and prevention.



Figure 10: Students using the interactive apps developed by Gladius.

### Project-Based Learning (PBL)

In order to participate in the development of strong science experiences that could aim to increase knowledge and awareness about vector control, PRVCU partnered with **Ciencia Puerto Rico** (CienciaPR) to develop a PBL about vectors. CienciaPR is a non-profit organization that promotes science communication, education and science-based careers. As part of this project, PRVCU staff visited and trained students in eight schools in different municipalities (Ponce, Vega Alta, Naranjito, Ciales, San Juan and Carolina) to develop a PBL about the mosquito *Ae. aegypti*. During this activity students developed home-made traps, did patio inspections, and learned how to identify adult mosquitoes and larvae.

### Instructional Videos

PRVCU has developed five educational videos on the topics of:

- (1) *Ae. aegypti* mosquito life cycle,
- (2) larvicides,
- (3) Autocidal Gravid Ovitrap (AGO),
- (4) house inspections and breeding sites reduction, and
- (5) COPA project. Currently, a video about sterile insect technique and Wolbachia is under development.

The videos are available in the PRVCU website and fragments are being used during educational activities.

### Community Outreach

On July 2018, the PRVCU Community Mobilization Division started a proactive outreach program. Using a multi-pronged approach, PRVCU is communicating and engaging municipalities, academia, non-profit organizations, corporate entities, and others to create awareness about the mosquito and increase the visibility of the program. The efforts include house to house visits, educational talks, and loudspeakers around community streets, among others.



Table 4: Summary of Outreach Activities.

Activity	Number of activities/ materials	Number of municipalities
Educational booths	252	38
Talks	183	28
Community visits	102	16
Repellents	87,713	62
Larvicides distributed	2,496	24
Educational material	107,512	74
Activity books	15,672	41
Informational visit	294	15

### Communities Organized to Prevent Arboviruses (COPA)

PRVCU established a collaboration with the CDC Dengue Branch to develop and implement the COPA project in the Municipality of Ponce. The goal of this project is to involve the community in the implementation and evaluation of alternative *Ae. aegypti* control methods. As part of the collaboration, PRVCU participated in community activities to introduce the project (Figure 11), developed and printed educational flyers and provided repellents for community interventions. In addition, PRVCU provided **2,500 “prevention kits”** to participants in the COPA project to create awareness and educate about source reduction and personal protection. PRVCU also provides CDC-COPA team with vector surveillance data and is evaluating an alternative vector control strategy to be implemented in the municipality.



Figure 11: PRVCU and CDC staff at a community meeting in Ponce.

### External Communications and Mass Media Efforts

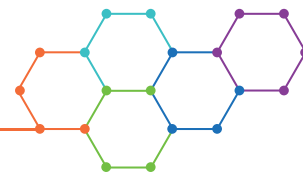
A collaboration was established with the TV show “Borinqueando” and its host Peter Hornedo to cover in detail activities conducted by PRVCU. PRVCU recorded four programs with the show that highlighted the laboratory, community activities, the COPA collaboration in Ponce and source reduction activities.

Another local influencer that supported campaign efforts was Rubén Sánchez, who is one of the most well-known local TV and radio influencer. As part of the “Paralos en Seco” campaign launched in May 2018, Sánchez recorded a radio commercial about the *Ae.aegypti* which was followed by the PRVCU radio ad.

Other efforts include several interviews in diverse media outlets.



Figure 12: Front page in El Vocero about insecticide resistance. The newspaper also included a two-page article about the work done by PRVCU.



During **this year PRVCU participated in more than 20 interviews, including TV (WIPR and Telemundo), radio and newspapers.** The latter includes a front page and two-page article in el Vocero about the insecticide resistance problem in Puerto Rico (Figure 12). In addition, El Vocero published an opinion piece about an alternative vector control approach for Puerto Rico, written by PRVCU executive director, Dr. Grayson Brown.

### “Tápale el Platón” Campaign

In December 2018, PRVCU launched the campaign Tápale el Platón to continue providing orientation thru mass media about source reduction. The campaign was covered by TeleNoticias, El Nuevo Día y WPAB in Ponce.

At the end of the Facebook Ads campaign, 4,030 clicks on the ad links had been received and a total of 196,028 people were reached. Of these, 70% were women.

### Community Newsletters

For PRVCU it is important that the stakeholders and collaborators know about the activities conducted by the Unit and are up to date with educational and technical information about the *Ae. aegypti* mosquito. Thus, PRVCU developed a newsletter that is sent monthly to collaborators.

In addition, as part of the strategy for community engagement it is important to share the results of the mosquito surveillance with the participants of the program. For this reason a newsletter was developed for each community and distributed monthly or quarterly in all the houses with AGO traps or participating in a project.

## Vector Control Activities

### Wide Area Larvicide Spraying (WALS)

On November 2018, PRVCU started a pilot project to test the effectiveness of Wide Area Larvicide Spray (WALS) in the local environment. The study consisted of two experimental sites (Valencia and Santa Juanita) and one control (Juan Sanchez) in the Municipality of Bayamón using the larvicide VectoBac WDG (Bti). Each experimental site was treated 12 times, every week for eight weeks and every other week for four additional weeks.

As part of the efforts to implement WALS in Bayamón, the PRVCU community mobilization team developed, in collaboration with the municipality, a communication strategy and educational material. Employees from the Municipality were provided orientation about WALS to support educational activities related to the project (Figure 15).



Figure 13: “Tápale el Platón” art used during the campaign.

Table 5: Media outlets used and the number of ads acquired.

Communication Outlets	Quantity (Oct-Dec 2018)
Radio spots	100
Digital news advertising (impressions & clicks)	2.4 M impressions, 4,030 clicks
TV and Radio Interviews	2

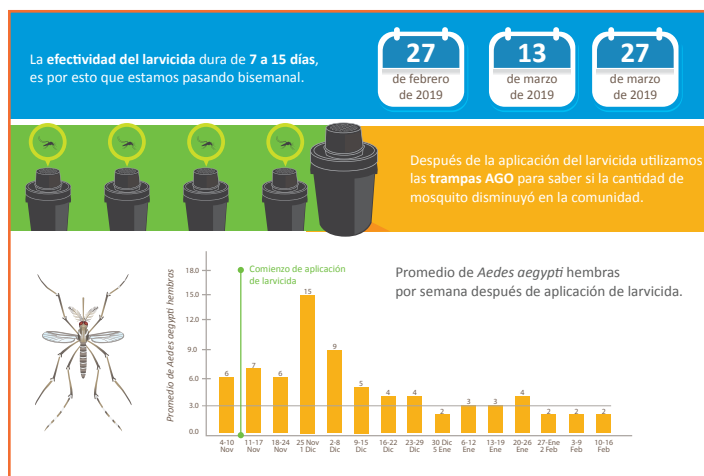


Figure 14: Example of a community newsletter created for the WALS project in Bayamón.



A microsite was also developed and included in the PRVCU website with information about the project, list of FAQs and contact information. In a collaboration with the Municipality of Bayamón, the PRVCU field and community team visited the community for a door to door intervention. This included the use of loud speaker, distribution of educational material and repellents. The project was covered by the media, including an interview with *El Nuevo Día* on November 2018.

In order to test the larvicide effectiveness to kill *Ae. aegypti* larvae, four jars were placed randomly in the patio of 10 residences before the WALS treatment, and collected 30 minutes after the treatment was completed. Assays conducted in the laboratory showed a mortality rate from 70-95% after 48 hours of larval exposure to the content of the jars. This suggests that the larvicide was reaching the sites where the jars were located and was effective at killing local larvae. Adult surveillance results, also indicated a reduction in the adult mosquito population in both of the communities treated when compared to the control.



Figure 15: Training provided by PRVCU to the Municipality of Bayamón staff as part of the community engagement activities for the pilot implementation of WALS in the municipality.

### Tires Vector Management

Given the limitations of the local authorities to address the issue on tire management, PRVCU is exploring alternatives to effectively treat tire shops and reduce the risk of tires becoming mosquito breeding sites. For this reason, on February 2019, PRVCU tested the effectiveness of pyriproxyfen, a juvenile hormone analog that interrupts the life cycle of mosquitoes, specifically affects the pupal stage preventing pupae to develop into adults. Jars were sprayed with a pyriproxyfen solution, and larval and pupal mortality was observed at intervals of 24 hours. After 144 hours of exposure, 97% pupal mortality was observed with the NyGuard 8ml/g solution, in comparison with 0% pupal mortality for the control. These results suggest that pyriproxyfen can be an effective solution for vector management in tire shops.

### Cemetery Vector Management

Cemeteries are known for being breeding sites for *Ae. aegypti* and PRVCU surveillance traps deployed in the cemeteries in Puerto Rico have reported more than 3 adult female mosquitos per week. For these reasons, PRVCU started a collaboration with the Municipality of Bayamón to reduce the amount of mosquitos in cemeteries by treating breeding sites and cryptic locations with VectoBac WDG. Applications with VectoBac WDG were done weekly with power backpacks, focusing on potential breeding sites such as flower pots, open caskets and cryptic sites on the thumbs damage by hurricane Maria. After four weeks, interventions were made every other week. In addition to larviciding, flower pots were filled with sand so they can stop producing mosquitos. Recommendations to cemetery owners and municipalities for attending potential breeding sites were made on the first intervention to work hand to hand to lower the mosquito population that can impact adjacent communities.

### Municipality Needs Assessment

The municipality needs assessment was conducted to understand the efforts that are currently being made to control the *Ae. aegypti* vector by municipality personnel in the Island. The objective was to collect detailed information regarding the vector control programs in each municipality, the tools and activities being used and the resources available to carry out those activities. At the same time, this activity aimed to engage and build collaborative relationships with the main stakeholders managing these programs.

A questionnaire tool was developed with specific questions regarding the planning, implementation, monitoring and evaluation of these programs as well as the capacity (ex. staff, budget) to complete these activities. A total of twelve municipality programs were interviewed.



The results indicated that most municipalities conduct some level of source reduction activities and have conducted educational activities related to *Ae. aegypti*. However, none of the municipalities have their own vector surveillance program, and many lack the necessary personnel, certifications or equipment to conduct effective vector management in their municipalities. Only three of the municipalities have used larvicides, while most relayed on adulticides, often applied by PRDH.

## Future Activities

### Novel vector control

Given the level of insecticide resistance determined by the work of PRVCU and CDC, alternative vector control strategies for Puerto Rico are being evaluated for implementation, in collaboration with the municipalities. As part of the COPA project, it is expected to identify and evaluate a method that could be safe for humans and pets, eco-friendly and proven in other jurisdictions. Some of these methods include the use of larvicides, as mentioned above, drones and the sterile insect technique.

### Vector Management Association

Given that Puerto Rico is an endemic country for arboviral diseases, long term solutions and collaborations need to be established. For that reason, PRVCU is in the process of creating an association to group vector control experts from the professional and academic field, to increase vector control capacity in Puerto Rico.

### Truck Rodeo

As part of the activities to support municipalities build capacity, PRVCU will be hosting a truck rodeo later this year to calibrate spray equipment and train municipality personnel in the proper management of the equipment used for mosquito control.

### Facilities

PRVCU is establishing a diagnostic molecular laboratory for arbovirus mosquito testing at the San Juan Laboratory. This laboratory is expected to have the capacity to test mosquitoes and detect in them the presence of arbovirus such as Zika, dengue and chikungunya, among other arbovirus that might appear in Puerto Rico. The laboratory is expected to be fully operational by October 2019. The facilities in Ponce are expected to be fully remodeled by the end of this year, and an open house will be conducted for community leaders and collaborators of the region. Likewise, the Unit is exploring the possibility to open an office in Mayaguez to be able to have major impact on the west region of the Island. This project is on-hold until San Juan and Ponce facilities are well-established.

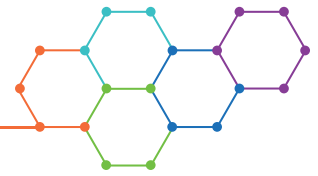


PR Vector Control Unit and Econo supermarkets launched a campaign during the Global Mosquito Awareness month.

P 1 8



Parallel18 is an acceleration program for globally-focused startups that come from different parts of the world to scale their businesses from Puerto Rico. The program, which has a duration of five (5) months, offers world-class entrepreneurship mentorship, weekly workshops that provide business training on exporting and scaling internationally, a free coworking space in San Juan, and direct access to clients and talent, among other valuable perks. Up to eighty (80) companies per year -- up to forty (40) per cohort -- receive a forty thousand dollar (\$40,000) grant funded by the Puerto Rico Science, Technology and Research Trust, the Puerto Rico Industrial Development Company (PRIDCO), and the Department of Economic Development and Commerce of Puerto Rico (DDEC), to grow their businesses from Puerto Rico.



Parallel18 launched pre18, a new preaccelerator program in response to Hurricane Maria to support Puerto Rican entrepreneurs from forty (40) emerging local startups to reach the market and become Parallel18 ready. After the hurricane devastated Puerto Rico, the island faced many challenges that could only be solved by its own people, so we created a program to promote entrepreneurship and innovation as the path to normality. **Pre18 offered a twenty thousand dollar (\$20,000) grant** and an intensive three (3) month pre-acceleration experience, which included workshops and relevant mentorship to help local businesses achieve sustainability and get ready for exponential growth.

## Mission and Vision

Parallel18 welcomes innovators from around the globe to help them scale from Puerto Rico to global communities beyond the Island. Supporting successful startups that can have significant local impact is our motivation. This is why we build initiatives within the program that lead to growth and help foster and promote entrepreneurship in Puerto Rico. The goal of the program is to accelerate the local innovation ecosystem and to position Puerto Rico as a unique gateway for startups to scale globally.

## Impact Metrics

During the first three (3) years and six (6) generations of the program, Parallel18 has received **two thousand nine hundred and forty (2,940) applicant companies** from over seventy (70) countries, with one hundred seventy nine (179) companies being admitted into the program, a very competitive acceptance rate of only six percent (6%). Among these, fifty (55) have Puerto Rican founders and one hundred twenty four (124) are foreign, a local representation of thirty one percent (31%) from the overall companies that have participated.

For pre18, during the first year (1) and two (2) generations, five hundred and fifty seven (557) applications from Puerto Rican entrepreneurs with developed concepts or prototypes were received, an unprecedented number for the local ecosystem. We are also proud that these efforts led to sixteen (16) Puerto Rican companies being selected for Parallel18, a record number that shows pre18 enabled these companies not only to reach the market in three (3) months, but to be competitive enough to be part of our international accelerator. Additionally, an average of thirty percent (30%) of companies in the program had a female as their team lead, a metric that is way above the industry standard of fifteen percent (15%) for comparable business incubation and acceleration programs. After the first (1) year, pre18 companies from generation one (1) hired one hundred thirty nine (139) Puerto Ricans and achieved **one million nine hundred and forty one thousand dollars (\$1,941,000) in revenue**. Originally, pre18 was designed as a special edition, and the selected founders worked hard to show us that we have to keep it as a regular program. The previously reported numbers are impressive considering that seventy percent (70) of the initial badge of companies are still operating.

All of the Parallel18 program structure pursues the mission of positioning Puerto Rico as an international hub for innovation and entrepreneurship, and to provide local startups a global mindset and opportunities to go to market and exporting to international markets. Specifically, the economic development of Puerto Rico is the driver and main goal of Parallel18, still very recent but our latest assessments inform that for generations five (5) and six (6) of the program combined, the total revenues generated by our companies during and after their participation in the program were **ten million eight hundred and three thousand (\$10,803,000)**, for a total combined revenue for the first four (6) cohorts of **sixty six million three hundred eighty thousand and two (\$66,380,002)**. Puerto Rico revenues for generations (5) and six (6) combined was **six million six hundred sixty five thousand (\$6,665,000)**, for a total combined local revenue for the first six (6) cohorts of **twenty three million seven hundred eighty thousand two hundred twenty two (\$23,708,222)**. At the same time, one hundred twenty three (123) job positions were created by the companies in our generations five (5) and six (6), including full time, part time, and internships, for a combined total for the first six (6) cohorts of five hundred and fifty two (552) job positions.

Also, the program has continued executing an even more aggressive initiative to foster private capital investment and local economic development, P18 Ventures. This initiative comprises an in-house investment fund that selects a target of three (3) startups from each generation, focused on startups that have outstanding performance and accelerated growth during Parallel18, have established operations in Puerto Rico, and commit to generating local full time employment.



Funds are invested on a matching basis (“matching fund”) with respect to funding from private investors secured by the companies for a target investment of **seventy five thousand dollars (\$75,000)**. P18 Ventures seeks to retain startups graduated from Parallel18 that commit to develop their company in Puerto Rico, generating economic activity and employment as a consequence.

From the beginning of the program until September 2019, investments in sixteen (16) startups graduated from Parallel18 have been made for a total of **one million one hundred fifteen thousand dollars (\$1,115,000)**. Additionally, Parallel18 companies for the first six (6) cohorts have raised a total of sixty eight million **four hundred fifty eight thousand four hundred and ten (\$68,458,410)**, including **eleven million eight hundred sixty six thousand eight hundred (\$11,866,800)** raised from Puerto Rico based investors, an unprecedented amount for local startup investment. Investment sources for this funding include angel investors based in Puerto Rico, local corporations, and investment funds from the United States and Latin America.



In order to foster the interest for innovating in Puerto Rico and to inspire more local entrepreneurs, Parallel18 has continued executing its Give Back Program, where as part of their obligations in the program, participating entrepreneurs offer workshops to students on technology and entrepreneurial development, and provide mentorship support to emerging entrepreneurs at events of the Puerto Rico startup community, as mechanisms of empowerment.

**During its first six (6) cohorts, the program facilitated four hundred twenty one engagements (421) by our entrepreneurs, and an impact in eleven thousand one hundred ninety seven (11,197) total lives around Puerto Rico.**

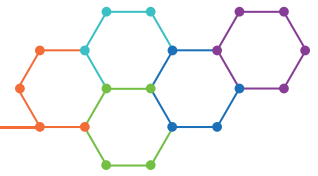
## Achievements

In the last year, Parallel18 has seen a significant accomplishment regionally been choose by Facebook as partner and Puerto Rico as a hub to run a program focused on social impact startups in the Caribbean, also the generation 5 (5) company Booksloth became the first startup to receive 200 thousand dollars in funding from a Silicon Valley fund. This milestone gave Booksloth access to experts in their industry to grow bigger in to the most important innovation capital of the world.

We have also seen several Parallel18 alumni companies continue growing and raising investment rounds of **one million dollars (\$1,000,000)** or more. The capital raised from private investors in follow up rounds is as follows: **three million (\$3,000,000)** by Abartys Health, **two million two hundred thousand (\$2,200,000)** by Burea, and **one million (\$1,000,000)** by Brands Of. The great majority of the investment capital came from Puerto Rico based investors, a milestone that shows the maturity of the entrepreneurship and investment ecosystem of the island.

To continue catalyzing the investment landscape in Puerto Rico, this year P18 Ventures executed (4) new investments for a total of two hundred twenty five thousand dollars (\$225,000) in the following companies: GoPanza, Vozy, Adventure Bucket List, and Molcajete Foods. This brings the P18 Ventures portfolio to sixteen (16) startups and a total investment of **one million one hundred fifteen thousand dollars (\$1,115,000)**.

On August 2019, we received new funding grant from the United States Economic Development Administration (EDA) -- **two hundred ninety nine thousand nine hundred fifty five (\$299,955)** with a three hundred nine thousand one hundred eighty (\$309,180) match from the Puerto Rico Science, Technology, and Research Trust -- to enhance the investment support infrastructure of Parallel18 and capital access to Puerto Rican startups. The goals of this project are to expand our local and international investor network, launch and investor education curriculum, and implement a formal investment fund with a target size of ten million (\$10,000,000).



The program's global exposure and market positioning, is not only increasing significantly but reaching a leadership status because of the quality of its structure, the benefits offered and the entrepreneurs overall experience.

A vivid example is that P18 has been invited to seventeen (17) international conference in the last year; eight (8) of which where speaker engagements to share Parallel18's best practices globally. A couple of other highlights is the program's first engagements with the Caribbean market, by been invited to conferences in Jamaica, Cuba and St Thomas and the promotion in more diverse South American capitals like Montevideo and Quito. Brief details of the trips are the following:

1. CEAL Global Conference, Panelist (**Mexico City, Mexico**) - Noviembre 2018
2. AESOFT Disruption, Keynote Speaker (**Quito, Ecuador**) - Marzo 2019
3. Brazil and Puerto Rico Chamber of Commerce, Keynote Speaker (**São Paulo, Brazil**) - April 2019
4. Prodem Conference, Panelista (**Montevideo, Uruguay**) - May 2019
5. Clinton Foundation CGI Conference, Panelist (**St. Thomas**) - June 2019
6. Emerge Americas, delegation (**Miami, United States**) - March 2019
7. TechBeach, Panelist (**Montego Bay, Jamaica**) - December 2018
8. SXSW Interactive, speaker (**Austin, United States**) - Marzo 2019
9. TechCrunch Disrupt, attendee (**San Francisco, United States**), October 2019
10. Inbound Conference, Attendee (**Boston, United States**) - September 2019
11. Demo Day Rockstart (**Bogota and Medellin, Colombia**) - February 2019
12. New York Angels Investment Screening Meeting (**New York, United States**) - march 2019
13. Simposio de Innovación, Festival Internacional de Cine de Gibara (**Gibara and La Habana, Cuba**) - July 2019
14. Forming and Operating an Impact Investment Fund, CDVCA Workshop (**Washington, DC, United States**) - September 2019
15. Cumbre Latinoamericana de Inversión de Impacto (**Quito, Ecuador**) - October 2019
16. 12th Americas Competitiveness Exchange (**Santiago, Chile**) - October 2019
17. Colombia Investment Summit (**Bogota, Colombia**) - October 2019

Currently, Parallel18 is supporting its second pre18 cohort, where they receive more than two hundred and fifty 250 applications to finally select thirty four (34) Puerto Rican startups working hard over twelve (12) weeks to go from developed concept or prototype to reaching the market and being ready for Parallel18. These local founders are seeing pre18 as a real platform to establish their companies and move towards having a sustainable and thriving business.

## Future Plans

Parallel18 will continue building the Puerto Rico innovation ecosystem and connecting the dots for the entrepreneurial life cycle, from innovation programs at local universities to the pre18 preaccelerator program to Parallel18 to sources of investment funding for startups. An important goal is to continue offering pre18 approximately once a year to continue supporting local innovators and to nurture the Parallel18 pipeline with high potential Puerto Rican companies.

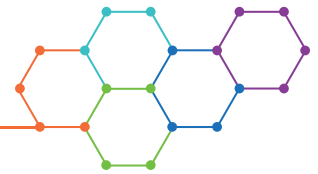
We plan to execute the program that will foster our international network of investors able to invest in our companies, and to continue motivating them to consider the Puerto Rican deal flow. We will keep polishing our value proposition to attract startups that are a good fit with our program, including using Puerto Rico strategically as a platform to grow. We will also work to strengthen our P18 Connect corporate innovation program in Puerto Rico and will pursue business development efforts in the United States.

We plan to increase the work we do empowering young Puerto Rican talent to start thinking in entrepreneurship as a valid option to grow as a professional, engaging them with job opportunities and entrepreneurial programs that motivate them to achieve their full potential and do so from the island. The ultimate goal is to continue positioning Parallel18 and Puerto Rico as a hub for global collaboration and innovation.



## Gen 6





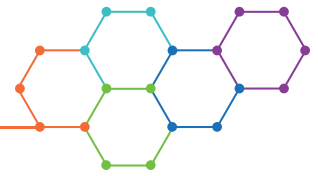
## Demo Day





# Puerto Rico Brain Trust for Tropical Diseases Research & Prevention





The Brain Trust for Tropical Diseases Research and Prevention was developed by an initiative of the Puerto Rico Science and Technology to explore opportunities for research and development in the area of tropical diseases. At the time of the Brain Trust creation in 2014, Puerto Rico was the only jurisdiction in the United States with endemic transmission of all four types of dengue fever and chikungunya and in early 2016, the introduction of Zika added urgency for research and development in tropical diseases including control of the vector for these diseases, all transmitted by the same mosquito, *Aedes aegypti*. In its initial plan, the Brain Trust identified three areas of priority:

1. development of rapid tests to identify tropical diseases circulating in Puerto Rico and the world's tropical belt
2. develop integrated vector control in Puerto Rico with a platform to examine novel approaches for controlling and eventually eliminating vectors, and
3. develop a biorepository of samples required for development of diagnostics, drugs, and vaccines for tropical diseases.

The initial expert meeting on diagnostic testing was held at the Trust in February 2016. As a result of that meeting, several initiatives were launched, including a local group that has developed a promising diagnostic test for Zika. This meeting, held on the initial weeks of the first ever Zika epidemic in Puerto Rico led to the second meeting focused on vector control held in May 2016. This meeting led to the development of a plan for integrated vector control and the development of the Puerto Rico Vector Control Unit at the Trust, funded by the Centers for Disease Control and Prevention.

The Zika epidemic made evident the need to expand the Puerto Rico infrastructure of laboratory testing for emerging tropical diseases and a meeting was held in July of 2017 that brought together researchers, and leaders of clinical reference laboratories in Puerto Rico and from the Continental US to develop a plan for expanded laboratory testing and a workgroup was developed with CDC leadership to address this important issue.

## The Roles of the Brain Trust are to:

- **conduct timely scientific forums** for advancement of tropical disease research and prevention in Puerto Rico,
- **connect experts from multidisciplinary backgrounds to collaboratively advance science**, promote preparedness, and improve patient care in the area of tropical diseases research and prevention,
- **strategize and advise key decision makers** in matters of science, technology and research related to tropical disease research and prevention, and
- **promote Puerto Rico as a hub for tropical disease research and prevention** initiatives.

## Mission and vision

**The mission** of the Puerto Rico Brain Trust for Tropical Disease Research and Prevention is to promote research and development in area of tropical diseases that will accelerate their prevention and control. **The vision** of the Brain Trust is a world free of tropical diseases.

## Achievements in 2018-2019

### I. Proyecto Agua Limpia

The **Brain Trust for Tropical Disease Research and Prevention (Brain Trust)**, since its inception has been dedicated to the vision of a world free from tropical diseases. The tropical **water-borne bacterial disease, Leptospirosis** has been a focus of the Brain Trust. Specifically, because there are challenges in Puerto Rico to correctly diagnose this disease as it mimics other common mosquito transmitted febrile illnesses like dengue fever, chikungunya and Zika.



Post Hurricane Maria, water quality issues in Puerto Rico have remained a concern, especially for people living in remote areas that are not served by the government water utility. It should be stated that when the primary source of water is not available due to lack of electricity and fuel for water pumps, people resort to secondary sources of water like streams and rivers for drinking and bathing water; thus, these populations are being exposed to a variety of microorganisms.



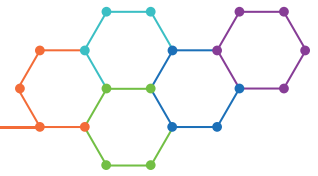
Proyecto Agua Limpia has completed four phases of work. **Unidos por Puerto Rico** has provided Proyecto Agua Limpia more than **\$2,000,000 to accomplish the Phases II and III**. Phase II was an expansion of a pilot project focused on the municipality of Utuado, Phase II supported an island-wide scaling up of Proyecto Agua Limpia to all municipalities. Phase IV was funded by a **\$730,000 grant** from the **Red Cross** and specifically focused PAL's work in remote communities with community-owned aqueducts. Other collaborators of Proyecto Agua Limpia include: **Puerto Ricans in Action, Puerto Rico Department of Public Health, Puerto Rico's Federally Qualified Community Health Centers, The Centers for Disease Control and Prevention, the Environmental Protection Agency (EPA), Federal Emergency Management Administration (FEMA), H2O World Wide and KOHLER among others.**

PAL has been working in collaboration to deliver KOHLER Clarity water filters to homes primarily in communities that are not served by the government water utility and in other vulnerable communities throughout Puerto Rico. General health and environmental screens are being conducted along with a survey regarding water sources pre and post Hurricane Maria. The location of homes receiving filters is being geo-coded and will be displayed on a map and an informational dashboard.

More than **45,000 home-use water filters have been delivered to rural communities** throughout Puerto Rico which can provide water for up to **280,500 citizens**. Surveys on drinking water sources and self-reported health conditions have been completed by each family that received a water filter, and preliminary data analysis will be included in a publication on drinking water sources and their relationship to endocrine disruption and diabetes. Results are updated daily in real time using ARC GIS technology and are available at the Proyecto Agua Limpia web site.

More than **45,000 people have received community-based training and education on water filter use and prevention of diseases** that are passed through contaminated water. PAL has begun to focus on sanitation efforts as well, incorporating more questions on topic of solid and water waste disposal as it relates to water quality. This effort directly impacts Puerto Rico's citizens daily as it continues to visit communities in need around the island. The PAL intern team presented and displayed a poster at the Caribbean Strong Building Resilience with Equity Summit. Results are being analyzed and will be prepared for publication in peer-reviewed public health journals.





## II. Pilot Project: MIT Collaboration on Metals Testing in Drinking Water

A pilot project in collaboration with Massachusetts Institute of Technology (MIT) has been conducted on topic of bacteriologic and metals testing of water. Results from this pilot project were presented at the Caribbean Strong Summit.

### Project Brief

In order to quantify the levels of metals in drinking water in Puerto Rico, household drinking water from communities in nine municipalities were tested for a suite of metals. One community was selected from each of the following municipalities: Aguada, Anasco, Barranquitas, Caguas, Corozal, Las Piedras, Penuelas, San Lorenzo, and Yabucoa. In each community, drinking water was collected from four homes of a variety of ages.

### Methods

Two samples were collected per house: a running and a standing sample. For the standing sample, water was collected from a tap that was unused for at least six hours. For the running sample, the same tap was flushed for two minutes before sample collection. Approximately 2 liters were collected per sample. Indoor taps were used when possible. Samples were also collected from the source water of each community's water system if feasible. Samples were analyzed on an Inductively-Coupled Plasma Mass Spectrometer (ICP-MS) at the Massachusetts Institute of Technology for a suite of metals: lead, arsenic, aluminum, chromium, manganese, iron, cobalt, nickel, copper, zinc, and cadmium.

### Results

In total, **75 samples** from homes, community storage tanks, and community wells were collected and analyzed. **Thirty-six homes were represented in the study**. Of these, nine homes exceeded the EPA action levels for both lead and copper, in their standing samples only. Five homes exceeded the EPA guideline of 10 parts per billion for arsenic, four of which are from Anasco. Nearly all homes exceeded the EPA guideline of 5 parts per billion for selenium.

### Key Takeaways

- Lead was present above the EPA action level only in standing samples; flushing the water in these homes will reduce lead levels.
- Elevated lead levels are not unique to any region or municipality of Puerto Rico
- Arsenic was near or above the EPA guideline in some municipalities: Anasco, Palmarito, and Oquendo. In addition, every sample we collected from Anasco exceeded the EPA guideline for arsenic.
- Nearly all houses with high lead also had high copper and zinc. Copper may cause adverse health impacts at the levels we found, while zinc may cause an unwanted metallic taste in the water.

## III. Caribbean Strong: Building Resilience with Equity, March, 2018

This summit focused on lessons learned following the two devastating hurricanes that hit Puerto Rico and the Caribbean Region in 2017. Participants were invited to join the PRSTRT and the Brain Trust at this important event to share their experiences, lessons learned and recommendations for enhanced resilience in health care systems and public health. An emphasis was placed on the critical need for collaboration and integration across all sectors to improve and strengthen the health and resilience of the Caribbean's citizens and communities.

The Caribbean Region is in a unique time in history to "Build Back Better," and requires a new level of leadership focused on following innovative strategies that are founded upon evidence-based approaches and lessons learned to maximize the opportunities available.



The Brain Trust recognizes that in Puerto Rico and the Caribbean Region, most systems, both private and public were impacted by the hurricanes. An integrated examination of the resilient capacity of all sectors and their interdependencies is essential to develop evidence-based best practices for the future. Sectors identified as: Independent and Community Resilience, Infrastructure (water, energy, fuel and transportation), Communications, Housing, Essential Services, PHARMA and Pharmacy Services, Morbidity and Mortality Management and Reporting, Hospital and Clinics, Vulnerable Populations and others will be addressed by local and national speakers and presenters in panel discussion and breakout sessions.

Summit was held on February 27 through March 1, 2018 in San Juan at the Sheraton Hotel near the convention center. Key note speakers were Mr. John Englander, Dr. Richard Besser, CEO of the Robert Wood Johnson Foundation, Dr. Georges Benjamin Executive Director of the American Public Health Association, and others. The FEMA designated Business Emergency Operations Committee conducted a panel discussion and answered questions from participants. Dr. Lynn Goldman from the George Washington Mortality Report and Dr. Satchit Balsari from the Harvard Mortality Study discussed the importance of accurate mortality reporting post disasters. Heart to Heart International provided twenty-five public health students scholarships to attend, and the PRSTRT provided three cash prizes for top three student posters in the poster session.

### Impact Metrics from Caribbean Strong Summit

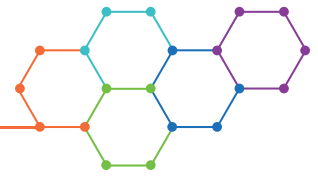
- **553** Uniquely Registered Participants
- Target goal was 400 participants
- **104 Presenters**
- **25 Student Scholarships Provided**
- **16-20 hours of participation**
- **70 Abstracts** were submitted
- **47 Posters** were displayed
- Approved for Continuing Medical Education Credits offered by Ponce School of Health Sciences
- **12 Peer reviewed** articles have been submitted for the Special Issue of the Journal of Society of Disaster Medicine and Public Health Preparedness

### Donations Received and Related Financial Outcomes from Caribbean Strong Summit

- Received **\$101,000.00 in donations** from various organizations
- Meeting Expenses \$306,253.83
- **Total meeting cost \$205,253.83**
- Related Financial Outcomes
- Puerto Rico Hurricane Response Hub Technical Assistance Center funded by National Network of Public Health Institutes at approximately \$600,000 for 18 months.
- Red Cross continuation of Proyecto Agua Limpia Phase III of approximately \$700,000 until August 30, 2019.
- Potential Direct Relief Grant for Sept, 2019 12 months \$1,900,000.

### Outcomes from Caribbean Strong Summit

- **145 Recommendations** have been developed
- Survey to rank recommendations has been developed to be sent today
- The Puerto Rico Hurricane Response Hub Technical Assistance Center has been funded by National Network of Public Health Institutes as a result of this summit and other hurricane resilience efforts at the Puerto Rico Public Health Trust.
- Needs Assessment of Public Health Workforce and First Responders Training Needs has been conducted and analyzed. Reports of findings have been generated. Five jurisdiction comparison available.
- Special Issue of Journal is in progress in collaboration with the Society of Disaster Medicine and Public Health Preparedness. Approximately 24 articles submitted.
- As part of the Caribbean Strong Summit, the Puerto Rico Hurricane Response Hub for Technical Assistance Center conducted a needs assessment among the public health and first responder workforce. This needs assessment was performed across the five Hurricane Response Hubs located in Florida, Texas, Louisiana, Georgia, and Puerto Rico. The results of the needs assessment has guided the direction and priorities of the Puerto Rico Hurricane Response Hub operations. The ten competencies the Puerto Rico workforce identified as the highest priority are included in the table below.



## PARTNERS

## and Sponsors

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**Hurricane Hub**  
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## IV. Puerto Rico Hurricane Response Hub for Technical Assistance

The Hurricane Response Hub (HRH) initiative is a coordinated effort among federal, state, and local public health organizations to facilitate training, technical assistance, and information sharing to enhance ongoing environmental and occupational health recovery in jurisdictions affected by the 2017 Hurricanes Harvey, Irma, and Maria. The National Coordinating Center for Public Health Training (NCCPHT) at NNPPI is coordinating efforts across five technical assistance centers:

Florida Hurricane Response Hub – Florida Institute for Health Innovation  
Georgia Hurricane Response Hub – The Rollins School of Public Health at Emory University  
Louisiana Hurricane Response Hub (LA-HRH) – Louisiana Public Health Institute  
Puerto Rico Hurricane Hub Technical Assistance Center – Puerto Rico Public Health Trust  
HRHTAC Texas – Texas Health Institute

The capacities and expertise of the Hurricane Response Hub are conducting rapid needs assessments, disaster epidemiology, education and risk-communications, high-tech and low-tech approaches to enhancing community resilience, Spanish and English language capacity, mortality estimation and surveillance, water safety, and the vulnerability index.



The partners of the Puerto Rico Hurricane Response Hub are:

- PR Department of Health, State Agency for Emergencies and Administration of Disasters
- PR Emergency Management Association (PREMA)
- HHS Region 2, Association for State and Territorial Health Officials (ASTHO)
- University of Puerto Rico-Medical Sciences Campus (UPR-MSU)
- Ponce Health Sciences University (PHSU)
- COR3 and Courses of Action
- Federal Emergency Management Administration (FEMA)
- Environmental Protection Agency (EPA)
- PR Primary Care Association
- PR Hospital Association, AmeriCares, Net Hope
- OXFAM, United Way, Heart to Heart International
- International Non-Governmental Organization's Group in Puerto Rico
- Net Hope
- AmeriCares
- Oxfam
- Direct Relief, Project Hope, PRSTRT Water Coalition
- PR Radio Association
- Local Government and Municipalities
- County Health Rankings and Roadmaps Center at University of Wisconsin Population Health Institute

The proposed work plan of the Hurricane Response Hub includes, but is not limited to:

- Training PRSTRT ASTHO Project Employees that will be working at the PR DOH on three courses to prepare them for job safety, communications and role during an emergency or disaster.
- Conduct an environmental scan to identify where Puerto Rico Public Health Data can be added to national data sets, identifying deficits in data availability and quality leading to discussions on data sources indicators for climate change and environment among hubs as part of the County Health Rankings Project.
- Creation and Follow-up on Taskforce Meetings to examine and standardize existing public information and messages for risk communications. Conduct a series of services and trainings related to risk communications with the University of Puerto Rico.
- Training on National Incident Management System (NIMS) Communications and Information Management to improve information sharing and capacity building.
- Training on ethical principles for emergency response workforce and conduct a Job Aid for Disaster Assessment Situational Awareness for Responders.
- Expansion of the Community Emergency Response Training Program (CERT) in communities identified by PREMA. Specifically supporting with simultaneous translation equipment, HAM KP4 Radio equipment, to enhance CERT program.
- Spanish based psychological first aid intervention, crisis management training, and skills for psychological recovery

## Hurricane Hub Technical Assistance Centers

- Texas
- Louisiana
- Georgia
- Florida
- Puerto Rico



**Services**  
Train individuals and organizations related to disaster in:

- Community Assessment for Public Health Emergency Response (CASPER)
- Recovery needs in public, environmental and occupational health
- Facilitating connections with organizations and resources
- Tracking deaths, injuries and illnesses after a disaster
- Shelter management, among others

**APPLY HERE**

[prsciencetrust.org/prhrhtac-application](https://prsciencetrust.org/prhrhtac-application)





Hurricane Response Hub



Hurricane Hub  
Technical Assistance Center

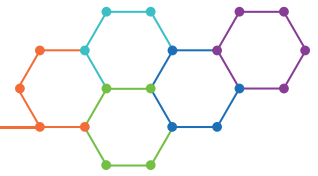


Fideicomiso de Salud  
Pública de Puerto Rico

A program of:



Puerto Rico  
Science, Technology  
& Research Trust



- Identification of resources related to disaster-specific morbidity and mortality surveillance, environmental and occupational health that Puerto Rico needs to fill gaps
- Development of an online 12-week course on Disaster Epidemiology Enhancing Public Health Workforce's knowledge on principles of disaster epidemiology
- Development and offering of Short Course in Disaster Epidemiology (5 days) Abridged version to target the PREMA workforce
- Conduct a death certificate training for medical and nursing professionals, medical examiners and coroners and funeral home operators, develop an online version of this training and integrate this into allied health schools' curriculum and into continuing medical education programs.
- Conduct an in person Enhancing Community Health Outreach (ECHO) Training Series at the Puerto Rico Public Health Trust on topics of high priority in the field of environmental health. This is intended to train PR Public Health Trust and Hurricane Response Hub Teams on ECHO methodology and implement this approach to expansion of trainings to remote locations and regionally throughout the Caribbean.

### Brain Trust for Tropical Disease Research and Prevention's 2018 Performance Indicators

- More than 550 international, regional and local experts participated in the Caribbean Strong: Building Resilience with Equity Summit held in March of 2018. More than \$100,000 in donations were received to host this summit from seventeen different organizations and businesses. This was held in collaboration with the Society for Disaster Medicine and Public Health Preparedness, who has published a special edition of their Journal dedicated to this summit and academic articles submitted.
- The Puerto Rico Hurricane Response Hub for Technical Assistance Center (PRHRHTAC) was funded as a direct result of the hurricane response work accomplished by Proyecto Agua Limpia, the Harvard Mortality Study and the impact of Caribbean Strong: Building Resilience with Equity Summit. This is funded with congressionally appropriated emergency funds from the Centers for Disease Control and Prevention in collaboration with the National Networks of Public Health Institutes.
- Proyecto Agua Limpia has received approximately \$3,000,000 in external funding to achieve the distribution of more than 45,000 home use water filters creating capacity for potable water for up to 270,000 citizens for at least 6 months. Each household completed a survey on water and health and received a training on filter maintenance and prevention of water-borne disease. Funders of this project were Red Cross, Unidos por Puerto Rico, MCS Foundation and Puerto Ricans in Action along with contribution from private donors.
- Hosted and was a participatory author with the Harvard Mortality Study post Hurricane Maria that appeared in New England Journal of Medicine.
- Article in process to Journal of American Medical Association (JAMA) on association of diabetes and bottled water co-authored with Dr. Kaumudi Joshipura from the University of Puerto Rico.

## Testimonials of Impacted Participants

### Quotes from COMMUNITY MEMBERS IMPACTED BY Proyecto Agua Limpia



"Estoy muy contenta con tener un filtro, mi agua cuando llueve mucho viene con fango y considero que eso afecta mi salud." - Barrio Montones, Las Piedras



Si el agua está contaminada nos puede dar alguna enfermedad y sin agua nos deshidratamos nos dan problemas con los riñones y ahora podemos filtrarla con el filtro que nos dieron ustedes." - Barrio Montones, Las Piedras



## Work Plan for 2019-2020

Future work plan for 2019, has been based on the findings and recommendations that have evolved from a series of technical meetings held by the Brain Trust. These were: 1) first meeting on rapid diagnostic testing of febrile illnesses (2015), 2) second meeting on creating a comprehensive vector control strategy (2016), 3) third meeting on creating capacity for arbovirus diagnostic development (2017), 4) Caribbean Strong: Building Resilience with Equity and 5) A Technical Training on Importance of Accurate Death Certificate Completion. All final reports and white papers produced from these technical meetings are available at our website. Future proposed work of the Brain Trust can be categorized into five core areas:

### Core 1: Research and Development of Rapid Diagnostic Testing for Febrile Illnesses

1. Support local rapid diagnostic test development efforts for febrile illnesses specific for endemic areas like Puerto Rico.
2. Promote public-private partnerships that can enhance the opportunities to move forward with additional testing platforms that will increase testing capacity, reduce turn-around time, by validating existing tests and move to obtain FDA approval.
3. Improve the marketability of a rapid test. There is a need to educate health care providers, health insurance companies, and the public about the importance of early and rapid diagnostic testing.
4. Facilitate efficient communication and collaboration between mutually beneficial private and public (local and federal) partnerships to enhance our ability to prepare for an infectious disease crisis.

### Core 2: Enhancing Reference Lab Capacity for Arbovirus Diagnostic Development

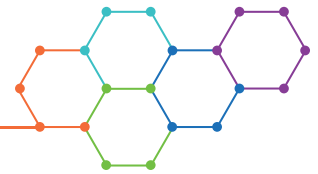
5. Puerto Rico Reference Lab Working Group to meet to establish a national laboratory policy for Puerto Rico to increase lab capacity and preparedness.
6. Facilitate clinical reference laboratories collaboration with the New York State Department of Health, Puerto Rico Department of Health, and the Centers for Disease Control and Prevention and the Puerto Rico Science, Technology and Research Trust to build an Immediate Management Response System for Puerto Rico and to insure a complete and consistent use of the testing algorithm by all labs participating in outbreak responses



### Core 3: Proyecto Agua Limpia

7. Complete project with Unidos por Puerto Rico to deliver 30,000 filters and with Red Cross to deliver 14,400 filters to citizens in areas not served by government water utility by September of 2019.





8. Secure funding to expand the water filter distribution and to deliver filter replacement cartridges, needs assessments, and water quality testing components of PAL.
9. Continued support of the Water Coalition, a group of agencies, non-governmental organizations and academics working together to most efficiently meet needs for water and sanitation in communities in vulnerable situations in Puerto Rico. Emphasis on the dashboard for NGO and Agency operations in Non-PRASA Communities.

#### Core 4: Disaster Response and Preparedness

10. Implement the workplan for training and curriculum development for the Puerto Rico Hurricane Response Hub Technical Assistance Center to build capacity in the Caribbean for enhanced resilience.

#### Core 5: Continued Support of the Puerto Rico Vector Control Unit's Efforts to Achieve the Five-Year Plan Established by the Brain Trust for Tropical Disease Research and Prevention

11. Continual support and follow up with Puerto Rico Vector Control Unit's efforts to implement the proposed five year road map towards the control and elimination of the *Aedes aegypti* mosquito.

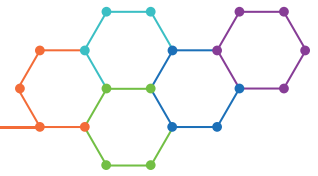




# CENTER FOR TROPICAL BIODIVERSITY



The Center for Tropical Biodiversity (CTB) was established in 2015 to guide the efforts of conservation and exploration of Puerto Rico's unique geography for benefits that can be scientific, societal or economic. Within the purview of the Center are the development of searchable collections of biological specimens, the conservation of biodiversity resources and the commercialization of biodiversity-derived products.



## Mission and Vision

The mission of the Center is to contribute to the advancement of basic and applied research associated with the preservation and intelligent utilization of biodiversity resources. Puerto Rico is the home of diverse natural ecosystems and possesses advanced infrastructure for scientific research: the makings of a regional leader in biodiversity research and commercialization.

## Our main goal

Over the last century, Puerto Rico has enjoyed a rich tradition of scientific research centered on its unique natural environment. There have been numerous projects aimed at observing and cataloging Puerto Rico's rich biodiversity with the goal of understanding how organisms interact with their surroundings. Lacking through the years has been a local policy to guide and coordinate these efforts, which were often driven by the curiosity of individual researchers in our many universities.

The CTB was established precisely to provide legal and regulatory guidelines under which our local ecosystems can be explored for scientific or economic benefit and protected to ensure sustainable use of the biodiversity resources. Additionally, the CTB coordinates efforts to develop natural compounds as products for a variety of applications.

## Achievements for 2018-19

As the CTB strives to bridge biological diversity with economic development, we report five major areas of growth during the past year:

### 1) Identification of bacteria associated to the Coquí Llanero

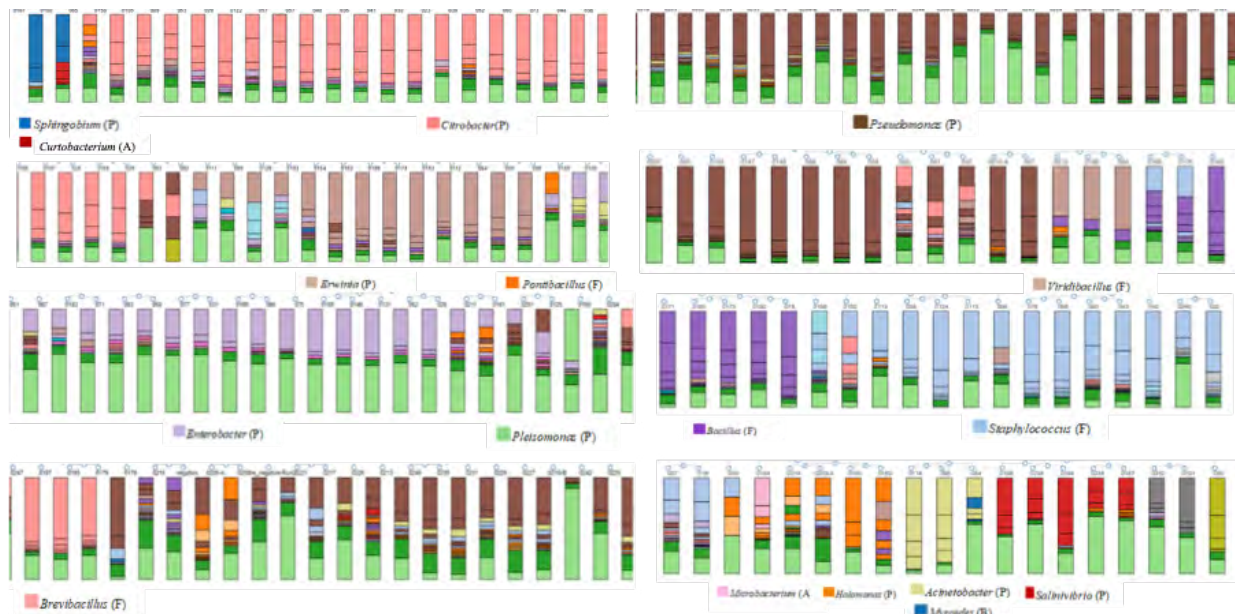


Figure 1. Bacterial isolates from *E. juanaroveroi* were characterized and classified by genera as *Citrobacter* (pink); *Pseudomonas* (brown); *Erwinia* (tan); *Enterobacter* (lavender); *Bacillus* (purple); *Staphylococcus* (blue); *Salinivibrio* (red)



During the past year, we have continued to identify new microorganisms associated with the autochthonous amphibian *Eleutherodactylus juanariveroi* or *Coquí Llanero*. Last year, we visited the Toa Baja wetlands together with herpetologist Neftalí Ríos (UPR Humacao) and microbiologist Ileana Rodríguez (UPR Humacao), to identify microbial species that could be helping to control the growth and virulence of a fungal pathogen that has decimated amphibian populations worldwide.

During these visits to Toa Baja, we collected 286 bacterial isolates, which we have now de-replicated and identified by 16S rRNA gene sequencing (Figure 1). Although species-level identification was not possible using a single DNA marker, we were able to group our isolates into 8 main genera: *Citrobacter*, *Pseudomonas*, *Erwinia*, *Enterobacter*, *Bacillus*, *Staphylococcus*, *Brevibacillus* and *Salinivibrio*. Efforts are underway to cultivate these species and to characterize the chemical compounds produced by each in search for antibacterial or antifungal activity. For more information on the *Coquí Llanero* project visit the URL: <https://youtu.be/NKoumU2UFts>

## 2) The chemistry of mangrove termites

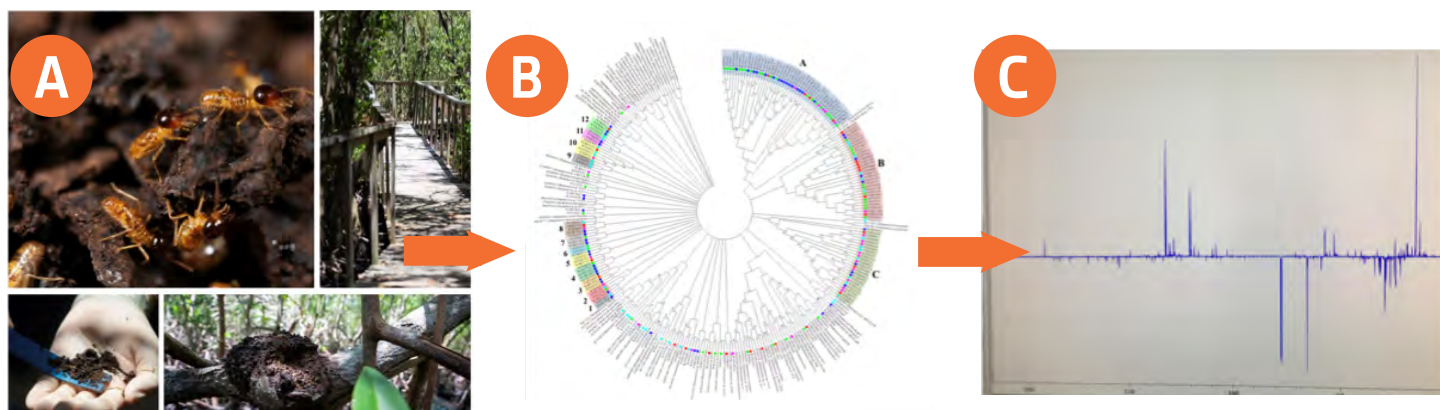


Figure 2. (A) Initial exploration of the mangrove termite nest yielded (B) a number of new bacterial species. These new species were cultivated, and its chemical compounds were extracted (C), revealing the presence of at least three organic compounds by 1D NMR.

The nests of termites are naturally fungus free. Termites "fumigate" their home using a collection of microorganisms that kill fungi by making toxic chemical compounds. A joint effort between the CTB and UPR Mayagüez has uncovered the presence of 272 microbial species in the nest of the Cabo Rojo mangrove termite. Of these, a total of **180 species are entirely new** and not similar (by DNA sequence) to anything that has been previously described.

Some of these species have now been cultivated and their chemical extracts have been generated and analyzed by 1D NMR (Figure 2). Our preliminary results reveal that some of these isolates are more chemically complex than once thought. Efforts are underway 1) to separate the chemical mixtures into a small number of individual components and 2) to obtain structures for compounds that display chemical novelty. For more information on the microbial diversity of termite nests visit the URL: <https://youtu.be/Fhr4cojIUlc>

## 3) Exploration of the hypersaline lagoons of Cabo Rojo

Hypersaline environments, such as salt flats and marshes, are the habitat of unique life forms that have adapted to withstand extremely high salt concentrations. Adaptation to these extreme environments has given rise to a whole new set of rules for the construction of proteins and enzymes. In an effort to characterize and catalogue the microbial life in hypersaline environments we have visited the salt lagoons of Cabo Rojo together with expert microbiologist Dr. Lilliam Casillas and biochemist Dr. Ezio Fasoli, both from UPR Humacao. While Dr. Casillas has dedicated her career to the identification of bacteria in these environments, Dr. Fasoli is more interested in the chemical properties and stability of enzymes that have evolved in high salt.



Figure 3. Salt produced in the lagoons is packaged and sold for numerous uses. Bacteria isolated from the salt lagoons can be cultivated in high-salt solid media.

Together with Dr. Casillas, the CTB is in the process of identifying new bacterial species from a hypersaline lagoon in Fajardo. These bacteria will be cultivated and its chemicals will be extracted and their structures will be elucidated.

Additionally, the CTB is also collaborating with Dr. Fasoli in the identification and sequence determination for enzymes for the degradation of oils and proteins in these hypersaline environments. For more information on the microbial diversity of termite nests visit the URL: <https://youtu.be/qacUOEIJNFY>

#### 4) Toward the licensing of biodiversity-derived products

This year, through our participation at the 2019 BIO Conference in Philadelphia, PA, we made contact with Arbor Biotechnologies Inc. (<https://arbor.bio/>), a Boston-based start-up specializing in the identification of DNA sequences encoding CRISPR endonucleases for gene editing. Arbor expressed a keen interest in searching through the DNA sequence datasets generated by our affiliated researcher Dr. Filipa Godoy (UPR-Medical Sciences). Dr. Godoy has generated extensive DNA sequence datasets from rare environments such as the intestine of the South American hoatzin bird (also known as the "Flying Cow") or the microbial communities associated with the mangrove tree. These DNA sequence datasets may contain sequences encoding novel CRISPR endonucleases that could find uses in gene editing applications. The Technology Transfer Office (TTO) has already been enlisted to generate the appropriate paperwork and agreements to ensure that Puerto Rico-based institutions retain the ownership of the data.

Similarly, another start-up company, Conagen Inc. (<https://conagen-inc.com/>), a Boston-based biofuels company, is currently evaluating a number of different proprietary enzymes to enhance the production of fatty acids in bacteria. These enzymes were originally described in the group of CTB Director, Abel Baerga-Ortiz, and the resulting intellectual property has been protected by the Technology Transfer Office (TTO), on behalf of the UPR, under patents 13/344,062 and provisional patent 62/815,676.

The enzymes are being evaluated by Conagen, for their ability to enhance fatty acid production in bacteria. The TTO has ensured that the transfer of knowledge and materials are conducted with respect for confidentiality and ownership.

#### 5) Increasing our international presence and leadership in biodiversity research

During the previous funding period, the CTB participated in a meeting on natural products at the University of Cambridge (UK) and made valuable contacts with institutions known for the development of antimicrobials and immune suppressants.

This year, CTB Director Abel Baerga-Ortiz and Jeffrey Marrero were invited to the Annual Meeting of the American Society for Pharmacognosy (ASP) in Wisconsin (July 13-17 Madison WI). The meeting was titled "Innovations in Natural Products Chemistry: an Interdisciplinary Approach to Understanding Nature's Chemical Library".



The exposure gained through our participation in the ASP meeting should enable meaningful collaborations with top figures in the fields of development and commercialization of natural products. Also, next year's annual meeting of the ASP will feature a panel on bioprospecting controls and Access and Benefit Sharing and the CTB Director has been preliminarily invited to this panel.

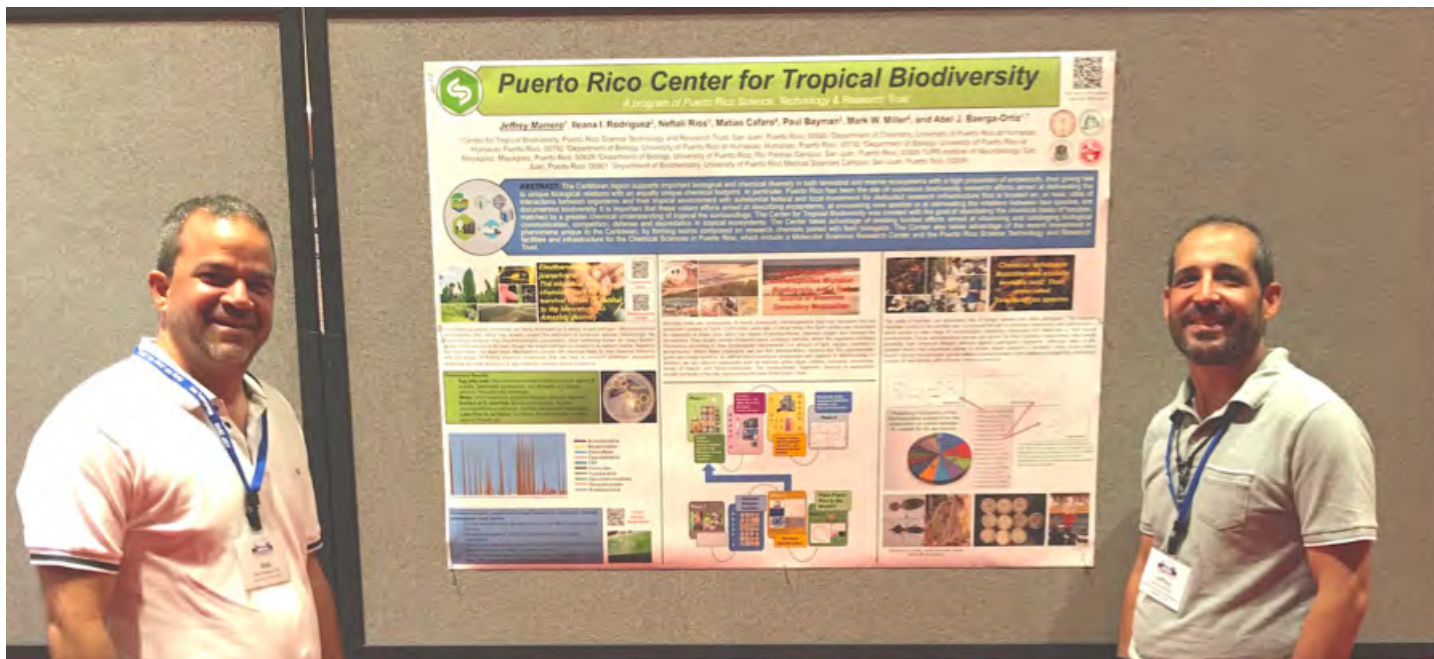


Figure 4. CTB director Abel Baerga-Ortiz and Scientific Director presenting a poster at the 2019 Annual Conference of the American Society for Pharmacognosy organized by the University of Wisconsin School of Pharmacy.

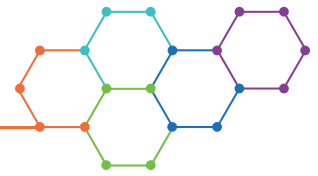
## Cumulative Impact Metrics

- 180 new microbial species not described previously
- 286 bacterial species isolated from the habitat of *Coquí Llanero*
- 12 publications from outside institutions citing Puerto Rico as the source of biological materials
- 35 Puerto Rico-based investigators in the areas of biodiversity
- 25 biological collections in Puerto Rico
- 2 patents being evaluated by Conagen Inc.
- 3 new microbial species from the Cabo Rojo Salterns

## Future Plans

### Online Repository

For year 2020, we are working closely with PRSTRT personnel to develop our online repository of biodiversity information for the unique species described previously. We have recruited a student volunteer to generate images of the chemical structures that are likely to be found in the known strains in our collection. These images will be used to generate a structure for the chemical and biological catalog.



## Business Development Pipeline

The online repository described above will be the cornerstone of a business development effort that will establish links with potentially interested parties for the development of products. This past year, the CTB was represented at BIO International Conference. We expect to participate in BIO 2020 which will be held in San Diego, CA during the month of June. We expect to have a beta version of the online sample repository that we can share with potential strategic partners during the activities of the BIO 2020 (San Diego) or at the 2020 ASP Meeting in San Francisco.

## Identification of Grant Opportunities

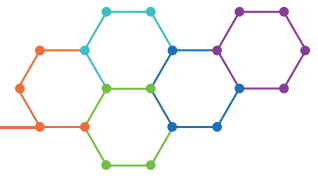
Last year's bid for an NSF-funded center to further the goals of the CTB was unsuccessful. Similar efforts will be carried out in 2020. An additional funding source will be the US Department of Defense, which has specific programs for the discovery of new antibiotics that could be used in biodefense. This year, we will be hosting a site visit from the Chief Scientist of the Vaccines and Therapeutics Division, as he has voiced an interest in the

## Generation of Access and Benefit Sharing Contracts

A new researcher at the CTB, Dr. Eduardo Caro, was recruited to join the UPR School of Pharmacy from the prestigious Scripps Institution of Oceanography. Dr. Caro brings with him an extensive list of researchers and collaborators that are, or would be, interested in carrying out research in Puerto Rico's ecosystems. However, prior to any research activities involving Puerto Rico's biodiversity, it is necessary to put in place a framework of rules to ensure access and benefit sharing of any financial or other proceeds derived from research activities. The TTO has already been engaged to draft appropriate agreements that would ensure that any material extracted from Puerto Rico's biodiversity, is owned by Puerto Rico's institutions.

# Science City





## Mission and Vision

The Puerto Rico Science, Technology and Research Trust has made a commitment to the advancement of a “Knowledge Economy” in Puerto Rico. Our Master Plan outlines the flagship development of this vision – a new Science City. Science City is to become a globally recognized innovation hub connecting and integrating Puerto Rico science and technology ecosystem.

As a multidisciplinary international center of collaboration, it will inspire new ideas, inventions and enterprises, resulting from its vibrant and rich environment to innovate, work, and live.

The new development will sit at the geographic and ideological hearth of the Knowledge Corridor – a nearly 2000 acre district within San Juan comprised of the University of Puerto Rico, Rio Piedras campus; San Juan’s Central Medical Campus; the University of Puerto Rico’s Botanical Garden; Universidad Metropolitana; and various publicly-owned potential development sites for life science industries, education and new lifestyle neighborhoods.

## Benefits of Science City

To support private development efforts to attract tenants to Science City, developers of the Site can take advantage of numerous tax incentives including:

- Full real estate tax abatement.
- Full sales tax abatement on construction materials and capital equipment.
- Full exemption from Federal Income Taxes for bona fide residents of Puerto Rico and Puerto Rican corporations.
- Competitive tax incentives to attract investors, tenants and employee.

### Science City specific incentives

- **Up to \$250,000** of the compensation received by eligible researchers/scientists residing in Puerto Rico and conducting work within the Puerto Rico Science District created by Act No. 214 of 2004, as amended will be exempt from Puerto Rico income taxes (Section 1031.02(a)(27). This exemption is independent and separate to the other incentives discussed herein.
- Sales tax exemption on construction materials and capital equipment (11.5%).
- New Tax Market Credit Eligible Location.

## Accomplishments

1. **The Trust was awarded with an EDA grant of \$4.7M** for the construction of the Forward Center Building.
2. The construction drawings for the Forward Center Building have been performed. The location will be adjacent to the Innovation Center – as part of new offices spaces for R&D for Medical Devices, Parallel 18 Alumni and a future expansion of the Trust.
3. The Highway Authority in joint with the Trust have designed the Science City Boulevard, including the new exit ramp from Las Americas Expressway (PR18) to Science City. The expectation of construction is for the next fiscal Year.



## Plans for 2020-2021

1. The Trust is working with the rehabilitation of 13,000 square feet building (Building 45) in Science City. We are considering with the possibility to have Fab-Lab and a Teaching, Practice and Development of Student Robotics.
2. The Trust is working with a proposal to PRIDCO to administrate BDTC. Meeting with Secretary Manuel Laboy have been held.

## In Images

**Science City is the site where the PRSTRT is located, with 68 'cuerdas', including the 25K square feet Innovation Center building and the 18K square feet Environmental Research Laboratory, bordered by Laboratory Road.**





In the Environmental Research Laboratory it is the research space of the laboratory of the Vector Control Unit of P.R, together with a group of the Environmental Quality Board.



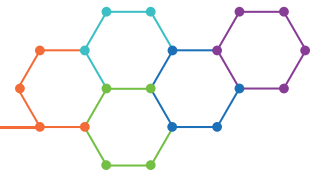
From the Old State Penitentiary, the main atrium, floor parts, walls and various pieces with architectural value are preserved with future plans.





TECHNOLOGY <sup>TM</sup>  
TRANSFER OFFICE





## Description

The Technology Transfer Office (TTO) is an island-wide effort to support and improve Puerto Rico's innovation ecosystem. The TTO partners with research universities, scientists, and researchers to provide best-of-class technology transfer services including expertise in evaluating new inventions, protecting intellectual property ("IP"), targeted global marketing to private sector companies, complex agreements and deal-making including licensing, R&D collaborations, and related agreements.

## Mission and Vision

The TTO's mission is to evaluate, protect, market, and transfer the most promising research discoveries and IP from Puerto Rico's universities, companies, and researchers to the private sector for commercialization and to benefit the public.

The TTO's vision is shared risk/shared reward partnerships that delivers best-in-class technology transfer services in order to improve Puerto Rico's universities' performance and to improve Puerto Rico's overall innovation ranking.

## Goals

The TTO's goals are to increase the participation of inventors; the use of best-in-class IP analytics, patent counsel, marketing platforms, licensing and related agreements; and to pursue resources to support technology transfer and a more robust innovation ecosystem.

## Performance Metrics

### Invention Disclosures and Technologies Evaluated

- Pre-disclosures: 7
- New Invention Disclosures: 17
- New Technologies: 20

### Marketing

- Direct contact: 340 targeted companies
- U.S. companies: 42%
- Asian companies: 33%
- European companies: 21%



## Patent Protection

- U.S. Provisionals: 3
- U.S. Nonprovisionals: 2
- PCT: 2
- Foreign: 7
- New Patents Issued: 2

## Licensing

- CDA/NDAs: 2
- Options: 3
- Licenses: 2
- Start-ups launched: 2
- Inter-Institutional Agreements: 1

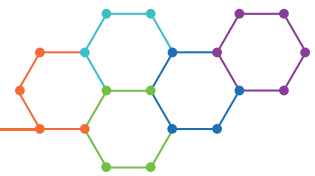
## Start-ups

MBQ Pharma, Inc., based in San Juan, is focused upon anti-cancer therapeutics, especially metastatic breast cancer. The TTO licensed the IP portfolio originating from the research discoveries of scientists at the UPR Medical Sciences Campus. The company's goal is to continue research and clinical development of the drug and FDA approval.

Korro Bio, based in Cambridge, MA, is focused upon site-directed RNA editing methods which can be used as precision medicine to bring treatments to patients with rare and debilitating genetic diseases. The TTO optioned IP originating from the research of scientists at the Institute of Neurobiology, UPR Medical Sciences Campus. The company secured first round seed funding of \$4 million to continue research and development.

## Portfolio Management for 34 Active Technologies

- MOU Amendments: 7
- Screening and Assessment Reports: 10
- POC/Validation: 2
- IP Protection: 6
- Marketing: 11
- Options/Licenses: 5



## Future Plans

### Knowledge Transfer

On-campus workshops to promote invention disclosure, knowledge of IP basics, marketing, licensing and key agreements

Special topics: Tropical and Neglected Diseases; Life Science/Healthcare Start-up Acceleration; Conflict of Interest Management

### Life Science/Healthcare Start-up Acceleration

Southeast XLerator Network, year two implementation and educational programs for targeted researchers on partner university campuses; access to and support from mentor and venture capital networks

### R&D Collaborations and Licensing

Innovation Challenge Grant: Cooperative Agreement with Express Licensing

Tropical and Neglected Diseases: BIOVentures for Global Health with AstraZeneca, GSK, J&J, Novartis, Pfizer, Takeda and others

### Standardized Agreements for Partner Institutions

- Material Transfer Agreements: UMBTA, MTAs with private sector
- Inter-Institutional Agreements: Management of Co-owned IP
- Conflict of Interest Management

### Expanded Presence at UPR Mayagüez and the West Coast

- New TTO technology manager for engineering/agriculture
- New office location at UPR Mayagüez

### Technology Transfer Internships

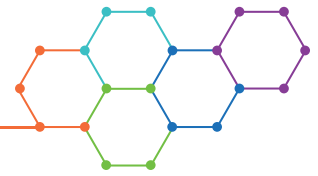
- The TTO will recruit two tech transfer interns from partnering institutions and others for one-year paid internships.
- Careers in technology transfer frequently begin with internships. TTO Interns will gain valuable experience in technology transfer that could enable a career in tech transfer.



# Colmena66

Tu Conexión Empresarial





Colmena66 (C66), a program of the Puerto Rico Science, Technology & Research Trust, is a referral network that links Puerto Rico's entrepreneurs to local and regional business building organizations, or resource partners, that can help them start and grow their businesses. Colmena66 also analyzes the gaps in the entrepreneurial ecosystem and works alongside our partners to address them. Our vision is to cultivate a local ecosystem that is inclusive, diverse and accessible for anyone, regardless of their demographic or socioeconomic background.

In C66, we match the needs of our entrepreneurs and business owners with the services provided by our **212** resource partners, facilitating their access to the right resource at the right time.

### Top 5 reasons why entrepreneurs and business owners contacted us in 2018:

- Startup Assistance
- Business Plan Assistance
- Mentoring
- Loans
- Marketing & Sales

## How did we do 2018?

- 3491 entrepreneurs and business owners reached out to us via our hotline or email seeking support to start or grow their businesses
- 1,200+ entrepreneur referrals (matches) to our Resource Partners
- 1,300+ events and workshops in our Central Calendar
- 7,400+ searches for our Resource Partners in our Resource Navigator™

The majority of our client base of entrepreneurs and business owners are between the pre-venture to infancy stages (75%). About 45% of our entrepreneurs and business owners own a microenterprise, 20% have main street businesses, 20% have an innovation based company and 13% have second stage companies.

In 2018, we learned from our entrepreneurs and business owners that the main obstacles they face before starting a business are: lack of capital or financing, lack of training, government regulations, location, and lack of time. For those who have opened their businesses but are having difficulties in growing their businesses, their main challenges are: lack of capital or financing, marketing and sales, lack of time, lack of training and affected credit.

## The Beehive

### Unleashing the Power of Our Local Ecosystem

Colmena66 has been working tirelessly in the development of the local ecosystem by connecting and organizing local resource partners, government and academic institutions, and other stakeholders. The team developed and executed three main initiatives that aim to eliminate access barriers for our entrepreneurs and business owners, as well as coordinating efforts from our resource partners: Red Colmena66 Meetups, Tu Camino Empresarial, and the Boricua Entrepreneur Fest.

The Red Colmena66 Meetups are convened by C66 with the purpose of getting the resource partners together to discuss the challenges they're facing and identify collaborative solutions to address gaps in services, programs and the ecosystem as a whole. By getting the knowledge and resources together, identifying champions and conveners, as well as intersections where collisions that spark innovations can take place, Colmena66 fosters conversations that inspire hope and actions among the network.



## A word from our Resource Partners

- 91% of our resource partners have met other organizations that provide business building support that they didn't know before, through Colmena66.
- 100% believe that Colmena66 has helped the business building organizations to be more interconnected.
- 97% believe that Colmena66 has helped make the business building resources more visible and accessible to entrepreneurs and business owners.
- 100% believe that Colmena66 adds great value to the entrepreneurial ecosystem.

### Tu Camino Empresarial or TCE

Is a map of local business building organizations that helps entrepreneurs and business owners identify the right resources for their type of business and development stage. This is yet another onramp for entrepreneurs to access the right resources, and it has helped resource partners identify collaborators and areas of opportunity within the ecosystem. During 2018, C66 distributed over 2,000 printed TCEs, and over 800 TCEs were downloaded through [www.tucaminoempresarial.com](http://www.tucaminoempresarial.com)

### Boricua Entrepreneur Fest (BE Fest)

Is an annual event with the mission of fostering an inclusive and collaborative entrepreneurial ecosystem on the Island. The inspiration for this event came from a learning trip to New Orleans focused on understanding their recovery strategies after Katrina.

- 1,157 attendees, 45% over our initial goal
- 72 speakers
- 32 sessions
- 97% of attendees would come back next year (Satisfaction)
- 92% of attendees met business building organizations, or resource partners, that they didn't know before the BE Fest. (Connections)
- 89% of attendees met and networked with entrepreneurs and business owners in other industries and stages of development. (Networking)

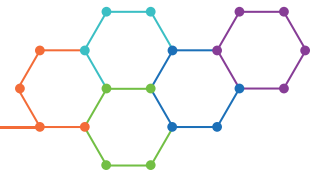
Colmena66 has also convened key players in the local innovation ecosystem to create awareness and increase the pipeline of innovative technology grants, such as the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. As a result of this and other efforts, Puerto Rico is being included in 2019 SBIR Roadtour for the first time. The SBIR Road Tour is a national outreach effort to educate and promote innovative technology grants provided through the SBIR/STTR programs. This means that Federal and State Program Managers that represent \$2.5 billion in early stage funding will be visiting Puerto Rico to meet with technology entrepreneurs and innovation supporters on the Island.

### How are we doing in our SourceLink Community?

Colmena66 is one of more than 50 affiliates of SourceLink, an organization that helps communities in the United States with R&D to identify, connect, empower and measure their entrepreneurial ecosystems. According to SourceLink's affiliate performance ranking, Colmena66 is a top performer among its peers.

The following numbers represent C66's 2018 ranking:

- 4/42 in affiliates using SourceLink Pro
- 4/29 in total searches using the Resource Navigator
- 6/45 in network strength
- 3/47 counseling hours



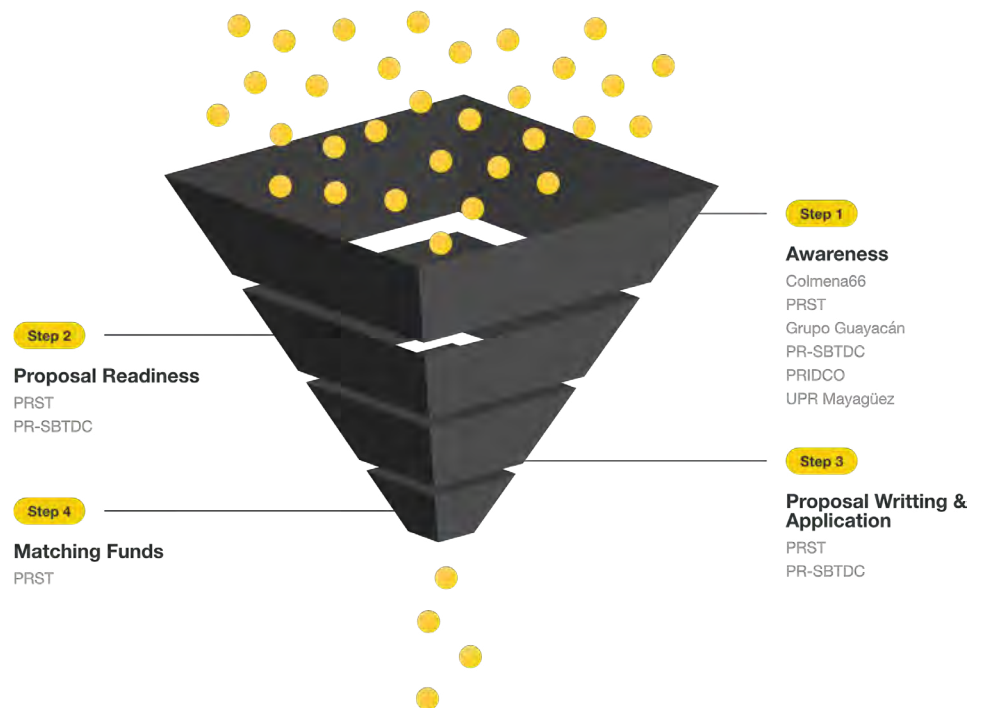
## Connecting the Dots

### Amplifying the Opportunities of the Boricua Innovation Ecosystem

Innovation ecosystems are made of people, different types of entrepreneurs in different stages, and different types of organizations and stakeholders that consistently interact with each other to create new startups. Puerto Rico finds itself having a diverse range of resources that aim to achieve a set of generally common goals: retain local talent, provide better opportunities for those who want to return to the Island, and to attract global talent, while fostering a new knowledge economy on the Island. As a program of the Puerto Rico Science, Technology & Research Trust (PRST), Colmena66 is also dedicated to supporting the development of the technology and innovation ecosystem.

In order to catalyze collaborations and connectivity, Colmena66 mapped out the paths for innovation based companies (Orange Line) and access to capital (Green Line) in Tu Camino Empresarial. This tool has helped entrepreneurs navigate their startup development stages, and has helped us identify gaps in programming or barriers of access to certain resources and opportunities.

In 2018, Colmena66 started convening monthly meetings between resource partners that support entrepreneurs and researchers interested in or in the process of applying for SBIR/STTR grants<sup>1</sup>, or innovative technology grants. These organizations include Small Business Administration (SBA), Puerto Rico Small Business & Technology Development Center (PR-SBTDC), Grupo Guayacán, University of Puerto Rico in Mayagüez, and the Puerto Rico Industrial Development Company.



With the purpose of supporting the PRST goal of increasing the number of applications and winning proposals, we helped define a collaborative structure for applicants that organized the resources in phases: Phase 1: Awareness; Phase 2: Proposal Readiness; Phase 3: Proposal Writing & Application; and Phase 4: Matching Funds. This collaboration has helped organize the available resources, coordinate efforts and define a better support structure for applicants.

This coordination effort has led to Puerto Rico being included in the 2019 SBIR Road Tour for the first time. The SBIR Road Tour is a national outreach effort to educate and promote innovative technology grants provided through the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs. This means that Federal and State Program Managers that represent \$2.5 billion in early stage funding will be visiting Puerto Rico to meet with technology entrepreneurs and innovation supporters on the Island.

<sup>1</sup> "The Small Business Innovation Research (SBIR) program is a highly competitive program that encourages domestic small businesses to engage in Federal Research/Research and Development (R/R&D) that has the potential for commercialization. Through a competitive awards-based program, SBIR enables small businesses to explore their technological potential and provides the incentive to profit from its commercialization. The Small Business Technology Transfer (STTR) is another program that expands funding opportunities in the federal innovation research and development (R&D) arena."



## Access

Puerto Rico's emerging entrepreneurial ecosystem has many attributes that make the Island a favorable place to start or grow a business. Nevertheless, there are certain access barriers that Colmena66, alongside our resource partners, are working to eliminate. For example, some people don't know that there are resources available for them to start or grow their business, or mistakenly think that they have to travel across the Island to find resources and training. Others don't know where and how to access capital for their idea or business, and some people just want someone who can walk them through the overwhelming amount of resources and possibilities.

How do we help eliminate these barriers? Colmena66 helps entrepreneurs and business owners to grow by providing easy access to the right resources at the right time:

### The Resource Navigator™

Through our Resource Navigator™, entrepreneurs and business owners have 24/7/365 access to the 212 resource partners in the Red Colmena66. They can filter their search by industry, business development stage or type of business, as well as by geography and specific needs. Then, they can contact the resource partners listed as a result of their search.

In 2018, our Resource Navigator™ registered 7,443 searches from entrepreneurs and business owners looking to learn and connect with resources on their own time.

### Central Calendar

In one single place, entrepreneurs and business owners can find all the events, workshops and programs created and hosted by our resource partners. This enables access to a diverse range of educational events and workshops, as well as to great networking opportunities throughout the Island that could help entrepreneurs and business owners meet their next business partners, investors or even find the talent they need for their teams.

In 2018, we shared over 1,900 events from our Resource Partners so they could be more visible and accessible to our entrepreneurs and business owners, and over 10,000 users visited our Central Calendar to learn more about these events.

### Colmena66 Blog

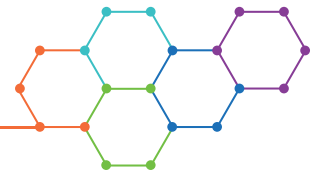
Through our weekly blog, entrepreneurs and business owners can learn about different resources, tools, programs and services that can help them start or grow their businesses. This content is written from the horse's mouth - C66 staff, resource partners and/or entrepreneurs that want to help these entrepreneurs and business owners succeed.

Our top five blogs were read by over 3,200 users, and touched on topics such as: eCommerce permits, tools, resources and access to capital alternatives to get businesses back on track after Hurricane María, the innovation ecosystem in the western region of the Island, and how to grow and reach new markets with programs such as Parallel18.

### Hotline

Entrepreneurs and business owners can call our Hotline to tell us about their business idea or how they want to grow their company. Our Network Navigator then provides initial counseling on whatever the entrepreneur or business owner needs, shares relevant educational content and proceeds to connect them with the resource partners that can best support their needs.

During 2018, we received over 1,000 calls from entrepreneurs and business owners seeking assistance.



## Tu Camino Empresarial or TCE

C66 took on the challenge of visually organizing the Island's business building organizations modeling the KC SourceLink Resource Railway™, from our affiliate organization KC SourceLink. This tool was co-designed alongside our resource partners through the Colmena66 Network Meetups in five different locations throughout the Island. During the Meetups, we mapped out the resource partners according to the services they specialize in providing as they relate to the types of businesses and business development stages defined in TCE.

### What was the TCE Tour?

Colmena66 hosted four events throughout the Island (Mayagüez, Ponce, Gurabo and San Juan), to give entrepreneurs and business owners a walkthrough of Tu Camino Empresarial. In these events:

- Resource partners that are on the TCE gave a 5-minute pitch of their services and programs.
- Entrepreneurs and business owners in attendance had the opportunity of connecting directly with these resource partners by visiting their tables at the Resource Partners Expo.
- The participants had the opportunity of partaking in one-on-one mentor sessions with experienced entrepreneurs and business owners. (The mentor sessions were done in collaboration with Parallel18)

Participant Satisfaction: 4.8 out of a max scale of 5; 78% asked for additional support from C66; over 1,000 registered participants

Mentor Sessions: 280+ mentor sessions; 30+ mentors; 70+ hours of mentoring

Resource Partners: 30 organizations per event; 100% of the organizations believed in the events were of added value to them; 95% overall satisfaction

TCEs: Over 2,000 printed TCE's were distributed ; Over 800 TCE's were downloaded through the website.



## BE Fest

### Co-designing a celebration of our community

The Boricua Entrepreneur Fest is an annual event designed to celebrate the talent that supports the entrepreneurial movement inside and outside of Puerto Rico, educate about business development at all levels, and promote an inclusive and collaborative entrepreneurial community in Puerto Rico.



The BE Fest gathers entrepreneurs and business owners of all stages and industries, business building organizations, academia, public sector and other stakeholders to provoke connections and collaborations, make the abundance of resources and available opportunities visible to our entrepreneurs and business owners, and create an annual space where the local and international public can connect with the entrepreneurial ecosystem in Puerto Rico.

The vision of C66 is to promote the development of an inclusive, diverse and accessible business ecosystem where all people, regardless of their demographics and socioeconomic status, can start and grow their business. Responding to C66's nature, the process of designing the organization and production of the event was carried out collaboratively since day one. The event's agenda was co-designed with the Red Colmena66 resource partners, which enabled us to reach diverse audiences, from all types of businesses, industries and development stages.

The Boricua Entrepreneur Fest's first edition took place on Friday, March 22nd, 2019 at the Puerto Rico Convention Center. Attendees were able to enjoy a full day of keynotes, panels and workshops, and over 70 resource partners that provided them with essential information and tips to grow as entrepreneurs and business owners.

- 1,157 attendees, 45% over our initial goal
- 72 speakers
- 32 sessions
- 97% of attendees would come back next year (Satisfaction)
- 92% of attendees met business building organizations, or resource partners, that they didn't know before the BE Fest. (Connections)
- 89% of attendees met and networked with entrepreneurs and business owners in other industries and stages of development.

## Attendees' Profile

- 57% were business owners
- 42% had a business idea or concept

## Business Stage

- 36% of attendees were in the idea or concept stage
- 26% of attendees were in the growth and expansion stage

## Type of Business

- 26% of attendees have a microenterprise
- 18% of attendees have a second stage company
- 13% of attendees have an innovation based company

## Top Five Industries

- Creative Industries
- Professional Services
- Health
- Restaurants
- Technology

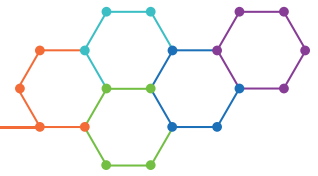
## Where did people visit us from?

People from 62 out of 78 municipalities in Puerto Rico attended the BE Fest, as well as from various cities in New York, Florida and Massachusetts.

According to our post-event survey, BE Fest attendees were able to meet their objectives!

## Networking

- Participating in practical workshops
- Meeting business building organizations
- Obtaining the necessary information to start their businesses
- Receive individualized mentoring
- Personal motivation



## Age Range

- 18% Were between the ages of 18 - 24 years
- 33% Were between the ages of 25 - 34 years
- 23% Were between the ages of 35 - 44 years
- 15% Were between the ages of 45 - 54 years
- 11% Were over 55 + years

## Gender

- 61% of attendees were women
- 39% of attendees were men

Mentor Lounge powered by Animus and Parallel18

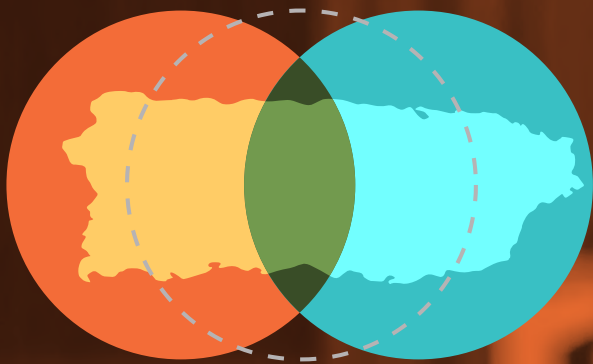
In Colmena66, we strongly believe in the value of connecting emerging entrepreneurs and experienced business owners with mentors who can share learned lessons, tips and expertise. The C66 team has successfully implemented this strategy in our events, and BE Fest was no exception.

- 60+ registered mentees
- 1,120+ minutes of mentoring
- 20 mentors, experts in areas such as: Intellectual Property, Prototyping, Exports, Business Development, Accessing Capital, Business Plan, Labor and tax laws, among others.

## What's next?

The Colmena66 team will continue executing ecosystem building initiatives that have been proven effective in the past year, as well as releasing new tools that will support entrepreneurs and business owners to start or grow their businesses in Puerto Rico.

- There will be four (4) more Red Colmena66 Meetups spread throughout Puerto Rico, focused on identifying the challenges experienced by our Resource Network organizations, as well as to provoke opportunities for collaboration to solve these challenges between the Resource Network. These Meetups will take place Mayagüez, Ponce, Gurabo and Barceloneta.
- The Colmena66 team will release the Tu Camino Empresarial V.2, with additional organizations that can support entrepreneurs and business owners start and grow their businesses. The idea behind the TCE is that it will continue to grow and evolve as the entrepreneurial ecosystem becomes stronger.
- In addition, the C66 team will release a TCE Agriculture version, which will follow a similar structure to the TCE, but focused only on the agriculture sector. This tool will enable those interested in starting or growing a business in the agricultural sector to identify what organizations can support them throughout the way.
- The 2019 SBIR Road Tour is visiting Puerto Rico on November 15th, 2019. The US Small Business Administration (SBA) is making a 16-stop tour that will connect entrepreneurs who work with innovative technologies with the SBIR / STTR programs, and we are hosting them for the first time in Puerto Rico. For our Island, it's a great opportunity since the SBIR Road Tour plays an important role in the development of our innovation business ecosystem and in the creation of small businesses focused on high impact research.
- The Boricua Entrepreneur Fest is coming back! Due to its massive success, the BE Fest will be back in March 2020, looking to support entrepreneurs and business owners that want to connect with other entrepreneurs, learn important skills or information, and connect with the diversity of resources available for them in our entrepreneurial ecosystem.



**PR** RESEARCH  
& INNOVATION



**Meet-ups**





## Mission and Vision

The Research and Innovations MeetUps is a platform that aims to establish a point of departure for the ongoing development of the research and innovation ecosystem -locally and internationally- while simultaneously tackling complex problems that impact the wellbeing of our citizens through innovative solutions based on science, research and technology.

Over time, the program has capitalized on its own spillover effects as it helps drive a more dynamic atmosphere for social impact, commerce, and innovation from the vantage point of shared leadership and collaboration.

## Achievements

While the Research and Innovations Meetups Program originated as a facilitator of dialogues to support emerging business entrepreneurship, its scope has expanded to address emerging complex problems that affect the wellbeing of our citizens from the vantage point of science, research, technology, and innovation. To that end, the program experienced an unintended successful outcome, as it has become a well-recognized convener of a diverse audience group, which has transcended PRSTRT's naturally intended audiences and moved to engage local and international NGOs; the Island's recovery through the CDBG DR funding process; as well as a closer relationship with US Federal agencies such as the US Department of Agriculture and the Environmental Protection Agency. Another important differentiation to be made is the fact that the Research and Innovations Meetups saw a significant increase in the demand for support of internal programs, thus contributing to the structure, delivery, and capacity of the Trust.

The salient achievements of the Research and Innovations Meetups platform for the 2018 (Q3-4) and 2019 Q1-2 are presented below.

### Meetup events

The first six months were characterized by engaging discussions related to disaster recovery, from giving continuity to the Non PRASA solution design to the launching of new endeavors, and the exploration of possibilities. To that end, we produced the last three Meetup events of 2018: *Non-PRASA Community Meetup*; *Networking and convening event for the Response Innovation Lab*, a relaunch of the lab to highlight its new Director, Gilberto Guevara; Dialogue facilitation events for *100 Resilient Cities (Rockefeller Foundation)* initiative for disaster recovery in Puerto Rico.



During 2019, production activity focused on supporting the continuation and evolution of our networking efforts with third parties. To that end, our engagement with the EPA led to the facilitation of two annual events, the *Caribbean Science Consortium Annual Meeting*



in Puerto Rico and its counterpart and the **Caribbean Science Consortium Annual Meeting in USVI**. It is worth noting that -towards the closing of the event- there was a unanimously accepted motion to present the PRSTRT as a new member of the Consortium, a widely cheered idea that required subsequent approval from their Board of Directors. Likewise, our relationship with Universidad del Sagrado Corazón led to the production of a *Science Communication Meetup* supported by the university's Department of Communications. We had our first meetup for STEM Education, produced in order to create awareness on the Trust's new STEM Education Program and to allow for audience input on issues related to challenges and opportunities for STEM education in Puerto Rico.

This was followed by a **Non PRASA communities/Water Sector Meetup**, which resulted in the creation of the **Water Sector Coalition**, an effort geared at reducing duplicity of work among FEMAs Recovery Service Function Group for Water, local and international NGOs, affected communities, as well as PR and US Federal agencies, and the agreement to engage in a shared solution design for Non PRASA communities. Last but not least, we facilitated a dialogue with renowned oceanographer Jon Englander to engage the topic of Sea Level Rise and the possibility of creating a Sea Level Rise Institute for the Caribbean Region..

## Program Support

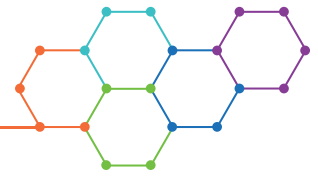
The second half of 2018 was marked by the production of two flagship events for the Trust: the 1st International Symposium: Challenges and Solutions for Aedes Aegypti Control, produced by the PR Vector Control Unit, and for whom we provided support in the production design; the facilitation of the event as MoC; data collection and analysis on audience inputs; and the production of an event report. This was followed by assisting and supporting breakout activities during the Trust's Forward Summit held in the Convention Center Sheraton. Although smaller in scope, but considered very important due to the nature of the audience, we assisted in the design and launching of Junte Gerencial, a new activity for PRSTRT's management staff, so as to bring enable alignment, networking, cross-collaboration, and shared leadership among our program directors. Equally important was our support efforts for the effective launching of Recuperación Agrícola's, which included project charter design, budget forecasting, and document generation, among other important activities.

Unconnected to any of PRSTRT's programs, we engaged talent sourcing, research and solution design for USDA's Reconnect Grant opportunity. We were also part of a collaborative engagement with Relmagina, HUD, and the EPA on accessing CDBG DR - COA funding to address Puerto Rico's efforts.

## Networking and collaboration

These are natural activities pertaining to the program's development and continuous operation, and they are assumed as second nature to the development of relationships among individuals and groups with whom we interact. To that end, we engage in the exploration of opportunities that allow for the weaving of social capital that yields mutually beneficial circumstances for both PRSTRT and its audience groups. Therefore, to meet PRSTRT goals as well as the salient needs of the Island's recovery efforts, we have engaged the leadership of organizations, businesses, and working groups, such as the Puerto Rico Institute of Robotics (PRIOR), who we were able to assist by providing a location for their Summer Program (teaching teachers how to design, program and operate VEX robots, so they in turn may prepare students for revolving annual competitions in Puerto Rico and the United States).

This relationship also signals a stronger connection to NASA's space exploration program, as PRIOR's founder is part of that academic faculty. We also received top staff from TechSoup (supporters of nonprofits, charities, and libraries by providing access to donations and discounts on software, hardware, and services from major brands) and helped them channel their interest in contributing to the Island's recovery by supporting the creation of educational opportunities for non-profit organization staff in Puerto Rico. We also engaged with business executives from SAIC (engineering, IT, cybersecurity) and Adsystech (systems engineering and integration), to explore workforce development activities in Puerto Rico. Finally, the Trust was invited to participate in the **1st Social and Solidarity Economy Conference**, held in Caguas, this past June 2019. This represents a significant opportunity for the Trust to engage economic development strategizing from the vantage point of social innovation, as it sets the pace for new forms of business activity to take place.



## Alliances

We understand that there are levels of activity and engagement prior to achieving a mutual understanding and commitment towards collaboration, which is why PRSTRT subscribe a formal MOU. We have developed a relationship with the Caribbean Climate Hub, a subset of the USDA's Institute of Tropical Forestry, that enables the education of agroecological farm practitioners from our Recuperación Agrícola project, as well as their sustained learning through new digital platforms.

## Future Plans

The aspiration of our endeavors is to expand outreach activities that widen PRSTRT's audience base, and the attainment of its mission and goals, especially for the mapping and support the development of emerging industries and their ecosystems, as we aim to the development of cluster initiatives as demonstrative efforts of a clear path to economic growth and development. As we move forward, the Research and Innovation platform will continue to identify relevant and pertinent areas of discussion and action to further linking social capital, as well as bridging social capital, while simultaneously aiming to expand and solidify the operational capacity of the Trust.

To that end, we are driving new initiatives at the Trust, such as Grants Development, Food Security, Waste Management and Recycling, and Social and Solidarity Economy Network, through collaborative engagements with local, US based, and International academic, scientific, and cultural organizations. Likewise, we will continue to provide strategic support to the operations and development of PRSTRT internal programs such as the Public Health Trust, the Response Innovation Lab, Cultural Heritage Innovation, and the PRVCU, as well as the multi-stakeholder collaborations, like the Water Coalition (Non-PRASA communities).

## Impact Metrics

**4 Meetup events**

**49 Meetings** with key stakeholders

**66 Community stakeholders** engaged

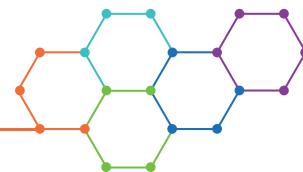
**2 Formal MOU's**

## Areas of Impact

- Disaster Recovery
- Food Security
- Agricultural research and innovation
- Creative Entrepreneurship
- Environmental scientific community (PR & USVI)
- Farm Recovery
- Non-PRASA communities
- Science Communications
- STEM Education
- Sea Level Rise

# EDUCATION AND CAPACITY BUILDING





## Mission

Our Education and Capacity Building initiatives aim to provide participants instruction, mentorship, and other development opportunities in strategic sectors of science, technology, and entrepreneurship. We strive to give Puerto Ricans the tools they need to be more competitive in science and technology fields, or to pursue entrepreneurial initiatives. The Trust supports and funds various programs, in partnership with several stakeholders who promote entrepreneurship, research and investing opportunities, to further economic development in the island. Also, through our Sponsorship Policy we have powered events and activities of R&D, entrepreneurship and innovation.

**The Trust invested more than \$261,299** in science, technology, research & entrepreneurship training initiatives, including the following:

AAA's Annual Meeting Science in Action; InPrende Mujer Innova; Engine4 IoT Lab Fast Track Program; Startup Weekends from Centro de Emprendedores; CIO & IT Leadership Conference; STEmpresarial; Animus 2018; Alpha Astrum Space & Science Day; Alpha Astrum Rocket Day; Agrohack 2018; Consensys Developer Program; Space Summer Internship Program; Congreso Latinoamericano y del Caribe de Bioética; INDUNIV Puerto Rico Pavillion BIO Philadelphia 2019; Engine 4 Hackaton; UAGM Network for Astronomy School Education Workshop; Obsidis Consortia Hacker Lab; MECA Art 2018; Intarz Technologies Space Summer Internship Program; UAGM Network for Astronomy School Education Workshop; SME Digital Forum 2019; UAGM Zemax OpticStudio Optical Design Course; UPR RUM 5th National Crystallization Competition.





## Memorandum of Understanding signed and conceptualized on 2018-2019:

The Trust establish alliances with a diverse range of organization, educational, private and non-profit, and the result is a bigger map of stakeholders to reinforce the Trust mission & vision. These are the organizations with which the PRSTRT has oficialized alliances.

1. 2019-NA-MOU-01 Juntos y Unidos por PR
2. 2019-NA-MOU-02 Instituto de Ciencias para la Conversación
3. 2019-NA-MOU-04 Asociación de Salud Primaria de PR
4. 2019-NA-MOU-06 Wovenware Inc.
5. 2019-NA-MOU-07 UCC
6. 2019-NA-MOU-09 Northeastern University Global Resilience Insititute
7. 2019-NA-MOU-10 Municipality of Bayamón
8. 2019-NA-MOU-11 Chamber of Commerce, Industry, Services and Tourism Brasil
9. 2019-NA-MOU-12 Mr. Andrew Keys
10. 2019-NA-MOU-13 Por los Nuestros-Water Mission Int -PR Community-American Red Cross
11. 2019-NA-MOU-14 Centro para Emprendedores
12. 2019-NA-MOU-15 Ponce School Foundation
13. 2019-NA-MOU-16 UPR
14. 2019-NA-MOU-17 Healthpro Med - HPM Foundation – FCTI
15. 2019-NA-MOU-18 Adm Vivienda Pública Cost Control Company
16. 2019-NA-MOU-19 Adm Vivienda Pública Individual Management & Consultant
17. 2019-NA-MOU-20 Club Rotatorio Dorado
18. 2019-NA-MOU-21 PYXERA GLOBAL
19. 2019-NA-MOU-22 UCC (TTO)
20. 2019-NA-MOU-23 International Economic Development Council
21. 2019-NA-MOU-24 The United States Department of Agriculture, Forest Service, International Institute of Tropical Forestry
22. 2019-NA-MOU-25 Graphic Mapping Tech
23. 2019-NA-MOU-26 VOCES COALICIÓN DE INMUNIZACIÓN Y PROMOCIÓN DE LA SALUD- PRPHT
24. 2019-NA-MOU-27 Univ Interamericana de PR - P18
25. 2019-NA-MOU-28 OBSIDIS
26. 2019-NA-MOU-29 PathStone
27. 2019-NA-MOU-30 SBA (Strategic Alliance Collaboration)
28. 2019-NA-MOU-31 Ponce Health Science University
29. 2019-NA-MOU-32 Executed Country Lab Agreement - WVI PRST

# SCIENTIFIC INVESTIGATORS TAX INCENTIVES ACT



Public Law 101 was approved in 2008 and is known as the *Ley de Incentivo Contributivo a Investigadores Científicos* (or the *Scientific Investigators Incentives Act*). Law 101 is a unique tax incentive to foster research and development (**R&D**) activity conducted at local universities in Puerto Rico, allowing qualified researchers to seek tax exemptions for salaries earned from eligible R&D research grants. Through these incentives, the main objective of this law is to attract and retain distinguished researchers to spur local research activity as one of the means to improve the Island's position in the knowledge economy.

The following is a summary of the impact of Law 101 for taxable year 2018:

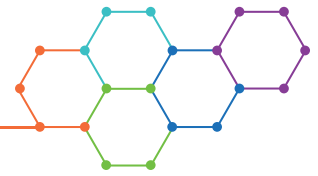
1. **Number of applications processed and approved: 63** (UPR Medical Science Campus: 32; UPR Mayaguez Campus: 15; UPR Rio Piedras: 7; Ponce Health Science University: 7; Universidad Central del Caribe: 2)
2. **Number of Researchers Benefited by the Program: 50** (UPR Medical Science Campus: 21; UPR Mayaguez Campus: 14; UPR Rio Piedras: 7; Ponce Health Science University: 6; Universidad Central del Caribe: 2)
3. **Total amount of Tax Exemptions Granted: \$1.418 million**
4. **Cost-to-Benefit Ratio of Law 101: an estimated 49:1 benefit ratio**, which means that for every \$1 dollar of program cost to Puerto Rico (at an implied tax rate of 29%) it represents an approximate \$49 dollars in benefit for research funding revenue brought to the Island.



# Cultural Heritage Innovation Program



Welcome to the Cultural Heritage Innovation Program, a program of the Puerto Rico Science, Technology and Research Trust. The term Cultural Heritage was reformed after WWII, when nations agreed to protect their cultural and historical values under wars and military conflicts. Then, the Educational, Scientific and Cultural Organization (UNESCO) ratified an agreement with a program to preserve for future generations the world's tangible, intangible and natural legacy as an important economic resource while keep the identity of all societies. Despite Puerto Rico is not under this agreement, we can follow UNESCO and ICOMOS guidelines for the development of a new cultural policy aligned to the intrinsic value and conditions of Puerto Rico in the Caribbean.



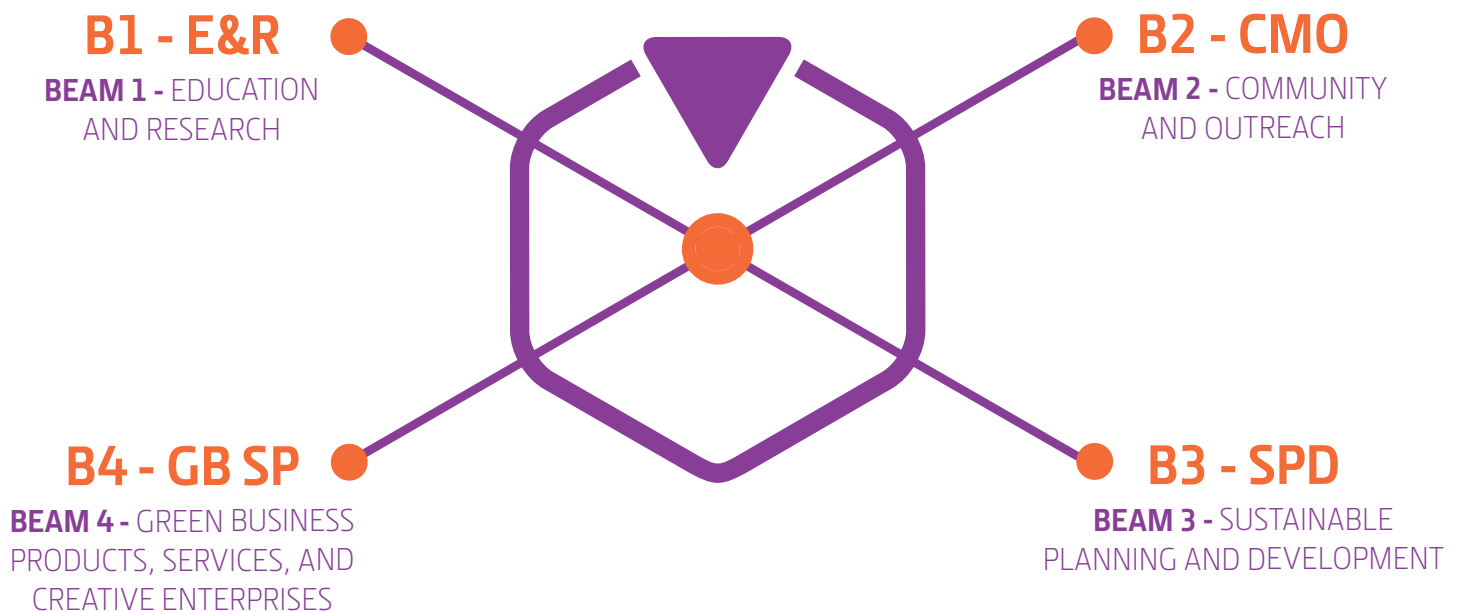
## Mission and Vision

**Our mission** is to facilitate and develop the capacities that advance the Puerto Rican cultural and heritage economy for the well-being of citizens, with a sustainable, self-sufficient conservation model, deployed from the communities and supported by innovation, technology and cultural creative.

**Our vision** is to expand the model for the Caribbean and Latin-American regions and to make Puerto Rico a center of sustainable innovation recognized worldwide, where a new cultural policy can be articulated within the Caribbean's self-sustainable development.

## Program Description

### The model: "The Positive Virus" Ecosystem Body



"When humans take materials from nature and create (negative) forms to destroy it, a (positive) virus emerge to balance the equation, then nature is transformed to an environment-human ecosystem" - JLV

As part of the mission of the PRSTRT, we set technology and innovation as a complementary tool to facilitate the development of the cultural economy within the communities. Based on the proper assessment of the tropical reality (environment) and encompassed by communities (society) historic contours, the preservation and conservation of heritage could be proposed as a core driven force to unify sustainability and resilience. This can be modeled by a simple shape within strategic axis of actions that promote several interactions. This model is part of an adopted environmental planning scheme for a sustainable auto retrieve ecosystem. Due to the possible positives interactions that expand but not deform the system's body, I called "The positive virus ecosystem".

The model proposed for the Cultural Heritage Innovation Program is based on the identification of four (4) beams, now named as "pillars" deployed for the capture of infinite interactions. The strategy under this model is to provide a modal synergic element that induce to sustain, both, economically and environmental integration of knowledge production into economic development.



Using the technology and -state of the art- programs under the trust, the first principle of the model initiates the effect of sprawl possible interactions for collaborations. Even the education and research beam can define better what wealthiest element is necessary by selecting the proper type of interaction. We will discover the intrinsically quality in human society: traditional environmental knowledge (Tsuji and Ho, 2002). This is not new neither an isolated idea. Culture and his conservation are part of an important and intrinsically quality of communities: resiliency. Also, as we approach a linear deployment of resources, a social behavior study for a real bottom up strategy to promote heritage (and natural) resources conservation implies the input of an educational strategy based on distributed leadership. (Bolden, 2011).

## Areas of interest for the development of strategic plans under the cultural heritage sector and the creative sector

### Area 1: Prevention of accidents, Preservation and Management of Natural Disasters for Museums, Archives and Collections

- Training and workshops on area (s) of interest
- Sustainable and integrated planning
- Risk and vulnerability appraisals
- Inventory management with geographic information systems
- Education and Research planning
- Proposals for a health and safety plan for artists

### Area 2: Digitization and Innovation in the Humanities

- Management and ordering of primary historical and cultural sources for the development of proposals
- Support in innovation and management of community projects for cultural and creative heritage conservation
- Application of Virtual technology and other technologies
- Creation of interconnection plans with STEM and STEAM

### Area 3: Development of creative entrepreneurship in the cultural economy

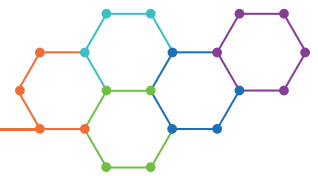
- Creation of a Strategic (update Plan) for the Creative Sector
- Create a cluster map and data base for creative industries
- Provide technical support and entrepreneurship advice in the creative sector at community level with C66
- Creation of interconnection activities of art and culture with scientific research

### Area 4: Development of strategic plans for tourism of interest

- Strategic Plan for DMO
- Identification of patrimonial and creative points of interest for the tourism sector
- Rehabilitation of urban and rural spaces for the development of self-sufficiency community projects

### Area 5: Oso Blanco Project

- Design and planning of the Oso Blanco Museum Exhibition and Open Conservation Lab (phase 1)
- Creation of a strategic plan for the development of the Caribbean Innovation Center
- Technical support in the design of the new CIC building



## Area 6: Grants and Funding Opportunities support: External funds and management of financial support

- Database management of external funds for subsidies for the heritage and creative sector
- Management of proposal budget and ordering of projects and plans
- Technical support in GIS
- Technical support of management and budget
- Technical support in research and ethics with human subjects



Conceptual layout design in 3D of the Oso Blanco Museum Exhibition and Open Lab. (summer 2020)



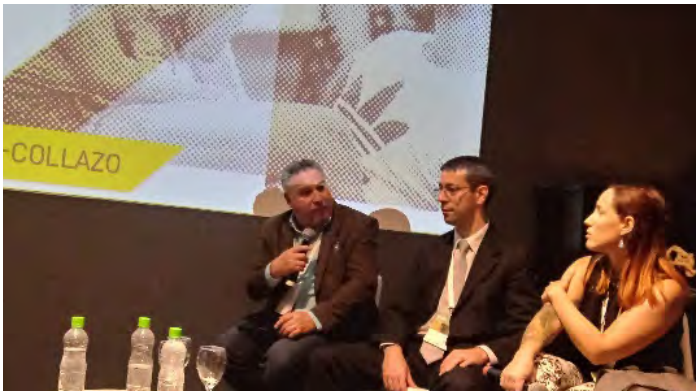
Conceptual layout design in 3D of the Oso Blanco's Caribbean Innovation Center (summer of 2025)

## D. Achievements and Impact

Area of Interest	Achievement Description	Date/Period	Number of Persons Impacted
6	Speaker invited to Culture 21 World Summit Buenos Aires Argentina	April 3-5 2019	>150
1	Organization of the First Heritage Emergency National Task Force meeting	March 2019	>35
1	Organization of a first Audiovisual Preservation Exchange (APEX with ArchiRed and NYU)	June 4 2019	>40
6	Program Co-Coordinator for the NASA's Disaster Preparedness Workshop: "Resilient Recovery Approaches: Using Earth Observations to Understand Vulnerability and Exposure in Land and Infrastructure Planning"	August 6-8, 2019	>80
1	Speaker invited to: ALCTS Annual Conference in Washington DC: "Better Networking for Disasters: Improving Participation and Coordination for Disaster Response and Recovery of Cultural Heritage"	June 21	>50



## Culture 21 Summit in Buenos Aires Argentina



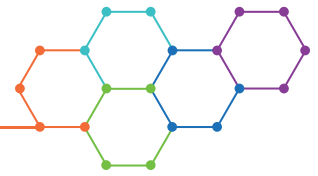
## Future Plans

### Joint Projects ongoing



### Future





## Current activities, Plans and Works

### Our Team - New Members

CHIP hired Alitza Cardona as an Intern in Historic Buildings Research and as a temporary Historic Site and Community Research Assistant and Shirley McPhaul as CHIP IT Developer Assistant. We want to welcome both as part of the CHIP team.

CHIP has been working with the final steps for the last versions of the OnePager, the micro website and the White Paper in which CHIP described the strategic plan for the operation of their projects. OGMA, a P18's generation 6 company, will help CIP with the Spanish translation of these platforms to convert it in the main Caribbean Languages: French, English, Netherland.

CHIP has the honor to be consult Dyanis the Jesús, from ByDesign Company, former PR Creativo 18 and Ricardo Burgos as consultants in the Creative Industries sector. We already put our hand together for a baseline of what we will call the Creative Sector Strategic Plan 2025. We will arise the level of importance of the creative economy as a new trend to do business and develop the orange economy model in Puerto Rico. We will seek to hire a Creative Sector Coordinator to the end of this year.

### Alliances

Cultural Heritage education is one of the most important assess generating the contours for a cultural economy. In that sense, we strength our relations with the Vice President of Academic and Research Affairs at the UPR system, Dr. Ubaldo Córdova. We started soon three (3) important projects:

- Digital Humanities
- A Professional Certificate in Art Forensics
- Proposal for a Minor curriculum in Art Conservation
- A proposal for a MS. In Tropical Heritage Conservation

CHIP has a final version of an MOU with the Graduate School of Planning, at the UPR Río Piedras. This mean that we will have at least two (2) graduate students with a strong background in GIS and one (1) senior graduate student for six (6) months.

CHIP will coordinate an MOU with the Faculty of Arts and Sciences at UPR Mayagüez. We already started a collaboration plan with Dr. Mary Leonard, Filmmaker professor at the Filmmaking certificate program in UPRM for January 2020.

### Activities

**HEART:** A Re-training seminar on Heritage Emergency Rescue with FEMA and ArchiRed, hosted in Training Room 2 on Cultural Heritage Innovation Program. March 8 2019.

**Culture 21:** 3rd Global Summit in United Cities Local Governments, Buenos Aires Argentina, Abril 3-6, 2019. Our program presented a conference supporting climate change as a real driver and the reaffirmation of the 2°C degree limit along with Climate summit in Paris 2018.



**APEX.** In an effort with ArchiRed, NYU and local organizations we hosted in Training Room 2 a section of Technology and Funding research to audio video preservation materials, on June 6, 2019.

**ALAS Annual Conference** in Washington D.C., June 22, 2019. Our program presented the risk situation and disaster response after hurricane María.

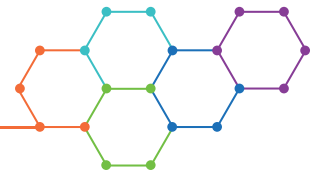
**Puerto Rico Museum Association Annual Conference.** This activity will be held in José Campeche High School in San Lorenzo. Planned for October 18, 2019, the main topic will be the presentation of the Echale un Ojo Al Arte! Proposal. The design is a STEAM- Conservation=PBL (Project base learning) framework to engage communities and schools in an integrated Conservation ecosystem. We will support the PRMA with technology and innovation to design and deploy the webpage and a possible application for Android.™



PRSTRT- APEX June 6 , 2019

Along with Dr. Irene Esteves, Professor at UAGM we are coordinating the visit of Forbes 2016 Price, Dr. Carol Mancusi. This distinguish lady is one of the most influent people in Modern Art Conservation. The visit will allow the CHIP to present the Oso Blanco Museum Exhibition and Open Lab Project, a brief presentation of Conservation status in the Island, then Dr. Mancusi will deploy some notes over Modern Art Conservation in US.

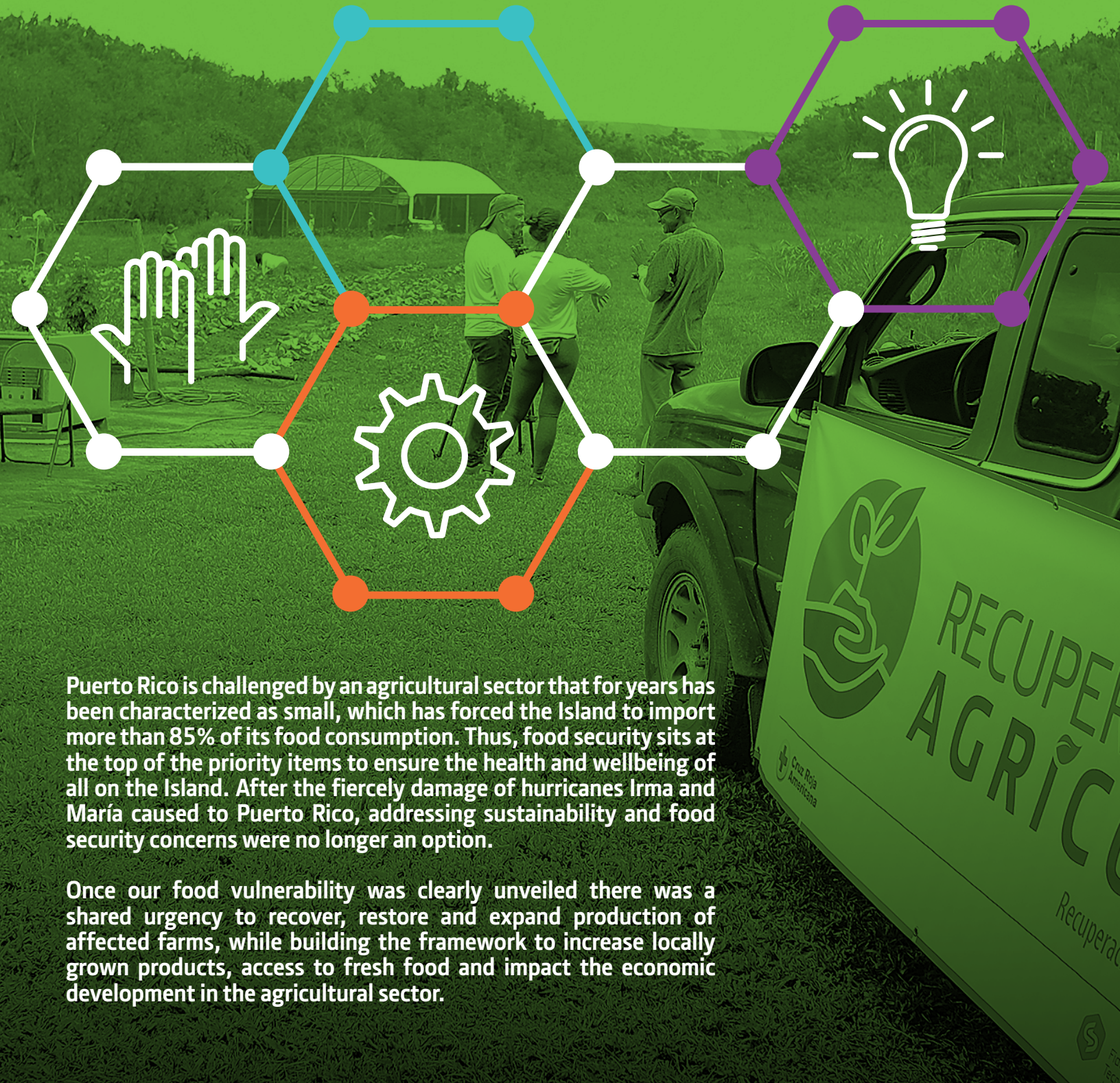
Dr. Johnny Lugo was granted with a 3,000 EU for a Cultural Heritage Stewards in Challenge Circumstances, held by Price Claus and Smithsonian Institute on November 3-9 , 2019.



**Buenos Aires, Argentina-** La tercera Cumbre de Cultura de Ciudades y Gobiernos Locales Unidos (CGLU), se celebró del 3 al 5 de abril, junto al International Council on Monuments and Sites (ICOMOS), en el emblemático barrio La Boca de la capital argentina. Allí, el Dr. Johnny Lugo Vega, director del Programa de Innovación del Patrimonio Cultural, del Fideicomiso para Ciencia, Tecnología e Investigación de Puerto Rico (FCTIPR), destacó la importancia de la conservación sostenible del patrimonio cultural ante el efecto del cambio climático sobre este en Puerto Rico, así como el rol del Fideicomiso en crear planes de resiliencia. El evento incluyó tres días de secciones con representantes de diferentes países del mundo. Los temas abarcaron desde el desarrollo de industrias creativas, donde Buenos Aires se destaca con un 10 % en ese sector de la economía; la innovación en arte y tecnología, y el reto de proponer, en una discusión seria, el efecto del aumento en el nivel del mar y la intensidad de fenómenos naturales, como los huracanes, en el Caribe. El panel, en el que participó el Dr. Lugo Vega, contó con otros panelistas, como la arqueóloga ambiental puertorriqueña destacada en la Universidad de California, en San Diego, Dra. Isabel Rivera Collazo, quien le extendió la invitación. En esta sección, se lanzó el desafío individual de apoyar el tratado de París y mantener las emisiones en el planeta por debajo de dos grados: “Es responsabilidad de cada uno de ustedes, al salir de esta conferencia, mantener un compromiso firme en la ratificación del acuerdo climático en París, ahora en la venidera cumbre de COP25”.



# RECUPERACIÓN AGRÍCOLA



Puerto Rico is challenged by an agricultural sector that for years has been characterized as small, which has forced the Island to import more than 85% of its food consumption. Thus, food security sits at the top of the priority items to ensure the health and wellbeing of all on the Island. After the fiercely damage of hurricanes Irma and María caused to Puerto Rico, addressing sustainability and food security concerns were no longer an option.

Once our food vulnerability was clearly unveiled there was a shared urgency to recover, restore and expand production of affected farms, while building the framework to increase locally grown products, access to fresh food and impact the economic development in the agricultural sector.



## Description

Being characterized as a solution-driven organization the PRSTRT took a step forward in building a farm recovery program with a bottom-up approach. In October 2018, the **PRSTRT** teamed up with the **American Red Cross (ARC)** to develop and manage **Recuperación Agrícola**, an 18-months micro-grant program to provide **450 underserved farmers** essential resources and support to recover and become more sustainable. The program was fully designed with farmers' needs in mind to helping them return to pre-storm productivity levels, while increasing self-employment and entrepreneurial opportunities in this emergent sector. A **\$3 million-dollar funding** was allocated to support this first-time farm recovery initiative.

**On October 24th, 2018 Recuperación Agrícola was launched** at a woman-owned farm in Las Piedras, Puerto Rico, where approximately 30 other farmers, mostly women, were able to participate and learn about the benefits of the program. The launch event also marked the **kickoff date for the program's marketing and promotion campaign**. It brought closer organizations and stakeholders in order to establish collaboration and spread the word among farmers of different regions on the island about this new supporting opportunity for farm recovery. Simultaneously, we were able to complete the design and configuration of the electronic application in **WizeHive, licensed platform for the processing and management of microgrant applications**.



Program Launch Event

Application period was then opened until February 28th and made available to local farmers and beekeepers. However, we provided priority to targeted groups such as **women, veterans, agroecological farms, beekeepers and small farmlands (20-acre or less)**, during the selection process.

### Program requirements

- **Farmlands and apiculture activities**
- **Farm business activity or operation established** prior hurricanes Irma and María (at least 2 years, preferable)
- **Farms that were damaged by the hurricanes**
- **Farms that haven't received economic recovery assistance** from the government (local, federal)

### Program benefits includes

- **Micro-grant contribution of \$1,000**
- **Farm tools, equipment and supplies**
- **Clean-up and recovery brigades**
- **Capacity Building**
- **Topography data (Drones assessment)**
- **Assistance and professional services**

## Achievements

### Our team

In a short-term period, the PRSTRT was able to establish all the necessary infrastructure to fulfill the program's goals and requirements. A complete team of one (1) Program Director, three (3) Program Assistants, one (1) Coordinator, a social media specialist and one (1) Consultant was conformed to support the day-to-day operation, marketing & communications efforts, and project administration. Also, an evaluation structure was designed to address proper application evaluation, approval, and award. We established an evaluation committee with in-house resources who voluntarily dedicated work-time to process incoming applications and participated in repeated committee meeting sessions.



Kudos and appreciation to all fully-committed committee members: **Dr. Carlos Baez** from the Technology Transfer Office, **Agro. Fernando González** from the Puerto Rico Vector Control Unit, **Dr. Martín Montoya** from the Puerto Rico Health Trust, and **Ernesto Cruz** from Research and Innovation Meetups.

### Reaching out to farmers

We carried out the **RECUPERA TU FINCA tour**, which marked an important milestone of the project, as it enabled us to substantially increase the number of received completed applications before February 28th. We reached out to the Puerto Rico regional directorship of the Department of Agriculture in order to coordinate a rollout of Recuperación Agrícola's visits and promote the program. At the same time, we provided on-site assistance to hundreds of farmers in completing their online applications.



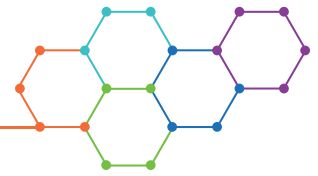
Recuperación Agrícola's team performed a total of **10 regional visits** that included:

- Naranjito (1/18),
- Las Piedras (1/23),
- Añasco (1/24),
- Camuy (1/29),
- Utuado (1/31),
- Yabucoa (2/7),
- School of Apiculture of Fajardo (2/15),
- San Germán (2/21),
- School of Apiculture of Camuy (2/25)
- Ponce (2/26)

Alongside these visits, we put in place a plan to call farmers who had started the application process but had not yet completed it. Program Assistants contacted about 400 farmers to either make them aware that their application was incomplete and/or assist them to complete and submit their applications. We complement this effort with an emailing campaign, as well.

We also engaged with other collaborators and community-based organizations along the way in order to promote Recuperación Agrícola's initiatives and encourage participation. Some of these organizations include:

- World Central Kitchen,
- El Josco Bravo,
- Mercy Corps,
- Para La Naturaleza,
- Hispanic American Institute,
- Hispanic Federation,
- Agro-Mujer,
- Asociación de Agricultores Camuianos,
- COSSAO
- Colmena 66



Alongside, our **website** and **social media fan page** were established, and a **media tour campaign** was successfully executed. After the application deadline, the social media strategy and campaign has continued but shifted toward promoting results and awareness of key elements of the program. Also, we continue using our network to share participants' testimonials, and promote local farms and locally grown products consumption.

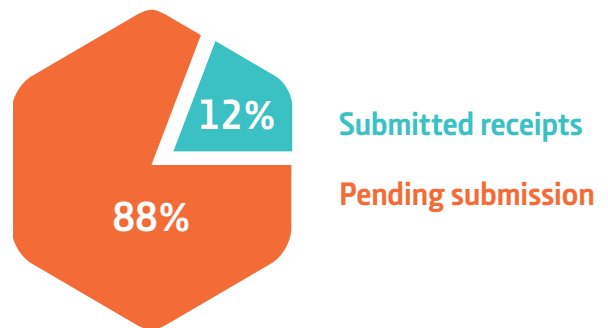
Thanks to all these efforts a total of **790 submitted applications were received**. By the end of April 2019 our goal to complete **450 micro-grant awards was fully accomplished**.

#### Where does the money go?

REACH	2,441,049	REACH average per post	1k - 2k
IMPRESSIONS	3,670,573	SHARES average per day	10-30
LIKES	3,636	WEBSITE visits	12,358
POSTS	191		

Early in the process we incorporated BUREA as a key program collaborator to collect and manage the receipts submitted by recipient farmers in order to maintain record of the micro-grant cash contribution spending. BUREA is a local startup company specialized in consumer receipts management using a mobile application.

Our goal with BUREA is being able to provide visibility of money spending for compliance and data analysis purposes. So far, **88% of farmers have submitted their receipts**, partially or wholly.



#### Supporting the local economy through this project

One important part of the program is being able to provide farmers with the specialized tools, materials and equipment needed to support their recovery and increase their production. In order to do that, we provide vouchers that farmers must redeemed at specific supplier. As part of our strategy, our Purchasing team reached out to as many **local suppliers** as they could to maintain our commitment to support the local economy through this project.

Over one million dollars in vouchers has been issued to farmers. As of August 2019, a total of **16 local suppliers have been contracted**.

- |                           |                                       |                                |
|---------------------------|---------------------------------------|--------------------------------|
| ■ Agro Empresas San Pablo | ■ Granja Avícola Pujols               | ■ Apiarios Caraballo           |
| ■ Agro Servicios          | ■ MotoCultores                        | ■ Para la Naturaleza           |
| ■ Antillas Powers         | ■ Outek                               | ■ Rico Tractor                 |
| ■ C-Red (Daniel Serrano)  | ■ Bella International (HONDA tillers) | ■ RB Power                     |
| ■ Desde Mi Huerto         | ■ Reforesta                           | ■ Puerto Rico Water Management |
| ■ Agro All Steel          |                                       |                                |



### Cleanup and Farm Work Brigades

**Advantix Engineering Corporation, Econet Soluciones Ambientales and Organia**, local small businesses, came on board to provide recovery work and machinery brigades to selected farms. As of August 2019, a total of **29 farms have received work brigade services.**

Some of the recovery work performed includes: farm storage construction, roofing repairs to farm structures, land recovery and preparation, fence repairs and reconstruction, water systems, road cleanup & natural material disposal.



### Volunteer Work

Aligned with our community engagement and commitment we have done 2 Volunteer farm work events.

- May 4th, 2019 – We coordinated and participated in the first volunteer work brigade along with some **ARC Board members** from the New Jersey region, and members of the **ARC Puerto Rico recovery team**. This event took place in **Finca NOA, a woman-owned and agroecological farm located in Toa Baja, Puerto Rico.**
- June 28th, 2019 - Due to the great success at Finca NOA, we coordinated a **second volunteer work group** with a group of eager PRSTRT employees, from different programs. This new instance took place in **Rio Chiquito Orchard, also a woman-owned and agroecological farm located in Luquillo, Puerto Rico.**

Volunteers had the opportunity to learn first-hand about agroecological and sustainable farming fundamentals, what is like to work at a farm, and the great impact Recuperación Agrícola project is having in the island's recovery framework.

### Organia - Advantix Econet Vendors Brigades





## Building Capacity and Resiliency

We have designed a complete capacity building program for farmers looking to support their continuous and sustainable development. To accomplish our objectives, we engaged strategic partners to provide targeted training programs, workshops and sessions. Some of these are:

- 8 training sessions by AgrolInnova, an agribusiness incubator.
- 2 agroecological farming workshops with El Josco Bravo, a role model agroecological farm project. These workshops are held in the farm and are divided in two parts, informative and practical, for better understanding on how a sustainable farm approach can provide a high production and efficient operation by utilizing and protecting natural resources.
- **INprende**, a PRSTRT partner, joined us to develop and present a new version of *Mujer Innova* by tailoring it to women's farmer's needs. That is how **Mujer Innova edición Agroempresarias** was born. In collaboration with INprende we coordinated and hosted the event **Mujeres Innovando en la Agricultura on June 18th**, at the University of Sagrado Corazón with a **participation of +100 women from the agricultural sector**. Besides serving as the kickoff event to *Mujer Innova edición Agroempresarias*, the event's intent and design was focused on empowerment and motivation to women farmers. This course program consisted of four (4) training sessions plus direct counseling hours with subject matter experts on specific business areas. Application was opened from June 18th until June 27th, a total of **215 applications were received**. Then, thirty-five (35) women were selected to participate from the training sessions and 20 of them were selected to receive one-on-one counseling. A graduation event was held on September 4th, where participants had the opportunity to present their business pitch and showcase their products.

The agricultural-tourist sector has evolved into one of great potential and interest among the general public as well as investors. That said, a unique education module: **Desarrolla Tu Proyecto Agroturismo Ecológico** has been designed and developed by INprende for Recuperación Agrícola to support access of participants farms to this niche market. The course just started with 25 agroecological farms enrolled and is expected to extend until November 2019.

## Events

### Mujeres Innovando en la Agricultura

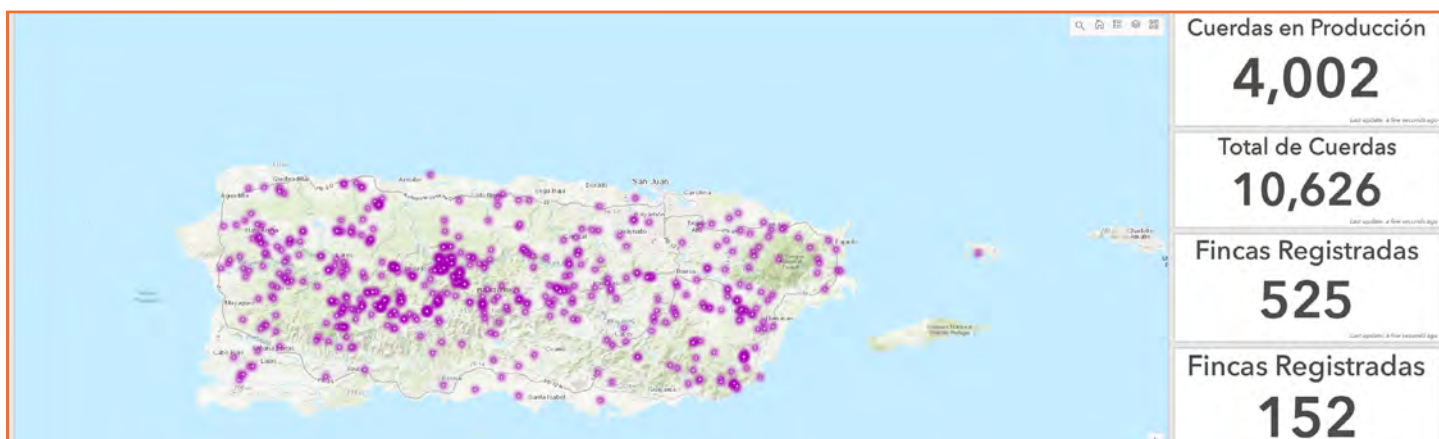




## Desarrolla tu proyecto agroturístico ecológico



## GIS integration and farm drone's assessment



One essential contribution to this project is the integration of technology and data elements such as the use of GIS to provide visibility and accessibility of the sector and the use of specialized drones. One first layer of information has been arrayed thanks to the support of our in-house GIS team. We also have partnered with Puerto Rico Drones Academy to perform drone flight at selected farms to generate topography specific information to improve farm productivity.

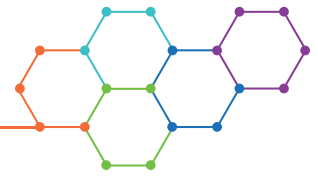
## Testimonials



“Gracias a ustedes he podido aumentar la producción de mi finca. Desde que llegaron los insumos y materiales he sentido mucha motivación para seguir adelante.” – Gabriel Berríos, Caguas



“De todas las ayudas que se ofrecieron post-María, Recuperación Agrícola representó para nuestro proyecto la aportación principal para recuperar nuestro proyecto agrícola y acercarlo al nivel óptimo que queremos.” – Crystal Díaz, Cayey



## Metrics

**790** RECEIVED  
APPLICATIONS



**450** MICRO-GRANTS  
AWARDED



**\$3** MILLION-DOLLAR  
FUNDING



**29%**  
WOMEN



**17%**  
AGRO-ECOLOGICAL  
FARMS



**5%**  
VETERANS



## Future Plans

### ■ Adding **75 new farmers** to the program:

We will continue to move forward with our commitment of contributing to food security and help recover small farms and apiculture activities on the island. Following that, we separated some program funds to accept 75 new farmers and beekeepers into the program. **This will increase our impact from 450 farmers up to 525.** These farmers will receive vouchers for farm tools & materials, and equipment. Also, they may qualify to receive recovery & cleanup work brigades, capacity building, drone's assessments and professional services. These farmers will be selected from the ones who originally applied to the program but due to funding limitations weren't able to be included before.

### ■ Continue the Capacity Building program:

We have built a robust capacity which will continue to grow while we include new partners to tackle key areas of interest. During the upcoming months we will be hosting **4 new training sessions on agroecology topics** with **El Josco Bravo**. This will complete our series of 6 sessions dedicated to developing agroecological farming knowledge to increase awareness and promote its sustainable and amicable farming approach among small farmers.

We will be hosting along 4 training sessions with the Caribbean Climate HUB dedicated to impacts of climate change in agriculture. Also, we will present some HUB digital tools suitable to farmers, such as: **Farm planning tool, Agricultural statistics tool, US Drought Monitor, Drought Impact Recorder, and weather stations for farmers (CoCoRaHS), and other resources and information.**

AgroInnova training will continue thru December 2019.

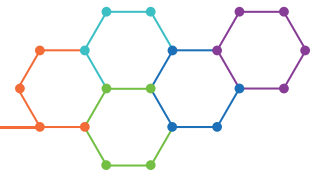
### ■ Besides all the above, generating relevant and accurate data of the agricultural sector in Puerto Rico and incorporating technological resources are critical contributions to partners, collaborators and industry stakeholders considered a catalytic factor for the development of future projects and investments to support local food ecosystem.



# RESPONSE INNOVATION LAB



The Response Innovation Lab (RIL) aim is to complement the traditional humanitarian system by adapting interventions and methods of humanitarian operations to more effectively meet the needs of populations affected by crisis. The RIL develops, tests and rolls out proven concepts that overcome context-specific problems or barriers to aid delivery and community recovery. On the ground amongst humanitarian agencies, innovations will work toward reducing the suffering of those affected by crisis and help communities to recover faster and build back better.



## Mission and Vision

- The mission of the country lab is to create a diverse humanitarian innovation ecosystem, including private sector, entrepreneurs, academics and more, bridging the global to local divide, where quality innovation is commonplace to humanitarian action.
- The Vision of the country lab is to provide one or more of the services the RIL provides in the functions of Convene, Matchmaker or Support while observing the ethical standards and principles of humanitarian purpose, autonomy, maleficence, experimentation and justice to real time solving of problems in large-scale humanitarian emergencies and protracted crises.

## Milestones

- Promote the use of the RIL methodology among local universities and the Puerto Rico Department of Education to produce prototypes applied to Response.
- Catalog of innovations and collection of recommendations to improve response from multisector areas, specializing in communication, energy and emergency management.
- Production of Ethical and Humanitarian Law training to be applied to first responders.
- Production of a Job Aid for First Responders and organized community

## Impact Metrics

The country lab will:

- Hold two convene meetings annually
- Refer three innovations for Response to the SMEs
- Increase the number of SMEs by a dozen
- Engage three institutions like FabLabs, Maker Spaces, commercial machine shops and contract manufacturer for the production of prototypes

## Future Plans

- The country lab will engage with Georgia Tech Institute for the development of a Modular Manufacturing Facility to provide the contract manufacturing to support bio-pharma, medical devices industry while providing the capacity for the local innovators to mass produce customer goods. This capacity will be at the service of innovators to produce the Minimum Viable Product (MVP) and the final prototypes for market testing.
- Increase the funding base in order to engage in the promotion of the manufacturing of prototypes developed from capstone courses by local universities. The funding will also be available for innovators from the private sector proponents of solutions to the challenges in the humanitarian arena.
- Support the formation of modular portable light manufacturing kits to be deployed to the Puerto Rico Department of Education in support of their STEM and Entrepreneurial programs. These kits will be used on a rotating basis to provide the widest use of the machinery and spur competition for the access to the equipment.



# STEM

EDUCATION PROGRAM





Created in December of 2018, the STEM Education Program aims to improve the quality, breadth and depth of STEM and Career Technical Education initiatives in Puerto Rico through meaningful alliances, innovative projects and community outreach. Priority is placed on the future. Attention to the way our educational ecosystem works and what it requires to succeed, the program's mission is geared towards fostering an educated workforce ready to engage and innovate in the fields of Science, Technology, Engineering & Mathematics, while contributing towards the economic development of the island.

## Mission and Vision

Our Vision: Serve as the leading STEM/CT education organization in the island.

Our Mission: Reimagine and lead the way towards STEM and Career Technical Education innovation in Puerto Rico

## Areas of focus

### STEM Education Public Policy

Lead the effort to establish a Puerto Rico STEM Education Strategic Plan that charts the path towards cutting-edge education within the island's education system.

### Strategic Partnerships to advance STEM Education in Puerto Rico

Leverage resources, tools and necessary convenings to avail both formal and informal STEM education programs that enhance the professional capacity of our community.

### Support the local STEM Education ecosystem for equitable access for all

Provide effective leadership to make STEM/CT Education experiences available, not only to those already inclined towards a STEM or CT career, but for everyone.

## Achievements

### Puerto Rico Department of Education

In January of 2019, the Puerto Rico Science, Technology and Research Trust signed a Memorandum of Understanding to collaborate in the development and operationalization of the Puerto Rico STEM Education Strategic Plan. The agreement was ratified by current Secretary of Education. The work towards completion of the plan is supported by organizations like *Ciencia Puerto Rico*, *Johnson & Johnson* and the *Smithsonian Science Education Center* in Washington D.C.

This plan will also include the strategic development of seven STEM Education Hubs, parallel to the educational regions, where nonprofit organizations, private sector, universities and others can focus efforts in supporting STEM ecosystems for equitable access.

### Microsoft Girls STEAM Challenge

In March of 2019, the STEM Education Program, in conjunction with Microsoft Puerto Rico, developed the Girls STEAM Challenge, a competition to raise interest and competitiveness of female youths in the areas of Science, Technology, Engineering and Mathematics.



With over 100 entries received, 10 projects were evaluated during the final round of the competition. Two (2) winners were selected, one in the Middle School Category, and one in the High School Category. Participants received prizes on behalf of Microsoft and the Puerto Rico Science, Technology and Research Trust, including invitations to exhibit their projects during the Sea Level Rising with marine biologist John Englander.



## ArcGIS Certification for teachers

Puerto Rico Science, Technology and Research Trust, and its STEM Education Program, entered an agreement with ESRI technology distributor Geographic Mapping Technologies, Inc. (GMT) to certify a total of 210 teachers in ArcGIS software -the industry standard in mapping data. The goal of the project is to turn these teachers into mentor/coaches in order to provide students with a professional credential as ArcGIS Data Collectors & Map Makers. Once completed, the project has the potential to have up to 5,000 certified high school students before their graduations.

## VR Summer Camp 2019

In July 2019, the STEM Education Program offered its 3rd Virtual Reality Summer Camp. This time, the camp reached both Ponce and San Juan thanks to the collaboration of *Ponce Health Sciences University* and *Universidad del Sagrado Corazón*. The program served a total of 96 students, 60% of them coming from public and home schools; a marked difference from previous years. The program also reached a mission milestone raising female participation by 15%, as compared to the 2018 edition.





## Impact Metrics

- 15 % Increase on female participation in STEM Learning activities
- 3% Increase on public and home school student participation in STEM Learning activities

Collaborations include:

- |                                       |   |
|---------------------------------------|---|
| ■ Puerto Rico Department of Education | ■ American Chemical Society – Puerto Rico Chapter |
| ■ Microsoft Puerto Rico               | ■ Science on Wheels                               |
| ■ Ponce Health Sciences University    | ■ Georgia Institute of Technology                 |
| ■ Universidad del Sagrado Corazón     | ■ Oregon Department of Education                  |

## Future Plans

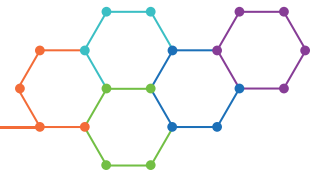
In the upcoming year, the STEM Education Program will continue the effort of re-imagining the future of education through innovative and meaningful partnerships, great programs and the development of new projects geared at turning the island towards a faster pace of student and teacher development. 2020 will also see the operationalization of the Puerto Rico STEM Education Strategic Plan, as well as see the results of its ArcGIS Certification Program.

Additionally, already established programs like the Virtual Reality Summer Camp will extend its offer to include the Special Education population in a collaboration with a local municipality.

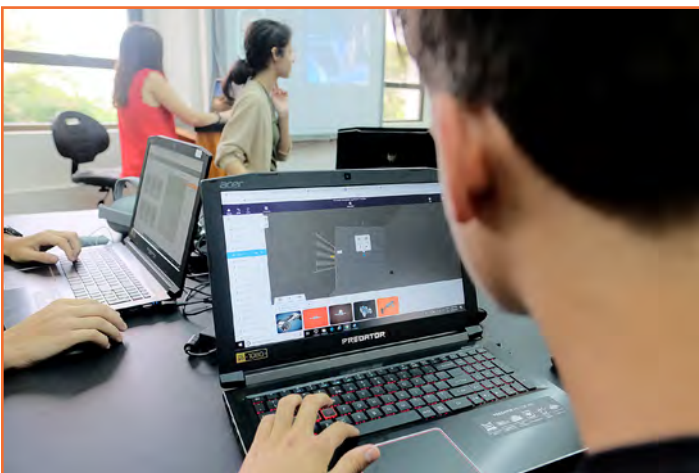


## VR Camp 2019 - San Juan





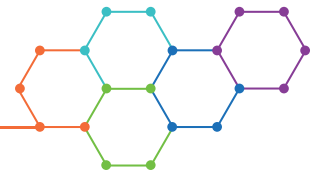
## VR Camp 2019 - Ponce





# Resiliency and Business Innovation





## Program Description

The Resiliency and Business Innovation Program (RBI) is an EDA i6 grantee, and part of the Puerto Rico Science, Technology and Research Trust (PRSTRT). The program will provide business resiliency training, university faculty for research support in documenting resilient, development of proof-of-concept, educational support to businesses on resiliency methods and concepts, and assistance in soliciting Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) funds. RBI also coordinates with economic development officers their exposure and training to issues of business resiliency and better management of risks.

The RBI has partnered with institutions of higher education, other nonprofit organizations, professionals and business trade associations and the Response and Innovation Lab (RIL), another program based at the PRSTRT to promote the identification of innovative practice that foster resiliency in the business community. RBI is also committed to workforce development.

## Mission and vision

Assist companies (in Puerto Rico) to develop an innovation (idea, product, or service) that they have identified or created after a disaster and can be commercialized.

To build a model that will benefit Puerto Rico and globally by identifying, conducting proof of concept and planning for the development of resiliency products based on innovations that create economic opportunities after a disaster.

## Milestones

- First grant received by the PRSTT from EDA to create resiliency in business programs.
- Program started on a fulltime basis in April 2019.
- Partnered with the RIL on the special risk presentation about the Sea Level Rise in Puerto Rico aimed at the private sector with the participation of over 125 professionals, June 4th, 2019.
- Developed resiliency training offers to be delivered in conjunction with the PR Chamber of Commerce, the PR Manufacturers Association, private university systems Business Schools, Foundation for Puerto Rico, PRIMEX, and other entities.
- Assisted in the creation of a MOU's with the PR Manufacturers Associations and the PR Chamber of Commerce.
- Designed "Disaster Preparedness for Resiliency" information material, distributed to businesses, professional associations and PR emergency managers.
- Coordinated a Resilient workshop targeted to economic development directors with international speakers.

## Future Plans

- RFP for researchers to develop proof of concepts and papers related to innovation and resilient.
- Support special presentations by federal agencies to educate business on risk reduction and resilient techniques.
- Create and publish case studies on business resiliency.

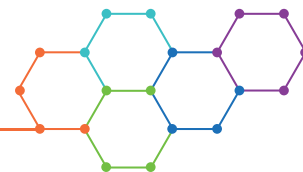


# Puerto Rico Public Health Trust



The Puerto Rico Public Health Trust (PRPHT) is a program created in 2017 by an amendment to the 2004 law that created the Puerto Rico Science, Technology and Research Trust (PRSTRT). The objective of PRPHT is to improve the health of communities in Puerto Rico and Puerto Ricans abroad through strategic alliances and collaborations.

Its mission, vision and objectives were developed with a group of collaborators that included the participation of the Puerto Rico Department of Health, universities, health care providers, companies and community leaders, among others.



The PRPHT was launched on April 2nd, 2019 with the written commitment of academics, government and community leaders to work together to improve the health ecosystem on the island. The program was delineated with the purpose of collecting actionable data that allows the creation of processes to improve the capacity, systems and results of public health in Puerto Rico. The PRPHT has a talented advisory committee of public health experts from the United States and Puerto Rico.

## Mission, Vision and Reach

Serve as trusted ally working with private and public partners to identify and execute community-led, evidence-based solutions. Achieve sustainable health equity in Puerto Rican communities and improve their quality of life through innovation, collaboration and community engagement.

The PRPHT is focused in Puerto Rico communities and public health partners within and outside Puerto Rico. (Including the Puerto Rico diaspora living abroad in some initiatives).

## Priorities

- Emergency preparedness, response and recovery,
- Health equity
- Climate change
- Mental health
- Opioid epidemic
- Chronic diseases

## Program Initiatives

### Puerto Rico Hurricane Response Hub Technical Assistance Center (PR-HRHTAC)

The Puerto Rico Hurricane Hub Response Technical Assistance (PR-HRHTAC), is part of a network of five centers that offer personalized training to first responders sponsored by **Centers of Disease Control and Prevention (CDC)** through **National Network of Public Health Institutes (NNPHI)**. The purpose of the trainings is to improve environmental and occupational health recovery efforts in areas affected by hurricanes of 2017.

Some of the services are train individuals and organizations related to disaster in Community Assessment for Public Health, Emergency Response, Recovery need in public, environmental and occupational health, facilitating connections with organizations and resources, tracking deaths, injuries and illnesses after a disaster and shelter management, among others.

### Community Engagement

In our newest initiative, the Community Engagement work of PRPHT aims to create connections with communities, listening to their needs and partnering with those communities to find solutions. Community participation is a strategic and vital process to catalyze fundamental health activities and health care systems to achieve measurable results that allow all Puerto Rican families to achieve their optimal emotional, physical and social well-being.

For that reason, we are busy contacting community leaders and establishing critical connections and potential partnership opportunities with the PRPHT. We are working to establish our strategic plan. In addition, we have hosted a community event in Martin Pena where we impact over 500 hundred people were, we provide health services and distributed water filters from the Proyecto Agua Limpia.

We have also reached out to 20 Municipalities in Puerto Rico. Our work weaves itself into our work both in the hurricane hub technical assistance center.



## Alliances

### Association of State and Territorial Health Officials (ASTHO)

ASTHO and the PRPHT have created an alliance with the Project Capacity Building for Jurisdictional Hurricane Recovery – Puerto Rico Staffing Capacity Enhancements. Through this Project the PRPHT hired 105 specialized technical and professional resources to provide critical services for the Department of Health of Puerto Rico and 1 employee at U.S Virgin Island. These resources support and enhance several programs such as Environmental Health Services for Impacted Communities, Data Collection and IT Infrastructure, Community Risk Mitigation, Disaster-related Death Registry, and Count Accuracy, Healthcare Infection Control Surveillance, Vector-Borne Diseases, and Jurisdictional Disaster Reconstitution.

### International Non-Governmental Organizations (INGO's)

The PRPHT is partnering to host all international non-governmental organization participating in the planning and emergency recovery efforts in Puerto Rico. We aim to strengthen the reach and work of each organization and not duplicate efforts. In addition, it will help identify new problems not being addressed and generate solutions together to solve them. Consequently, this will help optimize, organize and prepare new strategies together. Therefore, with this effort, we expect to have these and other aids to achieve our mission and vision with the health of the communities in Puerto Rico and the diaspora.

## Events

### Official Launching event, P.R. Public Health Trust

The Puerto Rico Public Health Trust (PRPHT) was launched to work in partnership with multiple sectors including governmental agencies, communities, the health care delivery system, businesses, media and academia. PRSTRT is a 501(c)(3), and in 2017, was designated by the Puerto Rico Legislature as the Puerto Rico Public Health Institute. Its mission, vision and objectives were developed with a group of collaborators, including the participation of local communities, the Puerto Rico Department of Health, the Graduate School of Public Health of the University of Puerto Rico-Medical Science Campus, the School of Public Health of Ponce Health Sciences University and Central Caribbean University, the Association of Primary Health and the Association of Hospitals and various other partners and businesses, such as Impactivo Consulting and FDI Clinical Research.





## National Network of Public Health Institutes (NNPHI) Annual Conference

The PRPHT delegation participated in the annual meeting of the National Network Public Health Institutes (NNPHI), in Washington DC. We presented the achievements of the PRPHT and established strategic alliances and establish the bases and contacts for future collaborations.

In addition, we took the opportunity to visit Congressional of the United States in order to educate them about our work.





## Caribbean Strong

Caribbean Strong was a massive event focused on the lessons learned after the two devastating hurricanes; Irma and María, that hit Puerto Rico and the Caribbean Region in 2017. The emphasis of the event was the critical need for collaboration and integration in all sectors to improve strengthen the health and resilience of the citizens of Puerto Rico and the Caribbean.

## Our Team



Leslie Maas



Dr. Martin Montoya



Javier Malavé



Lupe Vázquez



Sara E Miller



Fernando Pineda-Reyes



Dr. José Rodríguez Orengo



Elizabeth Vale



Camelia Jiménez



Maribel Pagán



Karimar Colón De La Rosa

## Our Advisory Committee

The PRPHT has assembled a five-member advisory committee with public health experts from the United States and Puerto Rico to guide the process of establishing our administrative and government structures. These members are: **Lt. Col. Wilson Ariza**, an experienced senior management director with an extensive track record of successful administration of multiple multi-million dollar health service programs in the Department of Defense and the Department of Veterans Affairs of the United States; **Dr. Antonia Novello de Coello**, 14th Surgeon General of the United States; **Dr. Richard Cohen**, President and CEO of Public Health Management Corporation, Philadelphia; **Dr. Ronald Quincy**, Academic Director of the Rutgers Civic Leadership Institute, Senior Member for Diversity Studies, **John J. Heldrich** Center for Workforce Development; and **Dr. Jose F. Cordero**, Head of the Department of Public Health at the University of Georgia, Distinguished Patel Professor.

As part of the launch event, members of the PRPHT, and important allies from the health industry and the Academia, validated their commitment with the Public Health of Puerto Rico by signing a backdrop with the motto: Committed to Puerto Rico's Public Health.



José F. Cordero, MD, MPH,  
FAAP, FACMG



Ronald L. Quincy, PhD



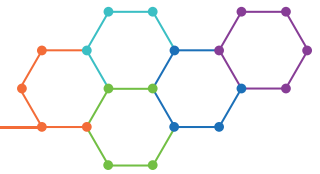
Richard J. Cohen, PhD,  
FACHE



Lt. Col. Wilson Ariza



Dr. Antonia Novello



## Future Plans

The Public Health Trust will continue seeking new strategies to innovate and improve public health in Puerto Rico through new partnerships, alliances and efforts. Always considering our priorities and goals which are our main objective. In addition, we seek the collaboration of the prominent oceanographer **John Englander**. Thus, his studies on Caribbean Sea level rise and flooding we can begin to prepare for future atmospheric phenomena. On the other hand, the project called "**Reverdece Tú También**" will be aimed at improving the quality of mental health in Puerto Rico. Therefore, these future projects will help us to continue optimizing health in Puerto Rico and achieving one of our main goals, health equity.

For example, an ongoing training that we have is death certificate completion training for medical health professionals with Puerto Rico Public Health Department and Centers for Disease Control and Prevention. In addition, we want to integrate of death certificate completion training into medical school curriculum.

The Tobacco Cessation Program will be developed during this programmatic year in collaboration with the PRDoH tackling the new problem of vaping that is affecting the younger population and medical cannabis users.

We will develop a Grant Application Program directed towards Public Health Programs to improve their activities to improve their data collection and publish their results in peer review journals. This fund will also provide the opportunity to gather preliminary data to submit additional competitive grants in different agencies or foundations.

A data collection and analysis program will be developed in collaboration with private entities and universities to provide reliable Public Health information to the public for better decision making.

## Public Health Trust publications and Media coverage

### Hurricane Hub of P.R. ready to provide training, technical assistance

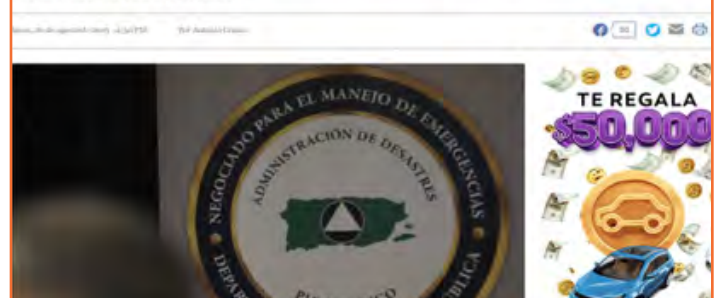
© August 28, 2019 · 420



Newismybusiness.com August 28, 2019

### Listo el Hurricane Hub de Puerto Rico para ofrecer apoyo a entidades de primera respuesta

El nuevo centro estableció de inmediato como una de sus prioridades identificar las necesidades de capacitación y asistencia técnica para la preparación



El Nuevo Día August 26, 2019



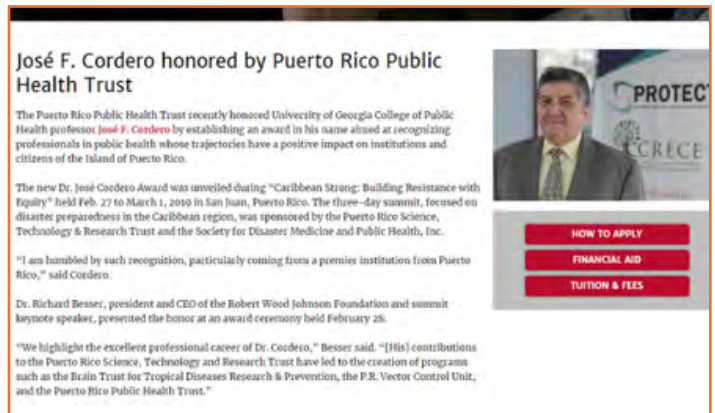
El Nuevo Día April 3, 2019



El Nuevo Día September 1, 2019



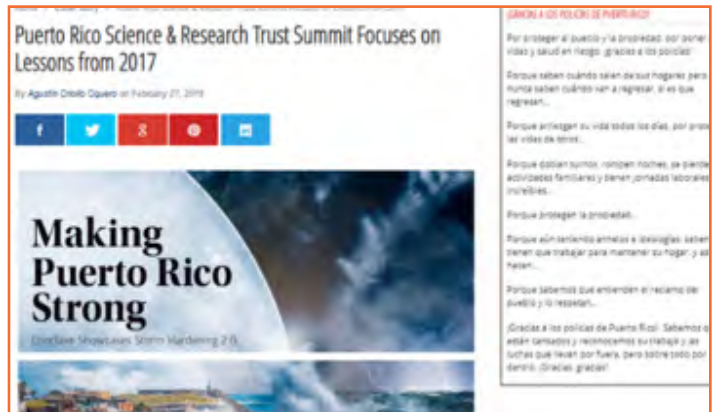
ABC 5 August 29, 2019



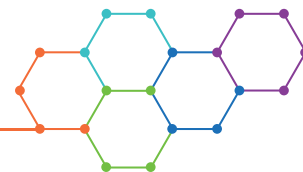
PublicHealth.UGA.EDU March 12, 2019



Metro April 2, 2019



CaribbeanBusiness.com February 27, 2019



CienciaPR.org April 2, 2019



Newismybusiness.com April 3, 2019



Caribbean Business - September 5, 2019



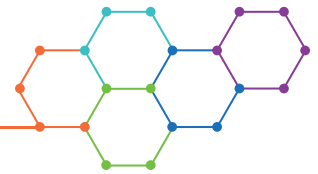
Elvocero.com - September 18, 2019

## Our Alliances



# EVENTS AND MEDIA COVERAGE





**August 2018 – Mosquito Day PRVCU Lab Visit - with Telemundo**



**January 2019 – Recuperación Agrícola first farmer's group**



**January 2019 – Welcome event Parallel 18 Generation 6**



**February 2019 – Caribbean Strong Building Resilience with Equity Summit**



**February 2019 – Official presentation of Hurricane Hub team at Caribbean Strong Summit**



**February 2019 – Creative Industries Meetups**



**February 2019 – PR Vector Control participates at STEM Challenge event**



**February 2019 – Science Communications Meetups at Universidad del Sagrado Corazón**



**March 2019 – Boricua Emprende (BE) Fest, at Centro de Convenciones de P.R.**



**March 2019 – Boricua Emprende (BE) Fest, at Centro de Convenciones de P.R.**



**March 2019 – Mujeres Científicas en el Conservatorio presented by COFI**



**March 2019 – Conecta workshop with Juntos y Unidos por P.R.**



**March 2019 – Neuroscience brainstorm with TTO at Universidad Central del Caribe**



**March 2019 – STEAM Girls Challenge presented by Microsoft & PRSTRT**



**April 2019 – Community Event on Public Health Week**



**April 2019 – Community Event by P.R. Public Health Trust on Public Health Week**



**April 2019 – La Magna students competition, Operación Éxito & PR Vector Control Unit**



**April 2019 – Official launching P.R. Public Health Trust**



**April 2019 – Official launching  
P.R. Public Health Trust**



**May 2019 – Boost Grants event**



**May 2019 – Launching of Semana de  
Investigación Traslacional with UPR & PRCCI**



**May 2019 – PRPHT participation at NNPHI  
Conference, Washington**



**May 2019 – PR Clinical Research Summit**



**May 2019 – Americas Competitiveness  
Exchange visit at PRSTRT**



**May 2019 – Recuperación Agrícola volunteer event at Finca NOA**



**May 2019 – Rise of the Rest visit at PRSTRT**



**May 2019 – CIO & IT Conference: We won the Societal Impact Award 2018**



**June 2019 – PRVCU participation at Taller Ciencia al Servicio**



**June 2019 – John Englander visits for “The Challenge of Sea Level Rising in P.R.”**



**June 2019 – Mujer Innova Agro Empresarias with InPrende & Recuperación Agrícola**



June 2019 – VR Summer Camp



July 2019 – Junte Gerencial Managers PRSTRT



July 2019 – VR Summer Camp Ponce



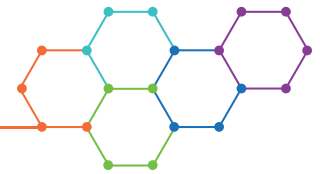
August 2019 – Agroturismo ecológico with InPrende & Recuperación Agrícola



August 2019 – Econo & PR Vector Control campaign on Global Mosquito week



August 2019 – Mujer Innova Agro Empresarias final event



**August 2019 – NASA: Managing Risk through Resilience workshop**



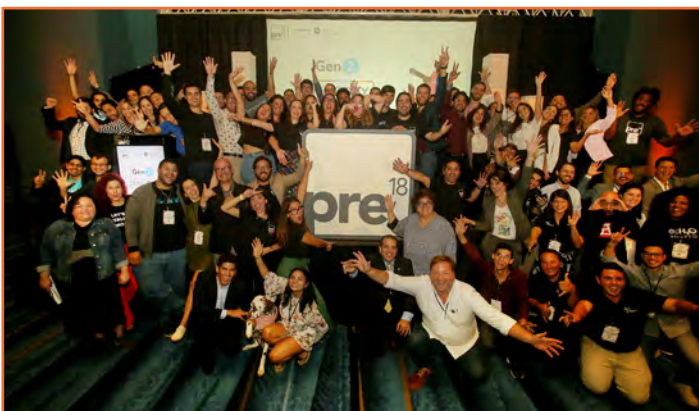
**August 2019 – PAL & Red Cross filters delivery at Culebra**



**August 2019 – PAL & Red Cross filters delivery at Culebra**



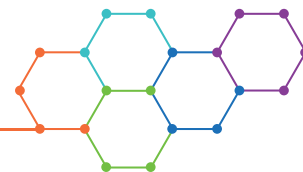
**September 2019 – Pre18 Demo Day**



**September 2019 – Pre18 Demo Day**

IN THE NEWS





**Sin comillas.com**

Arquitectura Cultura Economía Educación Legal Literatura Tecnología

## Estrenan plataforma para propulsar mujeres emprendedoras

Fri, Jun 22, 2018 Mujeres

Por redacción de Sin Comillas

Antes de que una mujer pueda convertirse en una empresaria innovadora capaz de aportar valor a su país, es importante que tenga la oportunidad de empoderarse y capacitarse.

Es así como nace Mujer Innova, una plataforma en alianza con el Fideicomiso para Ciencias, Investigación y Tecnología de Puerto Rico (FCTIPR) y la organización INPRENDE que tiene como enfoque capacitar a toda aquella mujer que desea innovar y emprender.



Foto suministrada

Esta plataforma cuenta con dos componentes: una plataforma digital gratuita que brinda herramientas de empoderamiento, capacitación empresarial y una red de apoyo de organizaciones y mentoras, y el componente adicional conformado por eventos regionales y capacitaciones presenciales para el desarrollo de ideas de negocio.

"Emprender no es tarea fácil y como mujeres nos encontramos faltas de herramientas accesibles que nos permitan sentirnos empoderadas y capaces de hacer nuestras ideas una realidad. Este programa va dirigido a cada una de esas mujeres que como yo nos lanzamos al desafiante mundo empresarial sin conocer nada", explicó Alessandra Correa, fundadora de INPRENDE.

La metodología utilizada para el desarrollo del programa es enfocada en temas de emprendimiento e innovación. Las participantes podrán acceder a videos, artículos, cursos en línea y cápsulas informativas desarrolladas por expertos.


6/22/2018 | Sin Comillas

**NEWS IS MY BUSINESS**

AGRICULTURE ECONOMY FINANCIAL DISTRICT RETAIL TELECOM & TECHNOLOGY TOURISM & TRANSPORTATION

## HiveCube builds new tough, durable and affordable housing option

August 30, 2018 3 3116



8/30/2018 | NIMB

**Sin comillas.com**

Arquitectura Cultura Economía Educación Legal Literatura Tecnología

## HiveCube construye vivienda resistente, duradera y asequible

Wed, Aug 29, 2018 Vivienda

Por redacción de Sin Comillas

HiveCube, una innovadora compañía de vivienda modular, utiliza contenedores como estructura base para entregar un modelo de casa básico y resistente, prefabricado en Puerto Rico en solo meses. La idea surgió tras el paso del huracán María, que provocaron que cerca de 70,000 propiedades sufrieran serios daños.



Sebastian Vidal, director ejecutivo de Parallel 18, junto a Carla Gautier y Maria Velasco, fundadoras de

8/30/2018 | Sin Comillas

**NOTICEL**

¡Cuidate!

## El saldo del zika en Puerto Rico

Unidad de Control de Vectores celebra simposio

Por: CyberNews

Publicado: Aug 10, 2018 11:20 AM AST

Actualizado: Aug 10, 2018 11:20 AM AST

f t i s e



Otro tema de interés e importancia que tuvo protagonismo en el simposio fue el rol del ciudadano para ayudar a controlar la población del mosquito vector y minimizar los brotes de enfermedades.

08/10/18 | Noticel



**4 EL NUEVO DÍA** **PUERTO RICO HOY** **DOMINGO 9 de diciembre de 2018**

**MANU PRAKASH** **REPORTAJE**  
 Manu Prakash, un científico innovador y profesor en la Universidad de Stanford, es uno de los protagonistas de la conferencia Forward Research and Innovation Summit '18, que se celebrará el próximo 10 de noviembre en el Centro de Convenciones de Puerto Rico.

Tras salvar el primer caso de Zika en Puerto Rico, este virus se ha convertido en una de las principales amenazas de salud pública en la isla. Los expertos en el tema, algunos con experiencia en la gestión de crisis, se reúnen en la isla para discutir la prevención y el control de esta enfermedad, así como la importancia de la prueba de Zika a embarazadas.

"No debemos bajar la guardia. Hay que seguir a la vanguardia en esta enfermedad, al igual que con el dengue y otras enfermedades infecciosas", resalta el epidemiólogo de la Universidad de Puerto Rico, Nabil Brucero.

Según el subsecretario de Asesoría Científica y Tecnológica, la enfermedad de Zika, aunque ha sido declarada una emergencia de salud pública, no es una amenaza para la población en general, sino que se debe dar a la mujer embarazada.

El 12 de septiembre del año pasado, el secretario de Salud, Dr. Saúl Rodríguez Méndez, firmó la orden administrativa número 393 para requerir a todas las mujeres que estaban embarazadas que, en cada trimestre de gestación, se les hiciera la prueba de Zika. Pero, ocho días después, la orden administrativa fue retirada.

En el momento de la noticia, los laboratorios de Salud y el Centro de Control y Prevención de Enfermedades (CDC) no tenían la capacidad suficiente para realizar las pruebas, denunció el doctor.

**ENFERMEDAD ENDÉMICA**

## Preocupa falta de pruebas contra el Zika

● El Departamento de Salud solo ha procesado 10 exámenes durante este año

● No todos los médicos están ordenando las evaluaciones a las mujeres embarazadas

El doctor Carlos Zorrilla, jefe del Laboratorio de Diagnóstico de la Universidad de Puerto Rico, afirma que la falta de pruebas de Zika es una preocupación importante. Según él, la mayoría de los médicos no están ordenando las pruebas de Zika a las mujeres embarazadas, lo que puede ser un problema para la salud pública.

Según Zorrilla, la falta de pruebas de Zika es un problema importante. Según él, la mayoría de los médicos no están ordenando las pruebas de Zika a las mujeres embarazadas, lo que puede ser un problema para la salud pública.


08/12/18 | ENDI

**NEWS IS MY BUSINESS**

**FEATURED GENERAL BIZ NEWS**

## Forward Research and Innovation Summit '18 slated for Nov. 10

October 15, 2018 1387



Manu Prakash, an innovative scientist and professor at Stanford University, inventor of the Foldscope, is one of the keynote speakers at the conference presented by the Puerto Rico Science, Technology and Research Trust.

10/27/2018 | NIMB

**NOTICEL**

Educación

## Resuélvelo Boricua: reto a la juventud

Utilizando la técnica de "active learning"

Por: NotiCel

Publicado: Sep 05, 2018 04:27 PM AST

Actualizado: Sep 05, 2018 04:27 PM AST



09/05/2018 | NotiCel

**endi** **Tecnología**

## Evento mostrará la cara científica de la Isla

"Forward Research and Innovation Summit", evento cumbre del Fideicomiso de Ciencia, promete exhibir el calibre local

Elaborado: 27 de octubre de 2018 - 12:00 AM

Por: Antonio R. Gómez

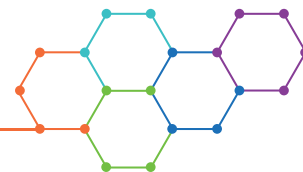
   

**Nota de archivo: Este contenido fue publicado hace más de 90 días**



El profesor de Ingeniería de Materiales, Manu Prakash, es el principal invitado y presentador en la 10.ª edición del evento Forward Research and Innovation Summit '18, que se celebrará el próximo 10 de noviembre en el Centro de Convenciones de Puerto Rico.

10/27/2018 | ENDI



Ahora

## Forward Summit buscará impulsar la actividad tecnológica de la isla

La actividad se llevará a cabo el 10 de noviembre

Por: NotiCel

Publicado: Nov 04, 2018 03:23 PM AST

Actualizado: Nov 04, 2018 03:23 PM AST



Manu Prakash (Foto suministrada)

11/4/2018 | NotiCel

## Destacan avances de Puerto Rico en la ciencia, tecnología e innovación

Carmen Zorilla, autora de avances contra la transmisión del VIH de madre a hijo, fue la ganadora del primer premio BAJARI

Por Metro Puerto Rico

Domingo 11, noviembre 2018 12:42



11/11/2018 | Metro PR

metro NOTICIAS DEPORTES ENTRETENIMIENTO ESTILO DE VIDA METRO TV OPINIÓN PUERTO RICO A UN AÑO DE MARÍA

NOTICIAS ECONOMÍA TACÓMETRO METRO NEGOCIOS MUNDO

## Anuncian Primera Cumbre de Resiliencia post María

Expertos internacionales de diversos de campos relacionados con la salud junto a líderes locales del sector público y privado presentarán lecciones aprendidas y recomendaciones

Por Metro Puerto Rico

Lunes 21, enero 2019 16:02



**Caribbean Strong** bajo el lema de Construyendo resiliencia con equidad, es la primera cumbre de resiliencia posterior a María que se realizará en el Hotel Sheraton del Centro de Convenciones del 27 de febrero al 1 de marzo de 2019.

1/24/2019 | Metro PR

de Puerto Rico  
elVocero.com

## Muestran innovador microscopio de papel origami

Redacción elvocero.com 09/11/2018



El bioingeniero y creador del innovador microscopio de papel plegable, Dr. Manu Prakash, presentó por primera vez en Puerto Rico el microscopio plegado de papel origami a estudiantes durante un evento educativo realizado en la Exhibición Océánica del EcoExploratorio: Museo de Ciencias de Puerto Rico.

11/4/2018 | El Vocero



## CARIBBEAN BUSINESS

Home > Regional > Caribbean > Summit on Caribbean disaster preparedness to be held Feb. 27 in San Juan

### Summit on Caribbean disaster preparedness to be held Feb. 27 in San Juan

By Caribbean Business on January 21, 2019



SAN JUAN – A conference focusing on disaster preparedness in the Caribbean will take place Feb. 27 to March 1 at the Sheraton Hotel and Casino in San Juan.

"Caribbean Strong: Building Resilience with Equity," a three-day summit, is co-sponsored by the nonprofit Puerto Rico Science, Technology & Research Trust and the Society for Disaster Medicine and Public Health Inc.

The society's goal is to improve global health security, with the involvement and development of health professionals and others who are involved in responding to and/or managing significant events. Its stated mission is to "advance and promote excellence in education, training and research in disaster medicine and public health for all potential health system responders based on sound educational principles, scientific evidence and best clinical and public health practices."

1/25/2019 | Caribbean Business

NEWS IS MY BUSINESS

FEATURED HURRICANE MARÍA

### 1st post-María resilience summit to focus on lessons learned from hurricanes

January 22, 2019 0 1182



Puerto Rico Science, Technology & Research Trust CEO Lucy Crespo.

1/25/2019 | NIMB

de Puerto Rico  
el **Vocero**.com

SPOTLIGHT

### Realizan la primera cumbre de resiliencia del Post María

Nicole Candelaria, Especial para EL VOCERO 22/01/2019



Ramon Espinosa / AP

1/25/2019 | El Vocero

ONLINE

Temporada de Huracanes

### Celebrarán conferencia "Caribbean Strong: Building Resilience with Equity"

La cumbre de tres días se centrará en la preparación para casos de desastre en la región del Caribe

Por Marcelo Ballaster - 22 enero, 2019 76 0

Compartir en Facebook Compartir en Twitter G+ YouTube LinkedIn



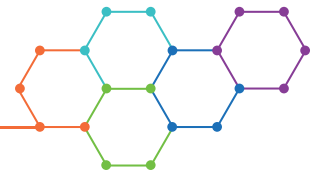
**Caribbean Strong:**  
Building Resilience  
with Equity

Date:  
Feb 27-Mar 1, 2019

Location:  
Sheraton Hotel  
San Juan, Puerto Rico



1/25/2019 | Punta Cana Bavaro



## CARIBBEAN BUSINESS

### Puerto Rico Science & Research Trust Summit Focuses on Lessons from 2017

By Agustín Criollo Oquero on February 27, 2019

**Making Puerto Rico Strong**

Covering Showcases Summit Harsening 20

2/27/2019 | Caribbean Business

PrimeraHORA 10.10.2019 | Actualización 11:27 AM

## Se busca a las duras en STEAM

PH Por Manuel Guillauma Capella / Para Primera Hora  
03/07/2019 | 11:45 p.m.



La directora de Educación y Responsabilidad Social Corporativa para Microsoft en el Caribe, Keren Henríquez (izq.); las estudiantes Lesly Ann Rosa y Franet Ocasio, quienes pertenecen al programa DigiGirlz; y Lucy Crespo, principal oficial ejecutiva del FCTIPR, exhortaron a las jóvenes a participar de las competiciones. (Suministrada)

Microsoft PR celebrará el certamen de ciencias de computación en el que podrán competir alumnas de los niveles intermedio y superior.

3/7/2019 | Primera Hora

el **Vocero**.com

## Microsoft anuncia iniciativa para estudiantes puertorriqueñas

Redacción, EL VOCERO 07/03/2019



3/7/2019 | El Vocero

## CARIBBEAN BUSINESS

Home > Economy > First Microsoft Girls STEAM Challenge announced

### First Microsoft Girls STEAM Challenge announced

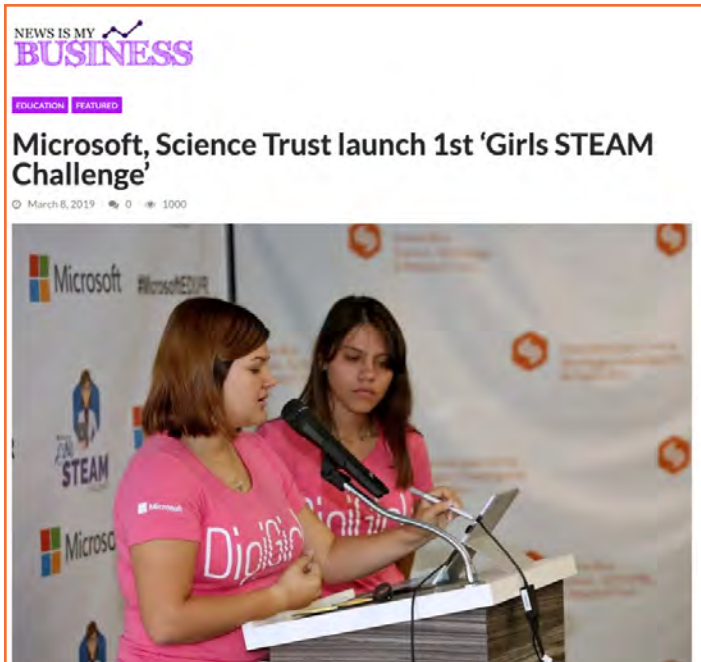
By Eva Lloréns Vélez on March 8, 2019



To foster participation in science-, tech-, engineering-, art- and math-related disciplines



3/7/2019 | Caribbean Business



3/8/2019 | NIMB



4/2/2019 | La Perla del Sur



4/2/2019 | NotiCel



4/2/2019 | Noticias Xtra



4/2/2019 | EFE



4/2/2019 | EDNI



4/2/2019 | Metro PR



4/12/2019 | NIMB



4/29/2019 | EDNI



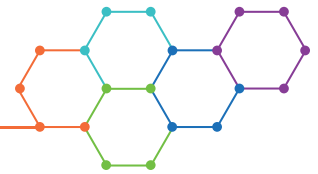
4/30/19 | Caribbean Business



4/30/19 | PR Love Biologies



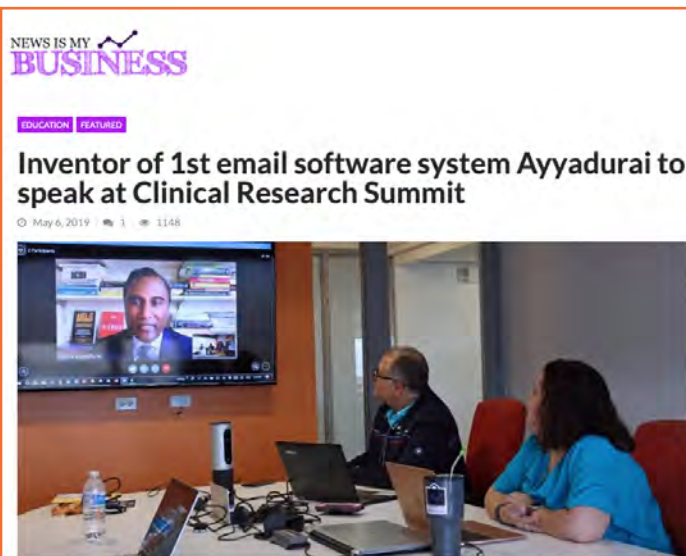
5/1/2019 | El Regional



5/7/2019 | El Vocero



5/7/2019 | Puerto Rico Post



5/7/2019 | NIMB





Inicio > Notiséis 360 > Ciencia y Tecnología

UPR celebran Semana de la I...



Notiséis 360 Ciencia y Tecnología

## UPR celebra Semana de la Investigación Clínica y Traslacional

May 6, 2019 412 0

5/7/2019 | WIPR

## CARIBBEAN BUSINESS

Conferences abound during Puerto Rico Clinical Research Week

By Eva Llorens Vélez on May 6, 2019





5/7/2019 | Caribbean Business

**PrimeraHORA**  

## Celebran Semana de la Investigación Clínica y Traslacional

Los eventos del Recinto de Ciencias Médicas de la UPR se extienden hasta el 12 de mayo.



[Primerahora.com](http://Primerahora.com)  
5/6/2019 | 12:27 p.m.

5/7/2019 | Primera Hora

**endi**   
ELNUEVODIA.COM

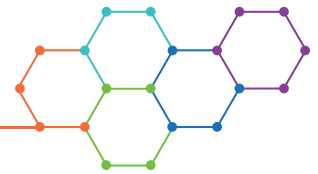
## Científico comparte receta para emprender en la biofarma

Federico Goodsaid cree que Puerto Rico tiene todo lo necesario para que más científicos funden sus empresas

sábado, 11 de mayo de 2019 - 12:00 AM Por Sharon Minelli Pérez



5/11/2019 | ENDI



## Mujeres científicas contra el cáncer en Puerto Rico

Publicado: 12 mayo, 2019



Agencia Latina de Noticias Medicina y Salud Pública

No solo la mujer ha marcado terreno en el campo científico de la isla, sino que ahora serán las pacientes quienes

5/12/2019 | Medicina Pública



Arquitectura Cultura Economía Educación Legal Literatura Tecnología

## Data Wifi: el gran ganador del DemoDay Gen6 de parallel18

Fri, May 24, 2019

Startups

★ Por redacción de Sin Comillas

En el DemoDay de la sexta generación, celebrado en el Cine Metro, cerca de 20 compañías presentaron ante inversionistas visitantes y la comunidad de negocios local. Entre los participantes están: CINCO, OGMA, Edusynch, EnvioPack, Facturedo, Hometuls, Isleñas, Processim Labs, Hackmetrix, YU-TRACK, DATAWIFI.co., Pinta Gelato, SavoR, Unicorn Games, Organic Power, Elegir Seguro y UVA!

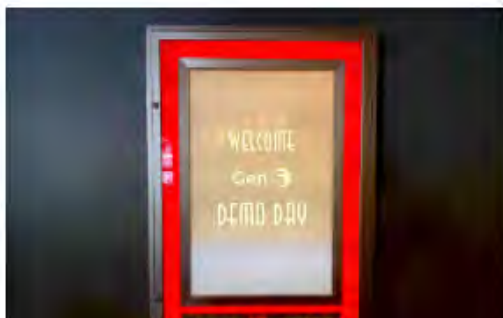


5/24/2019 | NIMB

## CB en Español

## Celebran graduación de sexta generación de Parallel 18

Por Efrén Rodríguez Martínez el 24 de Mayo de 2019



5/24/2019 | Caribbean Business



## Negocios

EMPRESAS

## Parallel18 cierra su sexto ciclo de capacitación

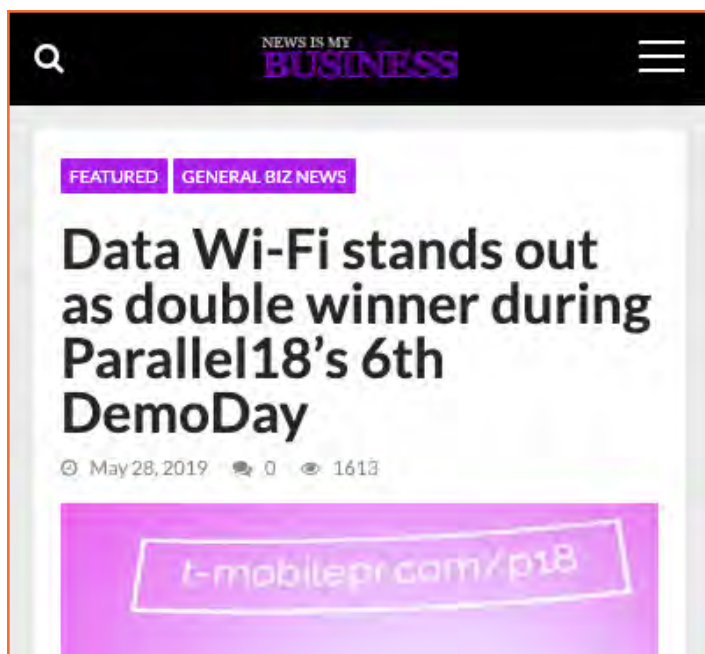
Las startups CINCO, Edusynch y Data Wifi cargan con los premios del tradicional Demo Day

viernes, 24 de mayo de 2019 - 11:30 PM

Por Sharon Minelli Pérez



5/24/2019 | ENDI



5/24/2019 | NIMB



5/31/2019 | NIMB



6/3/2019 | NIMB



6/3/2019 | Activo PR



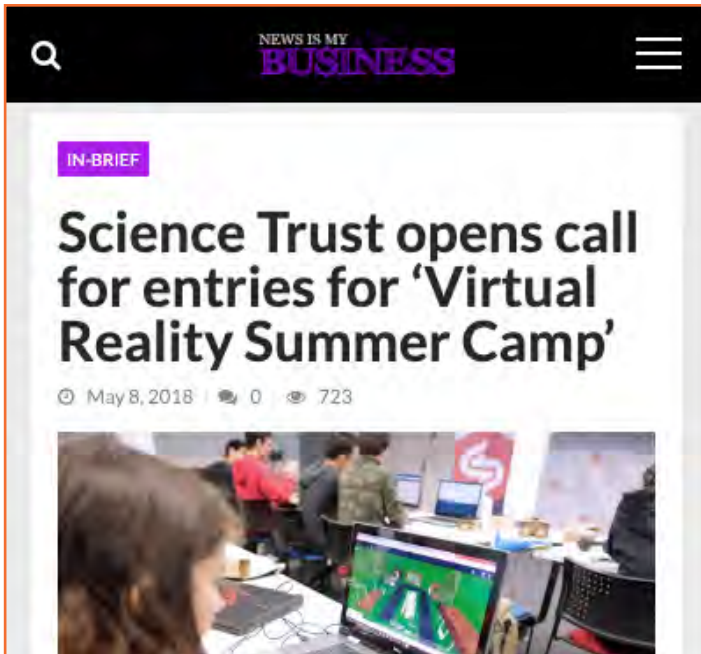
06/12/19 | El Vocero



6/12/2019 | ENDI



6/12/2019 | Voces del Sur



6/12/2019 | NIMB



6/12/2019 | Tecnético



06/19/19 | El Vocero



6/19/2019 | Metro PR



6/19/2019 | NIMB

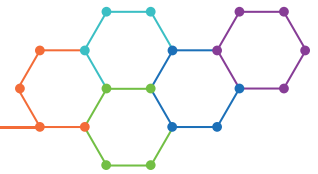


06/19/19 | The Weekly Journal



6/19/2019 | ENDI





10 www.facebook.com/DeTodoPR - 7 al 13 de agosto de 2019

## Salud y Bienestar

## Más atentos y precavidos en el Mes de Concienciación Contra el Mosquito

La llegada de agosto no solo significa el cierre del verano para muchos. También marca el comienzo del Mes de Concienciación Contra el Mosquito y la celebración del Día Mundial del Mosquito (World Mosquito Day) el 20 de agosto.

Bajo este contexto, la Unidad de Control de Vectores de Puerto Rico (UCV), por sus siglas en inglés, dio a conocer una serie de acciones que estará implementando durante el mes de agosto con el fin de educar al ciudadano y de las comunidades en el control de los mosquitos, en específico del mosquito *Aedes Aegypti*, que es el vector del dengue, Zika y Chikungunya en Puerto Rico.

Según la Dra. Montserrat Ortiz, directora asociada de la Unidad, "es importante que la gente se responsabilice del alto que se genera por estas enfermedades. El equipo de trabajo de la Unidad se mantendrá firme en su compromiso de empoderar a las comunidades por medio de estrategias de capacitación comunitaria y educación para promover la participación ciudadana en nuestra provincia. El objetivo es ayudar a la gente a identificar, eliminar y monitorear los lugares que pueden ser criaderos de mosquitos. De esta forma, a

largo plazo, buscamos fomentar un cambio en el comportamiento, siendo las personas un elemento clave en la prevención y control de este mosquito vector de enfermedades".

La Unidad, es un programa del Fideicomiso para la Ciencia, Tecnología e Investigación de Puerto Rico establecido para apoyar científicamente los esfuerzos integrados de control de vectores en toda la Isla. El equipo trabaja en colaboración con las Centros para el Control y Prevención de Enfermedades (CDC), por sus siglas en inglés, y con el Departamento de Salud de Puerto Rico. Su enfoque es fortalecer la capacidad local para el control de este vector, implementar la vigilancia de este, crear sistemas innovadores de información, integrar esfuerzos de control de vectores probados, eco-sustentables y costo-efectivos además de respaldar la participación y el compromiso de la comunidad.

Entre las iniciativas que la Unidad impulsa durante el Mes de Concienciación Contra el Mosquito en agosto, se destacan:

- El Día de los Mosquitos, el primer día de la Unidad. En un momento histórico, este mes fue seleccionado por los reguladores de la Unidad en las redes sociales.

Vecinos visitan escuelas y participan en diversos eventos de la Unidad y comunidades llevando el mensaje central de prevención y control de este mosquito vector de enfermedades.

El Lanzamiento de Mosquitos, una aplicación para iOS, por el momento, que ayuda al usuario a identificar y eliminar los posibles criaderos de mosquito dentro de su hogar. Por medio de la aplicación se podrá reportar los criaderos eliminados. Las personas podrán mantener un registro de las actividades realizadas para el control de mosquitos en su hogar y la Unidad podrá identificar cuáles son los criaderos más comunes. Con estos datos se podrán diseñar estrategias más efectivas y evaluar el rol del ciudadano. La aplicación brinda información sobre los pasos que los ciudadanos pueden hacer para ayudar a controlar la población de mosquitos.

20 de agosto: La fecha es conocida como el Día Mundial del Mosquito o "World Mosquito Day". Este día se conmemora el descubrimiento realizado, en 1897, por el médico británico Sir Ronald Ross, de la relación que existe entre las puestas de mosquito como propagador de malaria. Los Centros de Salud CDC en toda la Isla en unión a la Unidad en esta fecha, para hacer actividades educativas y de eliminación de criaderos de mosquito. También, por medio de una proyección del Departamento de Salud de Puerto Rico, se reconoce la importancia y la labor de la Unidad al educar a agosto como el Mes de Concienciación contra el Mosquito. Además se repite:

El Evento Rodas para mosquitos de agosto. El 28 de agosto la Unidad y vecinos especializados ayudan a eliminar mosquitos en la ubicación de sus vehículos para ayudar. Como parte del programa se aumenta la capacidad de los municipios para eliminar del mosquito por medio de asesoramiento al personal en áreas de manejo de residuos y el mantenimiento técnico de sus equipos para que puedan seguir adelante. En la primera vez que una iniciativa de este índole se lleva a cabo por la Unidad de Control de Vectores de Puerto Rico y es libre de costo para los participantes.

Para más información sobre el Mosquito en Puerto Rico, y cómo participar y/o apoyar: Puede escribir a [www.precutorcontrol.org](mailto:www.precutorcontrol.org), también en Facebook o Instagram como @PPRVectorControl o llamar al 787-222-0866.

### HYPERBARIC SKIN and HEALTH CLINIC

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07/08/19 | DeTodoPR



## EMPRESAS

## Nueva oportunidad para startups

Puerto Rico asegura \$610,000 para impulsar el sector

martes, 30 de julio de 2019 - 12:00 AM

Por ELNUEVODIA.COM



Wilbur Ross, secretario de Comercio.

7/30/2019 | ENDI

Arquitectura Cultura Economía Educación Legal Literatura Tecnología

### Fideicomiso de Ciencia y Tecnología recibe subvención del Departamento de Comercio de EE.UU.

Wed, Jul 31, 2019 Economía

Por redacción de Sin Comillas

El Fideicomiso para Ciencia, Tecnología e Investigación (FCTIPR) fue seleccionado como una de las 44 entidades sin fines de lucro que participó en la competencia anual del Programa de Estrategias de Innovación Regional de la Administración de Desarrollo Económico el cual otorgará en total \$23 millones para expandir el empresariado de alto impacto.

7/31/2019 | Sin Comillas

FEATURED GENERAL BIZ NEWS

## Science Trust gets significant grant from U.S. Dept. of Commerce

August 1, 2019 0 947

8/1/2019 | NIMB



## VOCES DEL SUR

vocesdelsurpr.com



Estudiantes en Ponce y San Juan fueron adiestrados sobre las novedades de la realidad virtual. (Suministrada)

## Exitoso el campamento de verano de realidad virtual en Ponce

8/6/2019 | Voces del Sur



08/20/19 | Noticias de Ponce

## Sin comillas.com

Arquitectura Cultura Economía Educación Legal Literatura Tecnología

## Listo el Hurricane Hub: Centro de Asistencia Técnica de Respuesta a Huracanes

Mon, Aug 26, 2019

Economía

Por redacción de Sin Comillas

Financiado por los Centros para el Control y la Prevención de Enfermedades (CDC, por sus siglas en inglés), el Hurricane Hub de Puerto Rico proporcionará capacitación y asistencia técnica a los Departamentos de Salud, Manejo de Emergencias y Organizaciones Comunitarias en Puerto Rico y el Caribe.



Jessica J. Cabrera, directora de la oficina OPHPR del Departamento de Salud. (Foto: José R. Madera)

El Hurricane Hub de Puerto Rico es uno de los cinco centros regionales de asistencia técnica para la iniciativa del Centro de Respuesta a Huracanes dirigido por la Red Nacional de Institutos de Salud Pública (NNPHI por sus siglas en inglés).

8/25/2019 | Voces del Sur

## LA PERLA DEL SUR

LA NOTICIA QUE TI CEEGA

EDICIÓN IMPRESA ANÚNCIATE CALENDARIO CONTÁCTANOS

NOTICIAS SEGURIDAD GENTE DEPORTES INTERNACIONALES METRÓPOLI COLUMNAS

NOTICIAS

PUERTO RICO

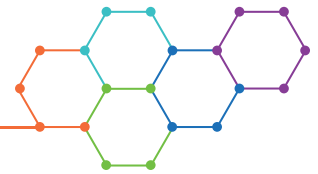


## Más atentos y precavidos en el Mes de Concienciación Contra el Mosquito

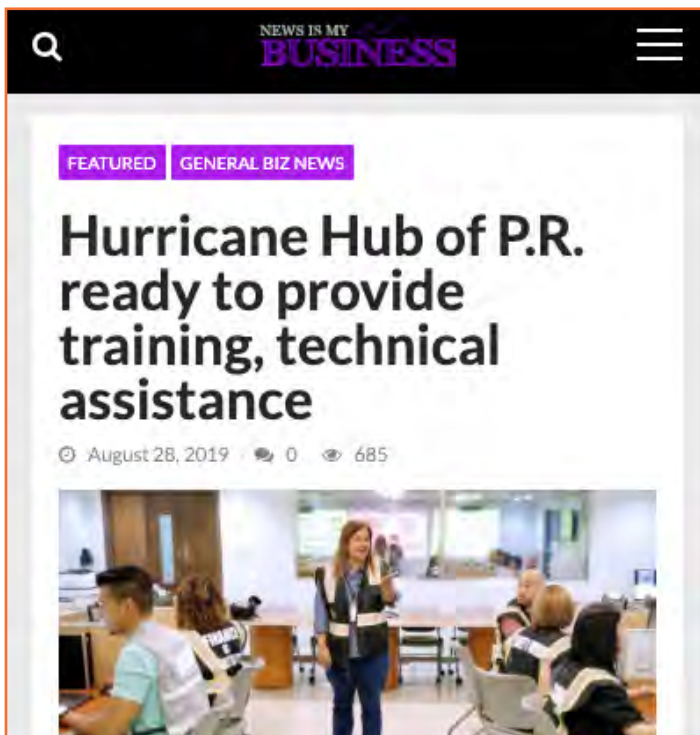
La Unidad de Control de Vectores de Puerto Rico redobla esfuerzos para orientar, educar y empoderar a los ciudadanos en el control del mosquito Aedes aegypti



08/17/19 | La Perla del Sur



8/26/2019 | ENDI

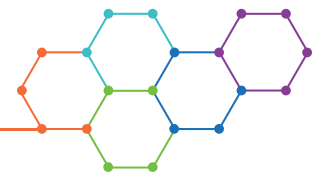


8/28/2019 | NIMB



Design  
Marketing  
Communications





## Non Paid Publicity Ad Value

**\$1,351,707.53M**

THE BIG  
THINK  
GROUP

**\$1,203,347.53M** for  Puerto Rico  
Science, Technology  
& Research Trust

**bcw**

**\$148,360** for  Unidad de Control de  
Vectores de Puerto Rico

## 5 new programs



**Hurricane Hub**  
Technical Assistance Center



Puerto Rico  
Public Health Trust



**RECUPERACIÓN  
AGRÍCOLA**



**STEM**  
EDUCATION PROGRAM

## Events, launching & announcements



**45+**

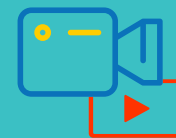


Design  
Marketing  
Communications

## OUR GROWTH

Fiscal Year 2018-2019

## Videos produced








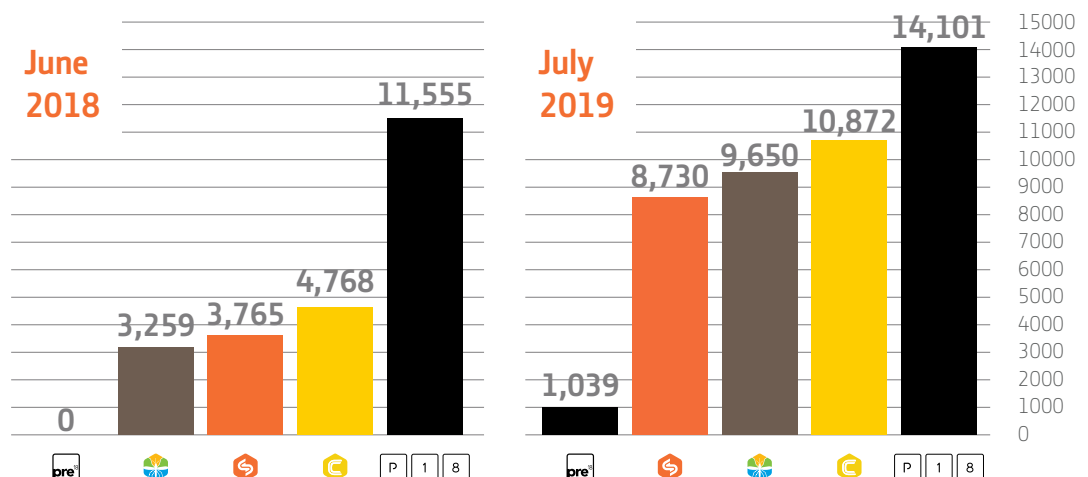
**148+**

## Facebook Likes and Followers



Programs

-  Pre18
-  PRVCU
-  PRSTRT
-  Colmena66
-  P18





THE BIG  
THINK  
GROUP



**NON PAID  
PUBLICITY AD VALUE**

**TOTAL NON PAID  
PUBLICITY AD VALUE:**

**\$1,203,347.53**



2018

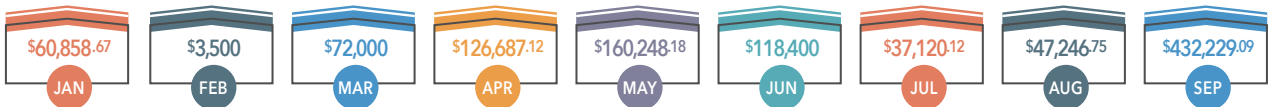


Publicity generated for:



P 1 8

2019



**PUBLICITY REPORT SUMMARY**  
JULY 2018 - JUNE 2019



TOTAL ROI

**\$148,360**

TOTAL IMPRESSIONS

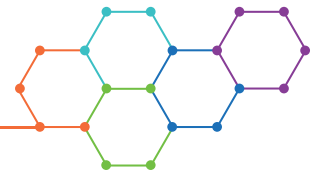
**20.5 M**

**bcw**

for



Unidad de Control de  
Vectores de Puerto Rico



## Meet the team



From left to right: Félix Navas, Graphic Designer; Natasha Sánchez, Graphic Designer; Xavier Ocasio, Lead Graphic Designer; Alexander Morales, Lead Graphic Designer; Ricky Vázquez, Videographer; José Madera, Photographer; Lupe Vázquez, Chief Communications & Marketing Officer; Maureen Rosado, Graphic Designer; and Jan Marrero, Social Media Manager.

## Credits

### Production

Lupe Vázquez  
Chief Communications & Marketing Officer

### Art direction

Alexander Morales

### Design Concept

Alexander Morales  
Félix Navas

### Graphic & Layout design

Félix Navas  
Alexander Morales  
Natasha Sánchez

### Photography

José Madera

### Videography

Ricky Vázquez

ADDENDUM





**IN-PART**

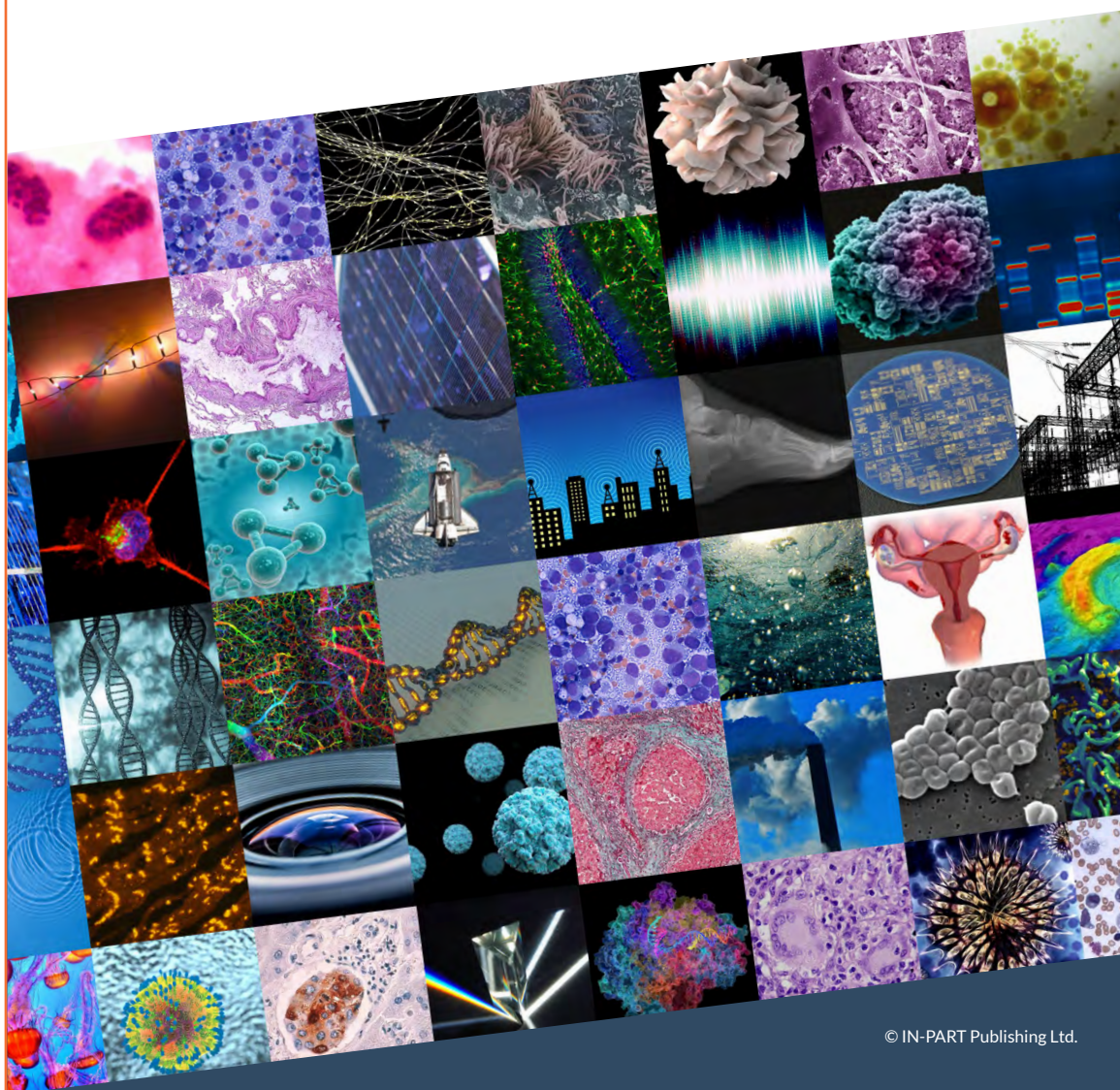


Puerto Rico  
Science, Technology  
& Research Trust

## Impact Report

### Puerto Rico Science, Technology & Research Trust

12 Month Report



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## Table of Contents

- 2 Executive Summary**
- 3 Audience Map**
- 4 Technology Submissions**
- 5 New Connections Provided by IN-PART**
- 7 New Article Reads**
- 8 BETA Engagement Score**
- 9 Audience Penetration**
- 10 Audience Drilldown**

## About IN-PART

IN-PART makes the initial connection for technology transfer between research institutions and industry simple, efficient and scalable. Since our launch in 2014, we have facilitated over 2,000 introductions between research institutions and our growing network of industry R&D professionals.

Our Research Team maintains strong relationships with industry users across an extensive range of sectors. We ensure that only the most relevant industry connections are established - with individuals who are in a position to action a collaborative opportunity. We work exclusively with academic technology and therefore have taken the time to understand the nuances that surround academia-industry interaction. Our platform acts as a tool for technology transfer teams to distribute potentially ground-breaking research directly to industry contacts with the ability to collaborate with and commercialise them.

The greatest breakthroughs in modern history have been as a result of research institutions pushing the boundaries of knowledge, and the results have had a profound impact on society. At IN-PART, our aim is to help facilitate the transfer of technology globally in order to positively impact society.

Learn more at [IN-PART.com](https://in-part.com)

### Our network is growing faster than ever...

-  **11,000+** R&D Experts
-  **5,000+** Companies
-  **200+** Research Institutes

### Questions?

Get in touch with your IN-PART contact point:



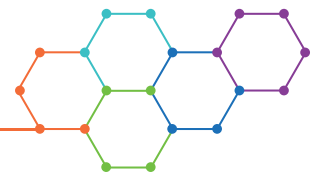
**Sarah Firth**

[sarah.firth@in-part.co.uk](mailto:sarah.firth@in-part.co.uk)

[+44 \(0\) 114 360 0020](tel:+44201143600020)

Next Page: **Executive Summary**

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## Executive Summary

This report provides a summary of the impact that technologies from Puerto Rico Science, Technology & Research Trust (PR Science Trust) have had on our audience of industry users on the IN-PART platform.

We have been pleased to see a high level of interest in technologies from PR Science Trust, with article reads above the platform average and a respectable amount of introductions and feedback. The new technologies submissions have enabled our research team to further their efforts in engaging our ever-increasing industry network. We look forward to continuing our work with PR Science Trust and hope to see this positive trend continue with new technologies added.

We are also glad to see PR Science Trust engaging with IN-PART: Discover by submitting to the Industry Calls for Opportunities (ICOs). All entries submitted to date have been included in reports for the commissioning R&D professionals to review, and we hope that with continued involvement, this will lead to further introductions.

### Your engagement touchpoints so far...



#### 5 Introductions

The number of times that we have introduced a member of our industry network to *Puerto Rico Science, Technology & Research Trust* to discuss a technology of interest.



#### 4 Feedback

The number of individual pieces of feedback received from our industry network, relating to *Puerto Rico Science, Technology & Research Trust* technologies.



#### 190 Internal Alerts

The number of personalised email campaigns containing *Puerto Rico Science, Technology & Research Trust* technology that have been sent to a member of our industry network with matched interests.



#### 150 External Leads

The number of industry R&D professionals not currently registered with IN-PART that have been targeted in relation to a *Puerto Rico Science, Technology & Research Trust* technology.



#### 72 Article Reads

The sum of all article reads that *Puerto Rico Science, Technology & Research Trust* technologies have received on the IN-PART platform.



#### 4,634 Newsletter Reads

The number of times promotional newsletter emails that contain the summary for one or more *Puerto Rico Science, Technology & Research Trust* technologies have been opened.

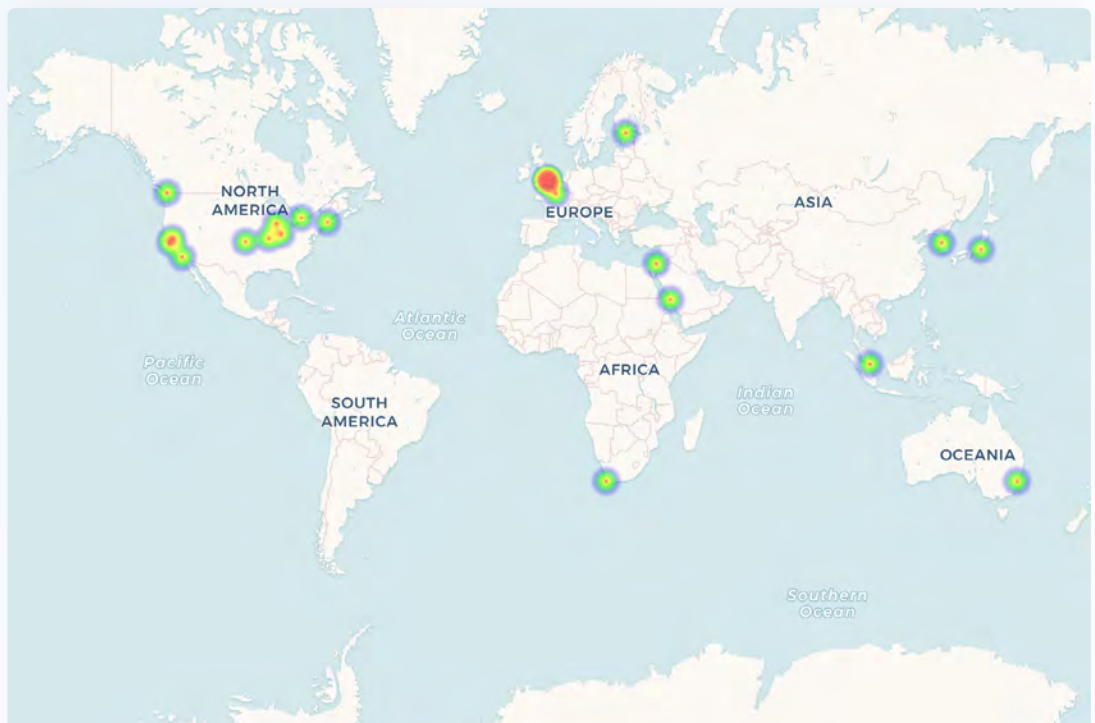
Next Page: **Audience Map**

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## Audience Map




Global viewership of Puerto Rico Science, Technology & Research Trust technologies during the current subscription period.






### At a glance...

-  **27** Cities
-  **12** Countries
-  **5** Continents

### Top Countries

-  **37%** United States
-  **16%** Singapore
-  **16%** United Kingdom

### Top Continents

-  **42%** North America
-  **33%** Asia
-  **21%** Europe

Next Page: **Technology Submissions**

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## Technology Submissions

*Working titles* are solely for use in this report, and will be the primary reference for technologies included in this report to enable easy communication.

Hint: When viewing this report on a PC, to quickly find the relevant information for a specific technology, use the keyboard shortcut Ctrl+F (Mac users: Command+F) and type in the working title.



### Alternative Treatment for Endometriosis using Environmental Enrichment Methods

[Environmental Enrichment](#) | [Published](#) | ID: 3416



### Reducing the Progression of Endometriosis

[Endometriosis Treatment](#) | [Published](#) | ID: 3517



### Novel Small Molecule Inhibits Metastatic Breast Cancer

[Metastatic Breast Cancer](#) | [Published](#) | ID: 3547



### Novel Compounds and Methods for Treatment of Cancer and Hyperproliferative Diseases

[Hyperproliferative Treatment](#) | [Published](#) | ID: 3560



### Novel Carbazole EHOp-016 Derivatives as Anti-Cancer and Anti-Migratory Agents

[Carbazole EHOp-016](#) | [Published](#) | ID: 3570



### Method to Remove Spectral Components of Illumination and Background from Multispectral and Hyperspectral Images

[Hyperspectral Imaging](#) | [Published](#) | ID: 4332



### Benzazolo [3,2-a] Quinolinium (BQ) Salts: Synthesis and Methods of Use as Cancer Theranostics and Fluorescent Markers

[BQ Salts](#) | [Published](#) | ID: 5178



### Low Cost, Robust and Durable Lead Selenide using Aromatics as Capping Ligands

[Lead Selenide](#) | [Published](#) | ID: 5865



### Artificial Fused Dehydratase Enzymes to Increase Fatty Acid Production in E. coli

[Fatty Acid Production](#) | [Published](#) | ID: 6012

Next Page: **New Connections Provided by IN-PART**

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## New Connections Provided by IN-PART


### Page 1 of 2

A summary of introductions and feedback from IN-PART's industry audience for your technologies during the current subscription period.



#### Environmental Enrichment | Published

##### Alternative Treatment for Endometriosis using Environmental Enrichment Methods


Connection Type	Company	Position	Name / Email
Feedback	Ferring Pharmaceuticals	Innovation Manager	 Anonymous

Based on the info provided, it appears like the research is only at the in-vivo stage and has not yet been validated in humans. [Our company] focus is also on therapeutic treatment of the disease. Hence, no interest to pursue for now.



#### Endometriosis Treatment | Published

##### Reducing the Progression of Endometriosis

Connection Type	Company	Position	Name / Email
Feedback	Multinational Pharmaceutical Company	Innovation Specialist	 Anonymous

CRHR1 antagonist antalarmin used to treat endometriosis from our previous exchange, we will monitor the research by the group but will not pursue any further at the moment.



#### Metastatic Breast Cancer | Published

##### Novel Small Molecule Inhibits Metastatic Breast Cancer

Connection Type	Company	Position	Name / Email
Introduction	Merck (EMD) Life Sciences	Technology Development and Licensing Manager	Vaibhav Saini <a href="mailto:vaibhav.saini@emdmillipore.com">vaibhav.saini@emdmillipore.com</a>



#### Hyperspectral Imaging | Published

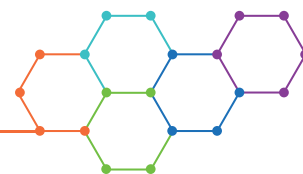
##### Method to Remove Spectral Components of Illumination and Background from Multispectral an...

[CONTINUED ON FOLLOWING PAGE →](#)

Connection Type	Company	Position	Name / Email
Introduction	Samsung	Advanced Image Technology Group Leader	Chaesung Kim <a href="mailto:chasung.kim@samsung.com">chasung.kim@samsung.com</a>

Next Page: **New Connections Provided by IN-PART (continued)**

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## New Connections Provided by IN-PART

Page 2 of 2



### Hyperspectral Imaging | Published

Method to Remove Spectral Components of Illumination and Background from Multispectral an...

Connection Type	Company	Position	Name / Email
Introduction	The Climate Corporation	Prospecting Lead	Nick Nissing <a href="mailto:nick.nissing@climate.com">nick.nissing@climate.com</a>
Introduction	Ninox Robotics	Mechatronics Engineer	Daniel Vogelnest <a href="mailto:daniel.vogelnest@ninox-robotics.com">daniel.vogelnest@ninox-robotics.com</a>



### Fatty Acid Production | Published

Artificial Fused Dehydratase Enzymes to Increase Fatty Acid Production in E. coli

Connection Type	Company	Position	Name / Email
Introduction	Conagen	Manager of Scientific Operations	Matthew Mattozzi <a href="mailto:matt.mattozzi@conagen-inc.com">matt.mattozzi@conagen-inc.com</a>
Feedback	Ingredion	Director, Open Innovation	Anonymous
I am not following technology for producing omega-3 fatty acid at this time. Very intriguing, but not an area of focus right now.			
Feedback	Multinational Food Production Company	R&D Specialist	Anonymous
Checked with our specialty oils group and found that this technology is not currently connected with their priority areas.			

Next Page: **New Article Reads**

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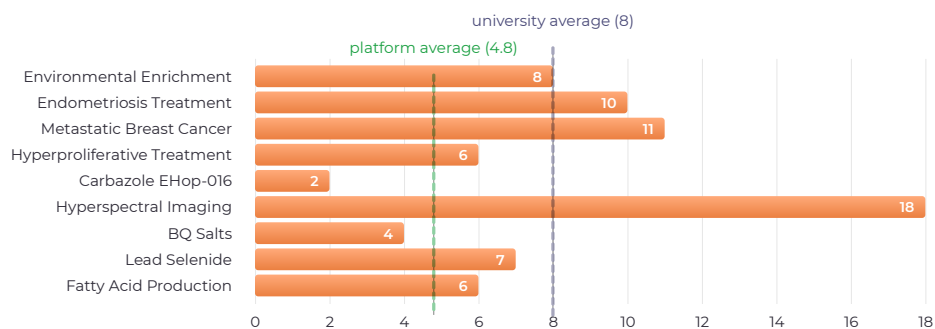
6



## New Article Reads

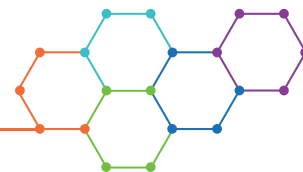
The number of article reads respective technology briefs have received during the current subscription period.

† Technology which is currently unpublished on the platform.



Next Page: **BETA Engagement Score**

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IN-PART

Impact Report  
June 2019

BETA

## Engagement Score

The deviation from the expected<sup>△</sup> number of contacts and feedback, based on the number of article reads during this subscription.

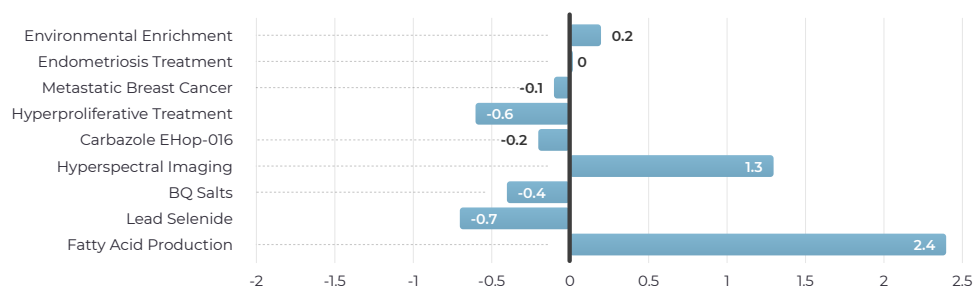
<sup>△</sup> Expected number of contacts/feedback is defined as the total number of contacts/feedback for all academic institutions during the current subscription period, divided by the total article reads for all technologies from all academic institutions during the current subscription period.

<sup>†</sup> Technology which is currently unpublished on the platform.

-3.8

← The deviation range for technologies on the platform →

5.8

Next Page: **Audience Penetration**

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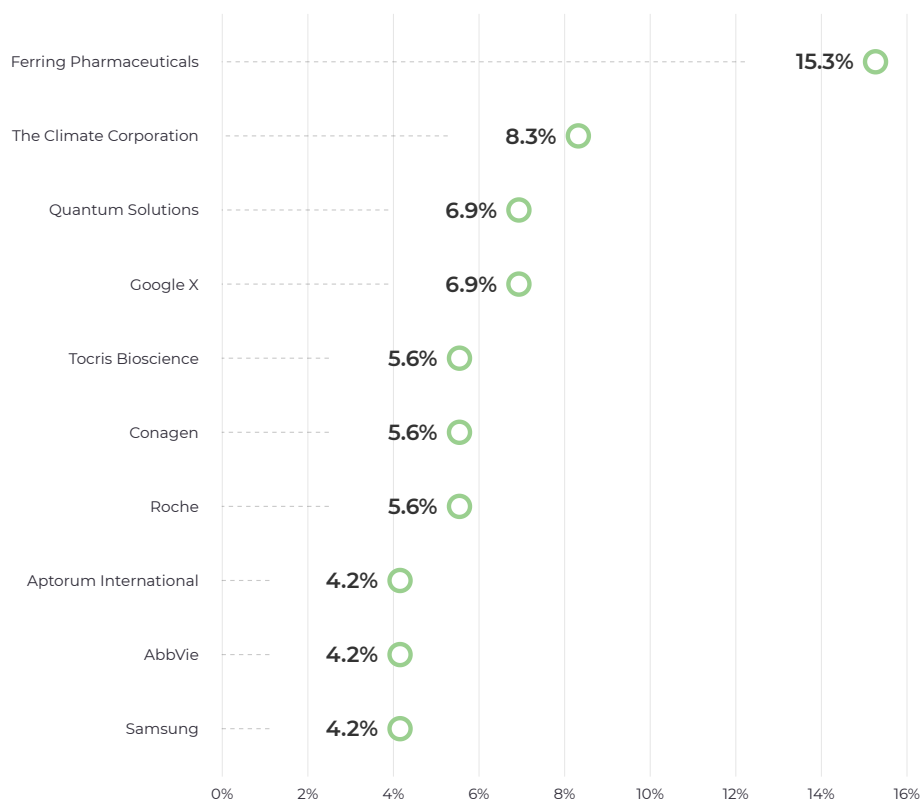
8



## Audience Penetration

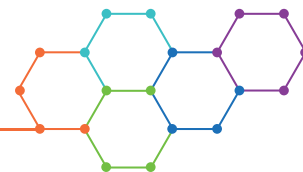
A list of the top 10 companies ranked by the amount of times they have viewed your technologies on the IN-PART website in the current subscription period.

The Audience Penetration is represented as a percentage which is calculated by dividing each individual company's views by the total amount of reads combined for all companies.



Next Page: **Audience Drilldown**

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## Audience Drilldown

### Page 1 of 2

A full list of companies which have viewed *Puerto Rico Science, Technology & Research Trust* technologies on the IN-PART website.

Feedback Received Introduction Made



**Environmental Enrichment** | Published | ID: 3416

Alternative Treatment for Endometriosis using Environmental Enrichment Methods

1 AbbVie 4 Ferring Pharmaceuticals 1 Hologic 1 KARL STORZ 1 Medovate



**Endometriosis Treatment** | Published | ID: 3517

Reducing the Progression of Endometriosis

2 AbbVie 7 Ferring Pharmaceuticals 1 FutuRx



**Metastatic Breast Cancer** | Published | ID: 3547

Novel Small Molecule Inhibits Metastatic Breast Cancer

1 Ajinomoto 1 Astex Pharmaceuticals 1 Daiichi Sankyo 1 DelMar Pharmaceuticals 2 Orion Pharma  
3 Roche 1 Shionogi 1 Tocris Bioscience



**Hyperproliferative Treatment** | Published | ID: 3560

Novel Compounds and Methods for Treatment of Cancer and Hyperproliferative Diseases

2 Aptorum International 1 Astex Pharmaceuticals 1 DelMar Pharmaceuticals 1 Onxeo 1 Pfizer



**Carbazole EHOp-016** | Published | ID: 3570

Novel Carbazole EHOp-016 Derivatives as Anti-Cancer and Anti-Migratory Agents

1 Antabio 1 Roche

Next Page: **Audience Drilldown (continued)**

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## Audience Drilldown

Page 2 of 2

 Feedback Received  Introduction Made

**Hyperspectral Imaging** | Published | ID: 4332

Method to Remove Spectral Components of Illumination and Background from Multispectral an...

- 5 Google X   2 [Ninox Robotics](#)   3 [Samsung](#)   1 SCS Space   1 Thalmic Labs  
6 [The Climate Corporation](#)

**BQ Salts** | Published | ID: 5178

Benzazolo [3,2-a] Quinolinium (BQ) Salts: Synthesis and Methods of Use as Cancer Theranostics ...

- 1 Aptorum International   3 Tocris Bioscience

**Lead Selenide** | Published | ID: 5865

Low Cost, Robust and Durable Lead Selenide using Aromatics as Capping Ligands

- 2 Nanooptical Materials   5 Quantum Solutions

**Fatty Acid Production** | Published | ID: 6012

Artificial Fused Dehydratase Enzymes to Increase Fatty Acid Production in E. coli

- 1 Cargill   4 [Conagen](#)   1 Elanco

Next Page: **Back Cover**

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Puerto Rico  
Science, Technology  
& Research Trust

## Looking for more insights?

Find best practices and resources for conducting technology transfer, open innovation and IP exchange in university-industry collaborations on our blog.

[IN-PART.com/blog](https://in-part.com/blog)

## University Dashboard

Our University Dashboard makes it easy for technology transfer professionals to generate content for commercial engagement, collaborate with colleagues, generate customised PDFs and download technology portfolios.

[app.in-part.com/university-dashboard](https://app.in-part.com/university-dashboard)

## Questions about this report?

Get in touch with your IN-PART contact point...



**Sarah Firth**

sarah.firth@in-part.co.uk

+44 (0) 114 360 0020

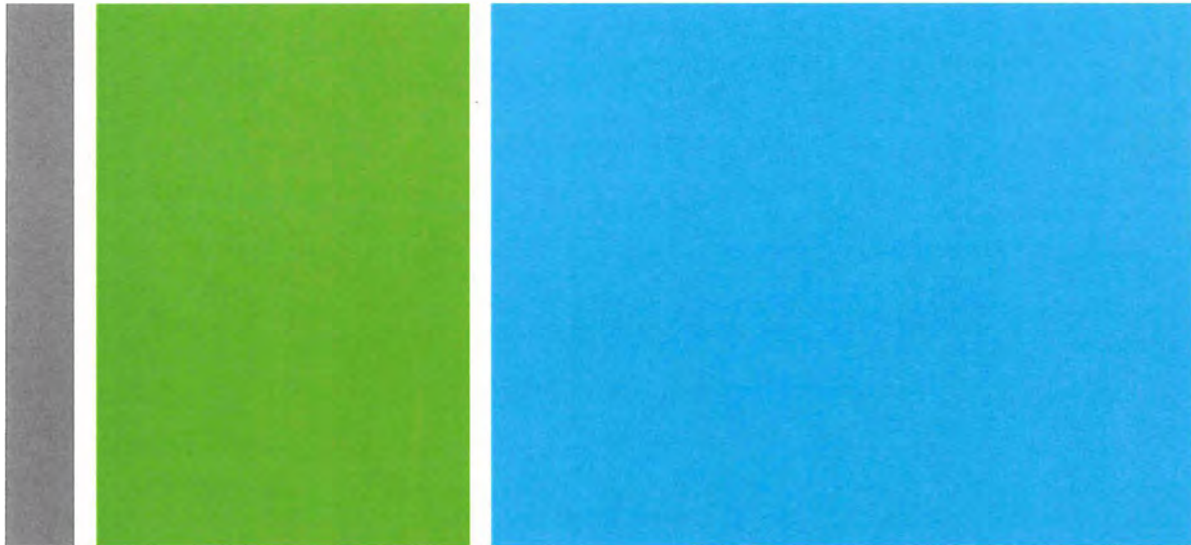
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# FINANCIAL STATEMENTS





RSM Puerto Rico



## PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST AND SUBSIDIARIES

Uniform Guidance Report  
June 30, 2019

THE POWER OF BEING UNDERSTOOD  
AUDIT | TAX | CONSULTING



**PUERTO RICO SCIENCE, TECHNOLOGY AND  
RESEARCH TRUST AND SUBSIDIARIES****UNIFORM GUIDANCE REPORT**  
**June 30, 2019****Table of Contents**

	Pages
Independent Auditors' Report	1-2
Basic Consolidated Financial Statements-	
Consolidated Statement of Financial Position	3
Consolidated Statement of Activities	4
Consolidated Statement of Functional Expenses	5
Consolidated Statement of Cash Flows	6
Notes to Basic Consolidated Financial Statements	7-18
Schedule of Expenditures of Federal Awards	19-20
Notes to Schedule of Expenditures of Federal Awards	21
Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Auditing Standards	22-23
Report on Compliance for Each Major Federal Program and Report on Internal Control over Compliance Required by the Uniform Guidance	24-25
Schedule of Findings and Questioned Costs	26-27



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 F (787) 759-7479  
[www.rsm.pr](http://www.rsm.pr)

## INDEPENDENT AUDITORS' REPORT

To: The Board of Trustees of  
 Puerto Rico Science, Technology and Research Trust

We have audited the accompanying consolidated financial statements of Puerto Rico Science, Technology and Research Trust, a Puerto Rico not-for-profit corporation, and its Subsidiaries, which comprise the consolidated statements of financial position as of June 30, 2019, the related consolidated statements of activities, functional expenses, and cash flows for the year then ended, and the related notes to the consolidated financial statements.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

### Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

THE POWER OF BEING UNDERSTOOD  
 AUDIT | TAX | CONSULTING

Page 1

RSM Puerto Rico is a member of the RSM network and trades as RSM. RSM is the trading name used by the members of the RSM network. Each member of the RSM network is an independent accounting and consulting firm which practices in its own right. The RSM network is not itself a separate legal entity in any jurisdiction.



#### **Opinion**

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Puerto Rico Science, Technology and Research Trust and its Subsidiaries as of June 30, 2019, and the changes in its net assets and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

#### **Other Matters**

##### *Other Information*

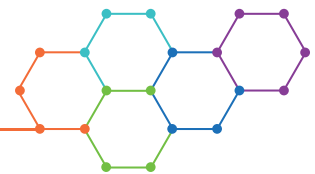
Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The schedule of expenditures of federal awards, as required by Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards is presented for purposes of additional analysis and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated, in all material respects, in relation to the consolidated financial statements as a whole.

#### **Other Reporting Required by Government Auditing Standards**

In accordance with Government Auditing Standards, we have also issued our report dated February 21, 2020 on our consideration of Puerto Rico Science, Technology and Research Trust's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Puerto Rico Science, Technology and Research Trust's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering internal control over financial reporting and compliance.

San Juan, Puerto Rico  
February 21, 2020.

Stamp No. E407286 was affixed to  
the original of this report.



**PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST  
AND ITS SUBSIDIARIES**



**CONSOLIDATED STATEMENT OF FINANCIAL POSITION**  
As of June 30, 2019

**ASSETS:**

Cash	\$ 29,632,070
Accounts receivable	1,864,680
Prepaid expenses	107,735
Due from governmental entities	4,978,063
Investment in bond	34,561,416
Equity investments	1,167,292
Convertible promissory notes receivable	375,000
Other investments	225,000
Other assets	19,484
Property and equipment, net	450,237
Building, net	6,071,064
Land and property for research, development and infrastructure project related to science and technology	16,100,307
Land development costs	11,329,395
Construction in Progress - Science City	11,149,857
	<u>\$ 118,031,600</u>

**LIABILITIES AND NET ASSETS**

**LIABILITIES:**

Program service payable	\$ 717,037
Accounts payable	2,271,267
Accrued expenses	448,240
Other liabilities	8,500
	<u>3,445,044</u>

**NET ASSETS:**

Without donor restrictions:	
Undesignated	<u>84,667,109</u>
With donor restrictions:	
Purpose restricted	3,819,140
Perpetual in nature	<u>16,100,307</u>
	19,919,447
	<u>114,586,556</u>
	<u>\$ 118,031,600</u>

The accompanying notes are an integral part of this consolidated statement of financial position.



**PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST  
AND ITS SUBSIDIARIES**

**CONSOLIDATED STATEMENT OF ACTIVITIES**  
**For the year ended June 30, 2019**

	Without donor restrictions	With donor restrictions	Total
<b>REVENUES AND SUPPORT:</b>			
State grants and assessments	\$ 16,759,924	\$ -	\$ 16,759,924
Federal grants	7,837,675	124,970	7,962,645
Private grants and sponsorships	408,684	2,957,448	3,366,132
Donations and contributions	46,631	-	46,631
Clinical trials	215,139	-	215,139
Rental income	331,057	-	331,057
Interest income	179,885	-	179,885
Other income	228,221	-	228,221
	<u>26,007,216</u>	<u>3,082,418</u>	<u>29,089,634</u>
Net assets released from restrictions:			
Satisfaction of program restrictions	<u>3,096,175</u>	<u>(3,096,175)</u>	<u>-</u>
	<u>29,103,391</u>	<u>(13,757)</u>	<u>29,089,634</u>
<b>OPERATING EXPENSES:</b>			
Program and services:			
Research and data	1,530,644	-	1,530,644
Public health initiative	9,504,182	-	9,504,182
Technology transfer and commercialization	5,164,645	-	5,164,645
Science City development	266,011	-	266,011
	<u>16,465,482</u>	<u>-</u>	<u>16,465,482</u>
Supporting services:			
General and administrative	3,791,868	-	3,791,868
	<u>20,257,350</u>	<u>-</u>	<u>20,257,350</u>
	<u>8,846,041</u>	<u>(13,757)</u>	<u>8,832,284</u>
<b>NON-OPERATING INCOME (EXPENSES):</b>			
Net investment loss	(8,562,596)	(553,326)	(9,115,922)
Gain on settlement of RSA	3,087,580	324,085	3,411,665
Forgiveness of debt	622,113	-	622,113
	<u>(4,852,903)</u>	<u>(229,241)</u>	<u>(5,082,144)</u>
<b>CHANGE IN NET ASSETS</b>	<u>3,993,138</u>	<u>(242,998)</u>	<u>3,750,140</u>
<b>NET ASSETS, beginning of year</b>	<u>90,673,971</u>	<u>20,162,445</u>	<u>110,836,416</u>
<b>NET ASSETS, end of year</b>	<u>\$ 94,667,109</u>	<u>\$ 19,919,447</u>	<u>\$ 114,586,556</u>

The accompanying notes are an integral part of this consolidated statement.

**PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST  
AND ITS SUBSIDIARIES**

**CONSOLIDATED STATEMENT OF FUNCTIONAL EXPENSES**  
For the year ended June 30, 2019

	Program activities				Support activity	
	Research and data	Public health initiative	Technology transfer and commercialization	Science City development	General and administrative	Total
<b>Program support:</b>						
Capacity building and sponsorships	\$ 77,150	\$ 300	\$ 141,550	\$ -	\$ -	\$ 219,000
Incubators support	-	-	6,082	-	-	6,082
Research and commercialization grants	16,007	-	-	-	-	16,007
Matching grants	-	-	171,231	-	-	171,231
Parallel 18 grants	-	-	2,181,385	-	-	2,181,385
Other program initiatives	-	2,432,079	1,943	-	-	2,434,022
	93,157	2,432,379	2,502,191	-	-	5,027,727
<b>Personnel costs:</b>						
Salaries and wages	533,337	3,819,910	921,059	29,231	1,149,279	6,452,816
Benefits and payroll taxes	152,991	978,634	274,311	9,752	506,478	1,922,166
	686,328	4,798,544	1,195,370	38,983	1,655,757	8,374,982
<b>Professional services</b>	144,176	302,967	490,094	212,553	682,240	1,832,030
<b>Occupancy expenses:</b>						
Depreciation and amortization	17,864	21,179	94,236	-	189,202	322,481
Rent	-	-	152,215	-	15,584	167,799
Repairs and maintenance	-	-	7,548	6,800	238,314	252,662
Security	-	1,834	-	-	177,531	179,365
Other	-	615	1,885	-	275,900	278,400
	17,864	23,628	255,884	6,800	896,531	1,200,707
<b>Travel</b>	77,197	172,140	210,473	4,192	92,703	556,705
<b>Other</b>	511,922	1,774,524	510,633	3,483	464,637	3,265,199
<b>Total expenses from operations:</b>	<b>\$ 1,530,644</b>	<b>\$ 9,504,182</b>	<b>\$ 5,164,645</b>	<b>\$ 266,011</b>	<b>\$ 3,791,868</b>	<b>\$ 20,257,350</b>

The accompanying notes are an integral part of this consolidated statement.





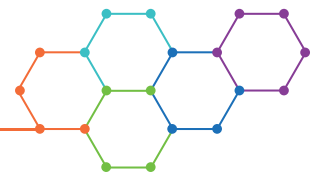
**PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST  
AND ITS SUBSIDIARIES**



**CONSOLIDATED STATEMENT OF CASH FLOWS**  
For the year ended June 30, 2019

<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>	
Change in net assets	\$ 3,750,140
Adjustments to reconcile change in net assets to net cash provided by operating activities:	
Depreciation and amortization	322,481
Gain on settlement of RSA	(3,411,665)
Unrealized loss on investment in bond	9,890,566
Changes in operating assets and liabilities-	
Decrease (increase) in assets:	
Accounts receivable	(731,937)
Prepaid expenses	9,406
Due from governmental entities	(2,074,304)
Other assets	(6,951)
Increase (decrease) in liabilities:	
Program service payable	(147,952)
Accounts payable	(2,975,713)
Accrued expenses	229,381
Other liabilities	(2,600)
Net cash provided by operating activities	4,850,852
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>	
Redemption of certificates of deposits	6,786,666
Redemption of investment in bond	192,617
Purchase of investments	(225,000)
Collection under promissory notes receivable	150,000
Purchase of property and equipment	(256,473)
Addition to construction in progress - building	(462,505)
Net cash provided by investing activities	6,185,305
<b>NET INCREASE IN CASH</b>	11,036,157
<b>CASH, beginning of year</b>	18,595,913
<b>CASH, end of year</b>	\$ 29,632,070

The accompanying notes are an integral part of this consolidated statement.



## PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST AND ITS SUBSIDIARIES

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS June 30, 2019

#### 1) Organization and summary of significant accounting policies:

- A) Organization – Puerto Rico Science, Technology and Research Trust (the Trust) is a not-for-profit organization created on August 18, 2004 by Act No. 214, as amended (the Act 214), of the Legislature of the Commonwealth of Puerto Rico (the Commonwealth). The purpose of the Trust is to foster and fund research, development and infrastructure projects related to science and technology that will promote the economic, social or educational development of the Commonwealth and to operate exclusively for charitable, educational and scientific purposes. The Act 214 also designates the Trust as a Public Health Institute, an Educational Organization and allows the Trust to act as fiscal agent to pursue certain federal funding opportunities on behalf of the Commonwealth. The Act 214 also enables the Trust to establish a research institute through which researchers from public and private research institutions might affiliate with and enables the Trust to evaluate competitive grant proposals and/or act as fiscal sponsor to pursue funding opportunities on behalf of these institutions.

The projects of the Trust are to be financed as follows: (i) the greater of \$6,340,000 or 31% out of the monies deposited in the Special Fund for Economic Development managed by the Puerto Rico Industrial Development Company (PRIDCO) for the fiscal year ended June 30, 2019 (ii) the monies of Scientific Investigation Fund for the Centenary of the University of Puerto Rico (Centenary Fund), (iii) a special appropriation of \$5,000,000 from the Improvements Fund, (iv) \$5,000,000 from the balance of collections of federal excise taxes in accordance with Section 7652(a)(3) of the United States Internal Revenue Code 1986, as amended, and, (v) private grants and donations, other government funds, and legislative appropriations.

The Act 214, as amended on August 2017, provides that the Board of Trustees is to be composed of eleven (11) trustees, two (2) of whom shall be members *ex officio* including the Secretary of the Department of Economic Development and Commerce and other government agency representative to be appointed by the Governor of the Commonwealth; and nine (9) members from the private sector.

Since September 2016, the Trust has been awarded, as prime recipient and subrecipient, with federal funds from the US Department of Health and Human (DHHS) - Center for Disease Prevention and Control, the DHHS - National Institutes of Health, the US Department of Commerce – Economic Development Administration, the US Department of the Treasury, and the US Department of Agriculture. In addition, during the year ended June 30, 2019, the Trust has been the primary recipient, or acted as fiscal sponsor, for the implementation of privately funded initiatives, mostly related to recovery efforts after the passing of Hurricane Maria in Puerto Rico on September 20, 2017.

Subsidiaries - The Trust has established the following subsidiaries by virtue of Article 5(26) of Act 214, as amended, whereby the Trust may organize subsidiaries or affiliates subject to its total or partial control to carry out any assignment from the Trust's Board of Trustees for the best interest of the Trust:

- The Puerto Rico Consortium for Clinical Investigation, Inc. (PRCCI) - A not-for-profit corporation organized on January 20, 2016. PRCCI began operations on April 1, 2016 and its purpose is to improve the impact, quality, and speed of clinical research activity conducted in Puerto Rico, especially in the fields of oncology, infectious diseases, neurological disorders and cardio-metabolism. To achieve its mission, PRCCI partners with clinical research sites across Puerto Rico to ensure access to a diverse patient population. PRCCI's operations are sustained through a combination of revenues obtained from clinical research sponsors, grants and contracts with state and private entities, and contributions from the Trust.

**PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH  
TRUST AND ITS SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**June 30, 2019**

- PRST, Inc. (PRST) – A not-for-profit corporation organized on December 28, 2016. The purpose of PRST is to act as a Qualified Promoter as defined in Section 2034.01 of the newly enacted Incentives Code of Puerto Rico. A Qualified Promoter is authorized by the Department of Economic Development and Commerce to engage in the promotion of new companies established in Puerto Rico and to obtain decrees under Act No. 20 of 2012, to establish and expand their export services businesses.

These consolidated financial statements include the accounts of the Trust and its Subsidiaries (collectively referred as the Trust and its Subsidiaries) as of and for the year ended June 30, 2019.

- B) Summary of significant accounting policies – The Trust and its Subsidiaries prepare its consolidated financial statements in accordance with accounting principles generally accepted in the United States of America for not-for-profit organizations. The significant accounting policies used by the Trust and its Subsidiaries are as follows:

Principles of consolidation – The accompanying consolidated financial statements include the accounts of the Trust and its Subsidiaries, as described in Note 1A. Intercompany transactions and accounts have been eliminated in consolidation.

Basis of presentation – The consolidated financial statements of the Trust and its Subsidiaries have been prepared in accordance with U.S. generally accepted accounting principles (US GAAP), which require reporting information regarding its financial position and activities according to the following net asset classifications:

- Net assets without donor restrictions – Net assets that are not subject to donor-imposed restrictions and may be expended for any purpose in performing the primary objectives of the organization. These assets may be used at the discretion of the Trust and its Subsidiaries' management and the Board of Trustees.
- Net assets with donor restrictions – Net assets subject to stipulations imposed by donors and some grantors. Some donor restrictions are temporary in nature; those restrictions will be met by actions of the Trust and its Subsidiaries or by passage of time. Other donor restrictions are perpetual in nature, where by the donor has stipulated the funds be maintained in perpetuity.

Donor restricted contributions are reported as increases in net assets with donor restrictions. When a restriction expires, net assets are reclassified from net assets with donor restrictions to net assets without donor restrictions in the statement of activities.

As of June 30, 2019, the Trust and its Subsidiaries' net assets are classified as net assets with donor restrictions and net assets without donor restrictions. Net assets with donor restrictions include the following:

Purpose restricted:

- Federal funds received in advanced for the implementation of programmatic initiatives, and funds received from private sources for the implementation of initiatives related to recovery efforts after the passing of Hurricane Maria through Puerto Rico on September 20, 2017.



## PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST AND ITS SUBSIDIARIES



### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS June 30, 2019

- Monies for the Scientific Investigation Fund for the Centenary of the University of Puerto Rico. This fund was created to improve the infrastructure, activities and environment of investigative activities of the University of Puerto Rico and to facilitate the commercialization of the innovations that are developed there. Among the activities to be supported are the recruitment and retention of researchers and the promotion of technology transfer.

Permanent in nature:

- Consist of a land, described in Note 11, that was contributed with the restriction of using it for the purpose described in Act 214, as amended, through the implementation of a Master Plan.

Accounting estimates – The preparation of consolidated financial statements in conformity with generally accepted accounting principles in the United States of America requires management to make estimates and assumptions that affect certain reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Accordingly, actual results could differ from those estimates.

Allowance for doubtful accounts – The Trust and its Subsidiaries provide an allowance for doubtful accounts equal to the amount of estimated uncollectible amounts. The estimate is based on the review of the current status of donor pledges, contributions and grants.

Investment in bond - Investments in marketable debt securities are carried at fair value determined using quotations obtained from brokers. Net investment return (loss) is reported in the statement of activities and consists of interest and dividend income, realized and unrealized capital gains and losses, less external and direct internal investment expenses.

Equity investments – The equity investments are carried at the lower of cost or net realizable value.

Property and equipment and equipment under capital leases – Property and equipment are stated at cost, or if donated, at the fair value at date of receipt. Equipment under capital leases is stated at the net present value of the minimum lease payments. Expenditures for major additions and improvements are capitalized, while minor replacements, maintenance, and repairs are charged to expense as incurred.

Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the related assets, as follows:

Description	Estimated Useful Life
Furniture and fixtures	5 years
Computer and laboratory equipment	3 to 5 years
Leasehold improvements	Lease term
Equipment under capital leases	Lease term

At the time property and equipment is sold or otherwise disposed of, the cost and related accumulated depreciation or amortization are removed from the books and the resulting gain or loss, if any, is credited or charged to operations.

Accounting for the impairment or disposal of long-lived assets – The Trust and its Subsidiaries' long-lived assets held and used in operations are tested for recoverability whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. Assets are considered to be impaired if the carrying amount of the asset exceeds the sum of the undiscounted cash flow expected to result from the use and eventual disposition of the asset.

**PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH  
TRUST AND ITS SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
June 30, 2019**

If such assets are impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds its fair value. Assets to be disposed of, other than by sale, continue to be classified as held and used until they are disposed of. Assets to be disposed of by sale are classified as held for sale in the period in which certain criteria are met and reported at the lower of the carrying amount or fair value. At the time such criteria are no longer met, such assets are reclassified as assets held and used in operations.

Land development costs – Represent costs for a land site consultation approval, certification of environmental compliance, architectural design, and other costs incurred in connection with land received by the Trust and its Subsidiaries for the construction of its facilities.

Fair value measurements – Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Market or observable inputs are the preferred source of value, followed by assumptions based on hypothetical transactions in the absence of market input.

The valuation techniques are based upon observable or unobservable inputs. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the entity's market assumptions. These two types of inputs create the following fair value hierarchy:

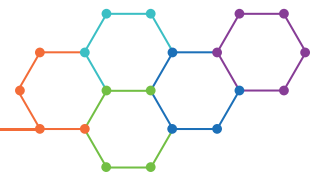
- Level 1 – Quoted prices for identical instruments in active markets.
- Level 2 – Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-derived valuations whose inputs are observable or whose significant value drivers are observable.
- Level 3 – Significant inputs to the valuation model are unobservable.

The Trust maintains policies and procedures to value financial instruments using the best and most relevant data available.

Contributions and support revenue – The Trust and its Subsidiaries derive its revenues from contributions received from the government, corporations, sponsors and individuals. All revenues and contributions are considered to be available for unrestricted use, unless specifically restricted by the donor. Amounts received that are designated for future periods or restricted by the donor for specific purposes are reported as with donor restrictions support. When a donor restriction expires, that is, when a stipulated time restriction ends or purpose restriction is accomplished, net assets with donor restrictions are reclassified to net assets without donor restrictions and reported in the statement of activities as net assets released from restrictions. However, if a restriction is fulfilled in the same time period in which the contribution is received, the Trust and its Subsidiaries report the support as without donor restrictions.

Contributed services – Contributions of services are only recognized if services received: (a) create or enhance non-financial assets or would typically need to be purchased if not provided by donation, (b) require specialized skills and are provided by individuals possessing those skills. The contribution revenue for services received is recognized at the fair value of those services. There were no contributed services during the year ended June 30, 2019.

Income taxes – The Trust and its Subsidiaries are exempt from Puerto Rico income taxes under the provisions of Act 214, as amended, and from federal taxes under the provisions of Section 501(c) of the Internal Revenue Code. Accordingly, no provision for income taxes has been recorded in the accompanying consolidated financial statements.



## PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST AND ITS SUBSIDIARIES



### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS June 30, 2019

The Trust and its Subsidiaries follow the guidance for uncertainty in income taxes issued by the Financial Accounting Standards Board. Management evaluated the Trust and its Subsidiaries' tax positions and concluded that the Trust and its Subsidiaries had taken no uncertain tax positions that require adjustments or disclosure in the consolidated financial statements.

**Functional allocation of expenses and operational expenditures** – The costs of providing the Trust and its Subsidiaries' programs and other activities have been summarized on a functional basis in the accompanying consolidated statements of activities and functional expenses. During the year ended June 30, 2019, certain costs have been allocated among the following programs and support activities:

- *Research and data:* includes expenses aimed to improve, analyze and/or strengthen the local research and development (R&D) infrastructure and the breadth of science and technology activity in Puerto Rico. Examples of expenses within this function include: clinical trials, grants to support laboratory infrastructure, research grants, research institute and educational organization initiatives, grants to attract or retain distinguished researchers, studies to determine R&D, innovation, knowledge economy activity in the Island; and, salaries and professional services to support this area.
- *Public Health Initiative:* includes expenses incurred regarding the *Puerto Rico Public Health Trust*, an initiative established by the Trust and its Subsidiaries to act as Public Health Institute (PHI). Acting as a PHI, the Trust implements programs which aim is to improve public health capacity, systems and outcomes by fostering innovation, leveraging resources and building partnerships to improve the public's health. Expenses within this function include: integrated vector management initiatives, health-outcome-and-measures research and studies, and salaries and professional services to support this area.
- *Technology transfer and commercialization:* includes expenses incurred in initiatives to support technology transfer and commercialization and direct investments in technology development projects which have a clear commercialization aim. Examples of expenses within this function include intellectual property assistance, sponsorship, grants for technology developments; investment in technology commercialization accelerators and startup incubators, salaries and professional services to support this area. During the year ended June 30, 2016, the Trust and its Subsidiaries implemented Parallel 18 (P18), a startup creation initiative. The purpose of P18 is to provide startups, selected competitively from Puerto Rico and abroad, with funding, complete support system, and an acceleration program with high-level resources and access to a global network of mentors. The P18 program is financed by the support from the Economic Development and Commerce Department, the Puerto Rico Industrial Development Company, and the Trust.
- *Science City development:* includes non-capitalizable expenditures necessary for the on-going development and construction of sites at the Science City. These expenditures include salary and professional services to support this area, planning and assessment projects, security services to enable construction work, etc.
- *General and administrative:* includes all administrative expenses incurred to support all functional areas as described above which are not directly allocable to any of them. Example of these expenses include administrative staff salaries, accounting fees, depreciation and amortization, utilities, etc.

**PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH  
TRUST AND ITS SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**June 30, 2019**

- *Fundraising:* includes expenses incurred in soliciting contributions, gifts, grants, etc. Example of these expenses include: publicizing and conducting fundraising campaigns, soliciting grants from foundations and government agencies, costs of participating in federated fundraising campaigns, preparing and distributing fundraising manuals, instructions and other materials. The Trust and its Subsidiaries did not engage in any fundraising activity during the year ended June 30, 2019.

Advertising and promotion – The Trust and its Subsidiaries charge to operations advertising and promotion costs as they are incurred. During the year ended June 30, 2019, the Trust and its Subsidiaries incurred in advertising and promotion expenses of approximately \$232,000.

Change in accounting principles – On August 18, 2016, Financial Accounting Standards Board (FASB) issued Accounting Standard Update (ASU) 2016-14, Not-For-Profit Entities (Topic 958) – Presentation of Financial Statements of Not-For-Profit Entities. The Trust and its Subsidiaries implemented the ASU in the current year, applying the changes retrospectively. The new standard changed the following aspects of the financial statements:

- The temporarily restricted and permanently restricted net asset classes have been combined into a single net asset class called net assets with donor restrictions.
- The unrestricted net asset class has been renamed net assets without donor restrictions.
- The financial statements include a disclosure about liquidity and availability of resources.

Recent accounting pronouncements – In May 2014, the FASB issued ASU 2014-09, Revenue from Contracts with Customers (Topic 606) (ASU 2014-09). This new accounting standard that requires recognition of revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods or services. The FASB has also issued several updates to ASU 2014-09. The new standard supersedes U.S. GAAP guidance on revenue recognition and requires the use of more estimates and judgments than the present standards. It also requires additional disclosures. This ASU is effective for annual reporting periods beginning after December 15, 2018, and interim periods within annual periods beginning after December 15, 2019.

In June 2018, the FASB issued ASU 2018-08, Not-for-Profit Entities (Topic 958): Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made (ASU 2018-08). The ASU 2018-08 clarifies the guidance for evaluating whether a transaction is reciprocal (i.e., an exchange transaction) or nonreciprocal (i.e., a contribution) and for distinguishing between conditional and unconditional contributions. The ASU also clarifies the guidance used by entities other than not-for-profit to identify and account for contributions made. The ASU 2018-08 has different effective dates for resource recipients and resource providers. Where the Trust and its Subsidiaries is the resource recipient, the ASU 2018-08 is applicable to contributions received for annual periods beginning after December 15, 2018, and interim periods within annual periods beginning after December 15, 2019. Early adoption is permitted.

The Trust and its Subsidiaries is evaluating the impact of these guidance on its financial statements.



## PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST AND ITS SUBSIDIARIES



### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS June 30, 2019

#### 2) Concentrations of credit risks:

Financial instruments, which potentially subject the Trust and its Subsidiaries to concentration of credit risks, consist of cash deposits and accounts receivable.

The Trust and its Subsidiaries have cash deposits with various financial institutions, which at times, may exceed the amount insured by the Federal Deposit Insurance Corporation (FDIC). As of June 30, 2019, the Trust and its Subsidiaries' cash deposits exceeded the FDIC guarantee of \$250,000 per financial institution by approximately \$27,975,000.

For the year ended June 30, 2019, grants and contributions from state and federal entities represent approximately 83%, out of total revenues. The balance due from these state and federal entities represent approximately 84%, of total accounts receivable.

#### 3) Liquidity and availability:

As of June 30, 2019, financial assets available for general expenses, that is, without donor restriction or other limiting their use, within one year of the financial position date, comprises the following:

Description	Amount
Cash	\$ 29,632,070
Account receivable	1,864,680
Due from governmental entities	4,978,063
Investment in bond	34,561,416
Equity investments	1,167,292
Other investments	225,000
	<u>72,428,521</u>
Less amount not available to be used within one year:	
Net assets with donor restrictions	<u>(3,819,140)</u>
Financial assets available to meet general expenditures over the next twelve months	<u>\$ 68,609,381</u>

#### 4) Investment in bond:

The Trust is a holder of a \$44,644,599 bond issued by the former Governmental Development Bank for Puerto Rico (GDB) during the year ended June 30, 2019, as a settlement regarding claims of assets held at GDB. The bond yields a 7.5% annual coupon interest rate and matures in August 2040.

As of June 30, 2019, the hierarchy level, cost and fair value of the investment in bond is as follows:

Description	Level	Cost basis	Fair value	Unrealized loss
Debt securities- Investment in bond	2	<u>\$ 44,451,982</u>	<u>\$ 34,561,416</u>	<u>\$ (9,890,566)</u>

**PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH  
TRUST AND ITS SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**June 30, 2019**

As of June 30, 2019, there is a portion of the investment in bond amounting to \$2,097,827 that is restricted for the Scientific Investigation Fund for the Centenary of the University of Puerto Rico, which remain in custody of the Trust.

**5) Equity investments:**

As of June 30, 2019, the equity investments consist of the following:

Description	Amount
49,222 shares of common stock of CDI Laboratories, Inc. (CDI), a nonaffiliated company, which as of June 30, 2019, represent approximately 10% of the CDI's common stock, respectively.	\$ 867,292
312,500 shares of Series Seed preferred stock of Timokids, Inc., a nonaffiliated company. These preferred shares provide its holders voting and liquidation preference rights and the option to convert to shares of common stock.	75,000
62,500 shares of Series Seed preferred stock of Brands of Holdings Inc., a nonaffiliated company. These preferred shares provide its holders voting and liquidation preference rights and the option to convert to shares of common stock.	75,000
150,000 shares of Class B Units of Abartys Health LLC (Abartys), a nonaffiliated company, which as of June 30, 2019, represent approximately 1.5% of Abartys' Class B Units.	150,000
	<u>\$ 1,167,292</u>

**6) Convertible promissory notes receivable:**

As of June 30, 2019, the Trust is the holder of five (5) convertible notes of \$75,000 each. The notes accrue interest at an annual interest rate between 2% and 6%. These notes may be converted into shares of common stock upon the occurrence of certain events, including the companies' failure to pay in full the principal and accrued interest upon its maturity date or a change of control transaction.

**7) Other investments:**

As of June 30, 2019, the Trust is the holder of four (4) Simple Agreements for Future Equity (SAFE) investments, amounting to \$225,000. These SAFE provide rights to the Trust and its Subsidiaries for future equity in its investees without determining a specific price per share at the time of the initial investment.



## PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST AND ITS SUBSIDIARIES



### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS June 30, 2019

#### 8) Property and equipment:

As of June 30, 2019, property and equipment consists of the following:

Description	Cost	Accumulated depreciation and amortization	Book value
Furniture and fixtures	\$ 109,906	\$ 101,035	\$ 8,871
Computer and laboratory equipment	248,225	122,562	125,663
Leasehold Improvements	612,271	296,568	315,703
	<u>\$ 970,402</u>	<u>\$ 520,165</u>	<u>\$ 450,237</u>

#### 9) Building:

As of June 30, 2019, building consists of the following:

Description	Amount
Innovation Center Building- a three-story building that houses the Trust's headquarters and provides space for both, the incubation of local hi-tech startups and strategic service providers, creating a synergistic effect to accelerate the commercialization of technologies.	\$ 3,056,568
Puerto Rico Environmental Quality Board's Laboratory - Building that houses the laboratory facilities of the Puerto Rico Environmental Quality Board and the laboratory facilities of the Puerto Rico Vector Control Unit.	3,546,932
	6,603,500
Less: Accumulated depreciation	(599,033)
	6,004,467
Construction in progress	66,597
	<u>\$ 6,071,064</u>

As of June 30, 2019, the construction in progress is related to the construction of the Forward Center Building, a 30,000 square feet, three-story building to be located at the Science City. This construction is partially funded by the US Department of Commerce – Economic Development Administration.

#### 10) Land and property for research, development and infrastructure project related to science and technology:

On October 22, 2007, the Trust received 67.95 acres of prime real estate in the metropolitan area of San Juan, which includes the former Rio Piedras Correctional Facilities (Oso Blanco State Penitentiary).

The land and property were valued at \$18,000,000, based on a market appraisal opinion report, dated October 20, 2008.

**PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH  
TRUST AND ITS SUBSIDIARIES****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**June 30, 2019**

As established by Act 214, as amended, the Trust and its Subsidiaries plan to develop the 67.95 acres of Oso Blanco State Penitentiary site into a research park, which combines residential, retail, educational, and civic facilities with laboratory and research and development facilities with the purpose of facilitating the development of infrastructure favorable to the research and development of science and technology. Costs related to the design, development and improvements of the campus are capitalized as incurred.

During the year ended June 30, 2018, the Trust and its Subsidiaries transferred the ownership of 8.3 acres of the land to the Puerto Rico Department of Transportation and Public Works (DTPW), as a donation. The purpose of the transfer was to enable DTPW to seek financing from the Federal Highway Administration (FHA) for the construction of the Science City Boulevard. The transfer was approved by the FHA and the Federal Transit Administration as part of the Statewide Transportation Improvement Program (STIP) for fiscal years 2017-2020.

As of June 30, 2019, the land was restricted by donor for research, development and infrastructure project related to science and technology.

**11) Program service payable:**

As of June 30, 2019, program service payable consists of accrued obligations related to program support grants awarded during the period through both, unrestricted and restricted funds.

The balance of program service regarding program support grants amounting to approximately \$717,000 as of June 30, 2019, is without donor restrictions.

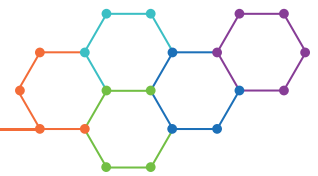
**12) Operating lease agreements:**

The Trust and its Subsidiaries entered into a lease agreement for the use of the facilities for P18, described in Note 1B. The agreement calls for escalating monthly rental payments ranging from \$11,983 to \$13,510 through December 2020. Total rent expense related to this agreement for the year ended June 30, 2019, amounted to approximately \$168,000.

On September 17, 2018, the Trust and its Subsidiaries entered into a lease agreement for the use of a two-story office building and one annex in Ponce, Puerto Rico. The agreement calls for monthly rental payments of \$2,004 through September 2021. Total rent expense related to this agreement for the year ended June 30, 2019, amounted to approximately \$20,000.

Future minimum lease payments subsequent to June 30, 2019, are as follows:

Year ending June 30,	Amount
2020	\$ 186,173
2021	105,111
2022	4,008
Total future minimum lease payments	\$ 295,292



## PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST AND ITS SUBSIDIARIES



### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS June 30, 2019

#### 13) Rental income:

The Trust and its Subsidiaries lease building spaces under operating lease agreements. The lease agreements are for periods of one year with a renewal option for an additional year on month to month basis.

In addition, as of June 30, 2019, the Trust and its Subsidiaries leases a facility for five (5) years ending July 31, 2022. The monthly rental payment is approximately \$221,000. For the year ended June 30, 2019, revenues on rental agreements amounted to approximately \$323,000.

Future minimum collections related to the lease agreements after June 30, 2019, are as follows

Year ending June 30,	Amount
2020	\$ 220,959
2021	220,959
2022	220,959
2023	18,413
	<u>\$ 681,290</u>

#### 14) Retirement plan

The Trust and its Subsidiaries have established a defined contribution retirement plan (the Plan) that covers all full-time employees who have reached 21 years of age, without requiring eligibility requirements as to service requirements. Under the Plan, participants may contribute an amount not exceeding \$15,000 per year. The Trust and its Subsidiaries are not required to make matching contributions but reserves its right to start making matching contributions based on a maximum of 3% out of each dollar contributed by the employee, up to 10% of compensation. The Trust and its Subsidiaries may contribute a discretionary amount in addition to the matching contribution for all eligible participants. Amounts contributed by the Trust and its Subsidiaries are 100% vested after an employee completes one (1) year of service. Total contributions made by the Trust and its Subsidiaries during the year ended June 30, 2019, amounted to approximately \$25,400.

#### 15) In-kind contributions:

In-kind contributions for the year ended June 30, 2019, amounted to approximately \$2,975, which consisted mainly of services provided by tenants related to science, technology, and research.

#### 16) Supplemental disclosures for the statement of cash flows:

- A) Non-cash from investing transactions – During the year ended June 30, 2019, the non-cash investing transaction is related to a conversion of certificates of deposits to investment in bond for \$44,644,599.
- B) Other cash flows information – During the year ended June 30, 2019, the Trust and its Subsidiaries paid approximately \$120 in interest.



## PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST AND ITS SUBSIDIARIES



### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS June 30, 2019

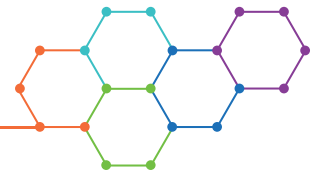
#### 17) Subsequent events:

During July 2019, the Association of State and Territorial Health Officials (ASTHO), a non-profit organization and prime recipient of funds from the Center for Control and Disease Prevention, awarded a \$150,000 sub-award to implement a project titled *Capacity Building for Jurisdictional Hurricane Recovery – US Virgin Islands Staffing Capacity Enhancement*.

During August 2019, the U.S. Secretary of Commerce announced that the Economic Development Administration (EDA) awarded \$300,000 for a project titled *Investor Bridge Project*. The project will provide an investor education series, expand the investor network, and launch a formal investment fund with a target size of \$10 million to acquire capital to invest in startups and other companies from the Puerto Rico tech ecosystem.

During August 2019, the Medtronic Communities Foundation awarded a grant in the amount of \$4,650,000 to support activities of the Trust and its Subsidiaries' Public Health Institute.

Subsequent events were evaluated through February 21, 2020, the date the basic consolidated financial statements were available to be issued.



## PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST AND SUBSIDIARIES

### SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS For the year ended June 30, 2019

Federal Grantor/Program Pass- Through Grantor/ Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying Number	Total Federal Expenditures
U.S. Department of Health and Human Services: Pass – Through Program From:			
Centers for Disease Control and Prevention (CDC)			
Prevention of Disease, Disability, and Death by Infectious Diseases Federal Program	93.084	NU50CK 000481	\$ 5,772,330
Association of State and Territorial Health Officials (ASTHO)			
Activities to Support State, Tribal, Local and Territorial (STLT) Health Department Response to Public Health or Healthcare Crises	93.391	79-30001	1,863,963
National Association of County and City Health Officials (NACCHO)			
Activities to Support State, Tribal, Local and Territorial (STLT) Health Department Response to Public Health or Healthcare Crises	93.391	2019-011601	3,790
National Institutes of Health			
Minority Health and Health Disparities Research	93.307	R21MDO 13709	76,751
National Network of Public Health Institutes (NNPHI)			
Activities to Support State, Tribal, Local and Territorial (STLT) Health Department Response to Public Health or Healthcare Crises	93.391	GL13069	54,338
XLerateHealth, LLC			
Biomedical Research and Research Training	93.859	UT2GM 130174	4,784
U.S. Department of Commerce			
Pass – Through Program From:			
Economic Development Administration (EDA)	11.020	ED19HDQO 2000027	15,149
Cluster Grants-Regional Innovation Initiatives			

Continues...

**PUERTO RICO SCIENCE, TECHNOLOGY AND  
RESEARCH TRUST AND SUBSIDIARIES****SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS  
For the year ended June 30, 2019**

<b>Federal Grantor/Program Pass- Through Grantor/ Program or Cluster Title</b>	<b>Federal CFDA Number</b>	<b>Pass-Through Entity Identifying Number</b>	<b>Total Federal Expenditures</b>
Continued...			
Investments for Public Works and Economic Development Facilities	11.300	01-79-14805	32,082
U. S. Department of Agriculture Pass – Through Program From: Animal and Plant Health Inspection Service			
Plant and Animal Disease, Pest Control, and Animal Care	10.025	AP19PPQSTO OC027	8,947
Total Expenditures of Federal Awards			<u>\$ 7,832,134</u>

The accompanying notes are an integral part of this schedule.



## PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST AND SUBSIDIARIES



### NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS For the year ended June 30, 2019

#### 1) Basis of Presentation:

The accompanying schedule of expenditures of federal awards (the Schedule) includes the federal award activity of Puerto Rico Science, Technology and Research Trust (the Trust) under programs of the federal government for the year ended June 30, 2019. The information in this Schedule is presented in accordance with the requirements of Title 2 U.S. Code of Federal Regulations (CFR) Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Because the Schedule presents only a selected portion of the operations of the Trust, it is not intended to and does not present the financial position, changes in net assets or cash flows of the Trust. Therefore, some amounts presented in this schedule may differ from amounts presented in, or used in the preparation of, the basic financial statements. All federal agencies as well as federal awards passed through from other local government agencies are included in the schedule.

#### 2) Summary of Significant Accounting Policies:

Expenditures reported on the Schedule are reported under the accrual basis of accounting. Such expenditures are recognized following the cost principles contained in the Uniform Guidance, wherein certain types of expenditures are not allowable or are limited as to reimbursement.

#### 3) Indirect Cost Rate:

The Trust has elected not to use the 10% de minimis indirect cost rate allowed under the Uniform Guidance.



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**REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER  
MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE  
WITH GOVERNMENT AUDITING STANDARDS**

**INDEPENDENT AUDITORS' REPORT**

To: The Board of Trustees of  
Puerto Rico Science, Technology and Research Trust

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards issued by the Comptroller General of the United States, the consolidated financial statements of Puerto Rico Science, Technology and Research Trust, as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise Puerto Rico Science, Technology and Research Trust's consolidated financial statements, and have issued our report thereon dated February 21, 2020.

**Internal Control Over Financial Reporting**

In planning and performing our audit of the consolidated consolidated financial statements, we considered Puerto Rico Science, Technology and Research Trust's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Puerto Rico Science, Technology and Research Trust's internal control. Accordingly, we do not express an opinion on the effectiveness of Puerto Rico Science, Technology and Research Trust's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

**THE POWER OF BEING UNDERSTOOD**  
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Page 22

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**Compliance and Other Matters**

As part of obtaining reasonable assurance about whether Puerto Rico Science, Technology and Research Trust's financial statement are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statements amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under Government Auditing Standards.

**Purpose of this Report**

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the entity's internal control compliance. Accordingly, this communication is not suitable for any other purpose.

San Juan, Puerto Rico  
February 21, 2020.

Stamp No. E407287 was affixed to  
the original of this report.

*RSM Puerto Rico*



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**REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM AND REPORT ON  
INTERNAL CONTROL OVER COMPLIANCE REQUIRED BY THE UNIFORM GUIDANCE**

**INDEPENDENT AUDITORS' REPORT**

To: The Board of Trustees of  
Puerto Rico Science, Technology and Research Trust

**Report on Compliance for Each Major Federal Program**

We have audited Puerto Rico Science, Technology and Research Trust's compliance with the types of compliance requirements described in the OMB Compliance Supplement that could have a direct and material effect on each of Puerto Rico Science, Technology and Research Trust's major federal programs for the year ended June 30, 2019. Puerto Rico Science, Technology and Research Trust's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

***Management's Responsibility***

Management is responsible for compliance with federal statutes, regulations, and the terms and conditions of its federal awards applicable to its federal programs.

***Auditors' Responsibility***

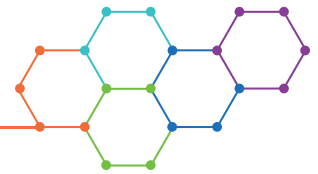
Our responsibility is to express an opinion on compliance for each of Puerto Rico Science, Technology and Research Trust's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about Puerto Rico Science, Technology and Research Trust's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of Puerto Rico Science, Technology and Research Trust's compliance.

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#### ***Opinion on Each Major Federal Program***

In our opinion, Puerto Rico Science, Technology and Research Trust's complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2019.

#### **Report on Internal Control over Compliance**

Management of Puerto Rico Science, Technology and Research Trust is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered Puerto Rico Science, Technology and Research Trust's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of Puerto Rico Science, Technology and Research Trust's internal control over compliance.

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A material weakness in internal control over compliance is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A significant deficiency in internal control over compliance is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

San Juan, Puerto Rico  
February 21, 2020.

Stamp No. E407288 was affixed to  
the original of this report.

*RSM Puerto Rico*

**PUERTO RICO SCIENCE, TECHNOLOGY AND  
RESEARCH TRUST AND SUBSIDIARIES****SCHEDULE OF FINDINGS AND QUESTIONED COSTS  
For the year ended June 30, 2019****SECTION I – SUMMARY OF AUDITORS' RESULTS****Financial Statements**

Type of report the auditor issued on whether the consolidated financial statements were prepared in accordance with GAAP:

**Unmodified Opinion**

Internal control over financial reporting:

- Material weakness (es) identified?
- Significant deficiency (ies) identified?

\_\_\_ yes    x no  
\_\_\_ yes    x none reported

Noncompliance material to financial statements noted?

\_\_\_ yes    x no

**Federal Awards**

Internal control over major federal programs:

- Material weakness (es) identified
- Significant deficiency (ies) identified?

\_\_\_ yes    x no  
\_\_\_ yes    x none reported

Type of auditors' report issued on  
Compliance for major federal programs

**Unmodified**

Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516 (a)?

\_\_\_ yes    x no

**Identification of federal program**CFDA Number

93.084

Name of Federal Program or Cluster

Prevention of Disease, Disability, and Death by Infectious Diseases

93.391

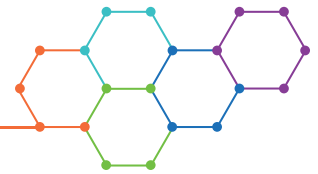
Activities to Support State, Tribal, Local and Territorial (STLT) Health Department Response to Public Health or Healthcare Crises

Dollar threshold used to distinguish between type A and type B programs:

\$750,000

Auditee qualified as low-risk auditee?

x yes    \_\_\_ no



**PUERTO RICO SCIENCE, TECHNOLOGY AND  
RESEARCH TRUST AND SUBSIDIARIES**



**SCHEDULE OF FINDINGS AND QUESTIONED COSTS  
For the year ended June 30, 2019**

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**SECTION II – FINANCIAL STATEMENTS FINDINGS**

There were no financial statements findings to report for the year ended June 30, 2019.

**SECTION III – FEDERAL AWARDS FINDINGS AND QUESTIONED COSTS**

There were no federal awards findings to report for the year ended June 30, 2019.



## PUERTO RICO SCIENCE, TECHNOLOGY AND RESEARCH TRUST AND SUBSIDIARIES

**DRAFT** Consolidated Financial Statements  
June 30, 2019 (Unaudited) and 2018 (Audited)

**CONSOLIDATED BALANCE SHEETS****As of June 30, 2019 (Unaudited) and 2018 (Audited)**

<b>ASSETS</b>	<b>June 30, 2019</b>	<b>June 30, 2018</b>
Cash	29,605,532	18,595,913
Accounts Receivable	1,865,342	1,132,743
Prepaid Expenses	104,209	117,141
Due from government entity, net of allowance for doubtful accounts of \$1,123,764, respectively	4,978,063	2,903,759
Unrestricted Investments	-	44,819,874
Investments, including restricted portion of \$3,036,801	-	3,199,726
Other assets	23,008	12,533
Convertible Promissory Notes Receivable	375,000	375,000
Promissory Note Receivable	-	150,000
Equity Investments	1,167,292	1,167,292
SAFE Investments	225,000	-
Bond Receivable, including restricted portion of \$2,097,827	34,561,416	-
Property and equipment, net	451,738	332,772
Building, net	6,071,064	5,792,032
Restricted land and property for research, development and infrastructure project related to science and technology	16,100,307	16,100,307
Land development costs	11,329,395	11,329,395
Construction in Progress - Science City	<u>11,148,357</u>	<u>11,149,857</u>
	<u><b>\$ 118,005,723</b></u>	<u><b>\$ 117,178,344</b></u>
<b>LIABILITIES AND NET ASSETS</b>		
<b>LIABILITIES</b>		
Program service payable	\$ 717,035	864,989
Accounts payable	2,271,267	5,246,980
Accrued expenses	421,702	218,859
Other liabilities	<u>8,500</u>	<u>11,100</u>
	3,418,504	6,341,928
<b>NET ASSETS</b>		
Without donor restrictions		
Undesignated	94,659,148	90,673,971
With donor restrictions		
Purpose restricted	3,827,764	4,062,138
Perpetual in nature	<u>16,100,307</u>	<u>16,100,307</u>
Total Net Assets:	<u>114,587,219</u>	<u>110,836,416</u>
Total liabilities and net assets	<u><b>\$ 118,005,723</b></u>	<u><b>\$ 117,178,344</b></u>

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Page 2



**CONSOLIDATED STATEMENT OF ACTIVITIES**  
**For the years ended as of June 30, 2019 (Unaudited) and 2018 (Audited)**

	June 30, 2019			June 30, 2018
	Without donor restrictions	With donor restrictions	Total	
<b>CHANGES IN NET ASSETS</b>				
<b>REVENUES AND SUPPORT</b>				
State grants and appropriation	\$ 16,759,924	-	\$ 16,759,924	\$ 15,495,239
Federal Grants	7,838,337	124,970	7,963,307	4,162,870
Private Grants and Sponsorships	388,684	2,947,448	3,336,133	2,671,835
Donations and Contributions	46,631		46,631	295,620
Clinical Trials, net	245,139	-	245,139	129,059
Intercompany Transfer	-	-	-	-
Rental Income	331,057	-	331,057	314,845
Interest Income	907,512	47,017	954,530	21,240
Other Income	228,221	-	228,221	178,959
Net Assets released from restrictions:				
Satisfaction of Program Restrictions	3,096,175	(3,096,175)	-	-
Total Revenue:	29,841,680	23,261	29,864,941	23,269,667
<b>OPERATING EXPENSES</b>				
Program and Services:				
Research Infrastructure	1,501,636	-	1,501,636	1,188,443
Public Health Initiative	9,504,182		9,504,182	4,810,022
Tech Transfer and Commercialization	5,164,645	-	5,164,645	5,108,387
Science City Development	266,011	-	266,011	274,688
	16,436,474	-	16,436,474	11,381,540
Supporting Services:				
General and administrative	3,820,874	-	3,820,874	3,363,765
Bad Debt Expense	-	-	-	1,204,170
Total Support Services	3,820,874	-	3,820,874	4,567,935
Total Expense from Operations:	20,257,348	-	20,257,348	15,949,475
Change in Net Assets from Operations:	9,584,332	23,261	9,607,592	7,320,192
<b>NON OPERATING INCOME (EXPENSES)</b>				
Loss on Transfer of Land	-		-	(1,899,693)
Unrealized Gain (Loss) on Bonds Value	(9,290,223)	(600,343)	(9,890,566)	-
Other Gain (Loss) on Settlements	415,188	-	415,188	-
Gain (Loss) Settlement of Assets at GDB	3,275,881	342,708	3,618,589	-
Change in Net Assets:	3,985,177	(234,374)	3,750,803	5,420,499
Net Assets, beginning of year:	<u>\$ 90,673,971</u>	<u>\$ 20,162,445</u>	<u>\$ 110,836,416</u>	<u>\$105,415,917</u>
Net Assets, end of year:	<u>\$ 94,659,148</u>	<u>\$19,928,071</u>	<u>\$114,587,219</u>	<u>\$110,836,416</u>

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Page 3



**CONSOLIDATED STATEMENT OF FUNCTIONAL EXPENSES**  
**For the years ended as of June 30, 2019 (Unaudited) and 2018 (Audited)**

		30-Jun-19					
		Program Activities				Support Activity	
		Research Infrastructure	Public Health Initiative	Technology Transfer and Commercialization	Science City Development	Management	Total
Program Support:							
	Capacity Building and Sponsorships	\$ 77,150	\$ 300	\$ 141,550	\$ -	-	\$ 219,000
	Incubators Support	-	-	6,081.52	-	-	6,082
	Research and Commercialization Grants	16,007	-	-	-	-	16,007
	Matching Grants	-	-	171,231	-	-	171,231
	Parallel 18 Grants	-	-	2,181,385	-	-	2,181,385
	Other Program Initiatives	-	2,432,079	1,943.11	-	-	2,434,022
	<b>Total Program Support Expenses:</b>	<b>93,157</b>	<b>2,432,379</b>	<b>2,502,191</b>	<b>-</b>	<b>-</b>	<b>5,027,727</b>
Personnel Costs:							
	Salaries and Wages	533,337	3,819,910	921,059	29,231	1,149,279	6,452,815
	Benefits and Payroll Taxes	152,991	978,634	274,311	9,752	506,478	1,922,166
	<b>Total Personnel Costs:</b>	<b>686,328</b>	<b>4,798,544</b>	<b>1,195,370</b>	<b>38,982</b>	<b>1,655,757</b>	<b>8,374,981</b>
Professional Services:		118,475	302,967	490,094	212,553	707,940	1,832,030
Occupancy Expenses:							
	Depreciation Expense	17,863	21,179	94,236	-	189,202	322,480
	Rent	-	-	152,215	-	15,584	167,799
	Repairs and Maintenance	-	-	7,548	6,800	238,314	252,662
	Security	-	1,834	-	-	177,531	179,365
	Other	-	615	1,885	-	275,900	278,400
	<b>Total Occupancy Expenses:</b>	<b>17,863</b>	<b>23,628</b>	<b>255,884</b>	<b>6,800</b>	<b>896,530</b>	<b>1,200,706</b>
Travel:		77,197	172,140	210,473	4,192	92,703	556,705
Other Operating Expenses:		508,616	1,774,524	510,633	3,483	467,943	3,265,199
<b>Total expenses from operations:</b>		<b>\$ 1,501,636</b>	<b>\$ 9,504,182</b>	<b>\$ 5,164,645</b>	<b>\$ 266,011</b>	<b>\$ 3,820,874</b>	<b>\$ 20,257,348</b>

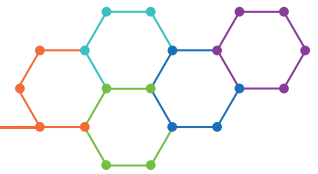


**CONSOLIDATED STATEMENT OF FUNCTIONAL EXPENSES (cont.)**  
**For the years ended as of June 30, 2019 (Unaudited) and 2018 (Audited)**

	2018								
	Research and data	Public health initiative	Technology transfer and commercialization	Science City development	Education and training	Promotion and awareness	General and administrative	Bad debt expense	Total
Program support:									
Capacity building and sponsorships	\$ 35,930	\$ -	\$ 109,424	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 145,354
Research and commercialization grants	426,631	-	-	-	-	-	-	-	426,631
Matching grants	-	-	836,986	-	-	-	-	-	836,986
Clinical trials	64,295	-	-	-	-	-	-	-	64,295
Parallel 18 grants	-	-	2,090,000	-	-	-	-	-	2,090,000
Other program initiatives	65,986	1,718,648	-	-	-	-	-	-	1,784,634
	<u>592,842</u>	<u>1,718,648</u>	<u>3,036,410</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>5,347,900</u>
Personnel costs:									
Salaries and wages	169,074	1,232,612	671,362	50,197	-	-	1,118,097	-	3,231,332
Benefits and payroll taxes	75,412	460,616	227,226	17,556	-	-	370,870	-	1,141,878
	<u>234,486</u>	<u>1,693,228</u>	<u>898,577</u>	<u>67,752</u>	<u>-</u>	<u>-</u>	<u>1,488,967</u>	<u>-</u>	<u>4,373,010</u>
Professional services	<u>284,677</u>	<u>5,665</u>	<u>347,114</u>	<u>187,164</u>	<u>1,386</u>	<u>12,380</u>	<u>692,328</u>	<u>-</u>	<u>1,430,894</u>
Occupancy expenses:									
Depreciation and amortization	31,018	-	94,945	-	-	-	80,751	-	206,714
Rent	-	-	153,116	-	-	-	-	-	153,116
Repairs and maintenance	-	-	1,276	12,353	-	-	299,248	-	312,876
Security	-	-	-	-	-	-	185,077	-	185,077
Other	-	30	884	-	-	-	180,992	-	181,906
	<u>31,018</u>	<u>30</u>	<u>250,222</u>	<u>12,353</u>	<u>-</u>	<u>-</u>	<u>746,068</u>	<u>-</u>	<u>1,039,691</u>
Travel	<u>15,919</u>	<u>55,091</u>	<u>170,723</u>	<u>670</u>	<u>5,797</u>	<u>2,091</u>	<u>41,146</u>	<u>-</u>	<u>291,436</u>
Other operating expenses	<u>29,501</u>	<u>1,347,160</u>	<u>405,341</u>	<u>5,749</u>	<u>13,467</u>	<u>88,966</u>	<u>361,200</u>	<u>1,204,170</u>	<u>3,466,544</u>
Total operating expenses	<u>\$ 1,188,443</u>	<u>\$ 4,810,022</u>	<u>\$ 5,106,387</u>	<u>\$ 274,686</u>	<u>\$ 20,640</u>	<u>\$ 113,417</u>	<u>\$ 3,229,708</u>	<u>\$ 1,204,170</u>	<u>\$ 15,949,475</u>

DRAFT

Page 5



**CONSOLIDATED STATEMENT OF CASH FLOWS**  
**For the years ended as of June 30, 2019 (Unaudited) and 2018 (Audited)**

	<b>JUNE 30, 2019</b>	<b>JUNE 30, 2018</b>
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>		
Increase (Decrease in Net Assets)	\$ 3,750,803	\$ 5,420,499
Adjustments to reconcile increase in net assets		
to net cash provided by operating activities		
Depreciation and amortization	322,480	206,714
Donation of Land	-	1,899,693
Unrealized Loss on Bond Value	9,890,566	-
Bad debts (recoveries)	-	(2,279,612)
Changes in assets and liabilities:		
Decrease (Increase) in assets:		
Accounts Receivable	(732,599)	(658,136)
Prepaid Expenses	12,931	(39,939)
Due from Government Entity	(2,074,304)	2,749,308
Other Assets	(10,475)	-
Increase (Decrease) in liabilities:		
Program Service Payable	(147,954)	408,762
Accounts Payable	(2,975,713)	(103,772)
Due to related Parties	-	(3,864)
Accrued expenses	202,843	100,549
Other liabilities	(2,600)	1,942
<b>Net Cash Provided (Used) by Operating Activities:</b>	<b>8,235,978</b>	<b>7,702,144</b>
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>		
Redemption of Investment held at GDB	48,019,600	-
Purchase of Bond	(44,644,599)	-
Bond Redemption	192,617	-
Purchase of Equity Investments	-	(150,000)
Purchase of SAFE Investments	(225,000)	-
Recoup (Issuance) of promissory notes receivable	150,000	(150,000)
Advances under convertible notes receivable	-	(75,000)
Purchase of property and equipment	(257,974)	(18,054)
Addition to construction in progress - building	(462,505)	(93,418)
(Addition) Adjustment to construction in progress - Science City	1,500	(130,933)
<b>Net Cash Provided (Used) by Investing Activities:</b>	<b>2,773,641</b>	<b>(617,405)</b>
<b>CASH FLOW FROM FINANCING ACTIVITIES:</b>		
Principal payment of obligation under capital leases	-	\$ (3,212)
<b>Net Cash Provided (Used) by Financing Activities:</b>	<b>-</b>	<b>(3,212)</b>
<b>Net Increase (Decrease) in Cash:</b>	<b>11,009,618</b>	<b>7,081,527</b>
<b>Cash at Beginning of Year:</b>	<b>\$ 18,595,913</b>	<b>11,514,386</b>
<b>Cash at End of Year or Period:</b>	<b>\$ 29,605,532</b>	<b>\$ 18,595,913</b>

DRAFT

Page 6

**1) Organization and summary of significant accounting policies:**

Organization – Puerto Rico Science, Technology and Research Trust (the Trust) is a private not-for-profit organization created on August 18, 2004 by Act No. 214, as amended (the Act 214), of the Legislature of the Commonwealth of Puerto Rico (the Commonwealth). The purpose of the Trust is to foster, and fund research, development and infrastructure projects related to science and technology that will promote the economic, social or educational development of the Commonwealth and to operate exclusively for charitable, educational and scientific purposes. The amended Act also designates the Trust as a Public Health Institute, an Educational Organization and allows the Trust to act as fiscal agent to pursue certain federal funding opportunities on behalf of the government. The Act also enables the Trust to establish a Research Institute through which researchers from public and private research institutions might affiliate with and enables the Trust to evaluate competitive grant proposals and/or act as fiscal sponsor to pursue funding opportunities on behalf of these institutions.

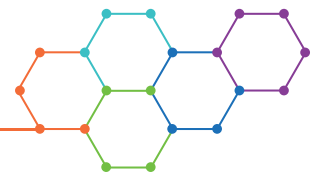
Projects of the Trust and its Subsidiaries are to be financed as follows: (i) the greater of \$6,340,000 or 31% out of the monies deposited in the Special Fund for Economic Development managed by the Puerto Rico Industrial Development Company (PRIDCO) for the fiscal years ended June 30, 2019 and 2018 (ii) the monies of Scientific Investigation Fund for the Centenary of the University of Puerto Rico (Centenary Fund), (iii) a special appropriation of \$5,000,000 from the Improvements Fund, (iv) \$5,000,000 from the balance of collections of federal excise taxes in accordance with Section 7652(a)(3) of the United States Internal Revenue Code 1986, as amended, and, (v) private grants and donations, other government funds, and legislative appropriations.

The Act 214, as amended on August 2017, provides that the Board of Trustees is to be composed of eleven (11) trustees, two (2) of whom shall be members *ex officio* including the Secretary of the Department of Economic Development and Commerce and other government agency representative to be appointed by the Governor; and nine (9) members from the private sector.

Since September 2016, the Trust has been awarded, as prime recipient and subrecipient, federal funds from the US Department of Health and Human (DHHS) - Center for Disease Prevention and Control, the DHHS - National Institutes of Health, the US Department of Commerce – Economic Development Administration, the US Department of the Treasury, and the US Department of Agriculture. In addition, during the years ended June 30, 2018 and 2019, the Trust has been the primary recipient, or acted as fiscal sponsor, for the implementation of privately funded initiatives, mostly related to recovery efforts after the passing of Hurricane Maria in Puerto Rico in September 2017.

Subsidiaries - The Trust has established the following subsidiaries by virtue of Article 5(26) of Act 214, as amended, whereby the Trust may organize subsidiaries or affiliates subject to its total or partial control to carry out any assignment from the Trust's Board of Trustees:

- The Puerto Rico Consortium for Clinical Investigation, Inc. (PRCCI) is a not-for-profit entity incorporated as of January 2016. PRCCI began operations on April 1, 2016 and its purpose is to improve the impact, quality, and speed of clinical research activity conducted in Puerto Rico, especially in the fields of oncology, infectious diseases, neurological disorders and cardio-metabolism. To achieve its mission, PRCCI partners with clinical research sites across Puerto Rico to ensure access to a diverse patient population. PRCCI's operations are sustained through a combination of revenues obtained from clinical research sponsors, grants and contracts with state and private entities, and contributions from the Trust.



- PRST, Inc., (PRST) - A not-for-profit entity organized as of December 2016. The purpose of PRST is to act as a Qualified Promoter as defined in Section 2034.01 of the newly enacted Incentives Code of Puerto Rico. A Qualified Promoter is authorized by the Department of Economic Development and Commerce to engage in the promotion of new businesses, established under Act No. 20 of 2012, which obtain tax incentives for their export services businesses.

These consolidated financial statements include the accounts of the Trust and its Subsidiaries (collectively referred as the Trust and its Subsidiaries) as of and for the years ended June 30, 2019 and 2018.

B. Summary of significant accounting policies – The Trust and its Subsidiaries prepare its consolidated financial statements in accordance with accounting principles generally accepted in the United States of America for not-for-profit organizations. The significant accounting policies used by the Trust and its Subsidiary are as follows:

Principles of consolidation – The accompanying consolidated financial statements include the accounts of the Trust and its Subsidiaries, as described in Note 1. Intercompany transactions and accounts have been eliminated in consolidation.

Basis of presentation – In August 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) No. 2016-14 Not-for-Profit Entities (Topic 958): *Presentation of Financial Statements of Not-for-Profit Entities*. The Trust and its Subsidiaries have adopted the standard during its current fiscal year and applied it retrospectively to all periods presented, through inclusion of information about liquidity and availability of resources (Note 13), inclusion of information provided about expenses as shown in the *Statement of Functional Expenses* for the years ended as of June 30, 2019 and 2018, and changes to the presentation of net asset classification on the consolidated financial statements as described below.

The Trust and its Subsidiaries' resources are classified for accounting and reporting purposes into two net asset categories according to the existence or absence of donor-imposed restrictions. Descriptions of the two net asset categories and types of transactions affecting each category follow:

- Net assets without donor restrictions – Net assets without donor restrictions are free of donor-imposed restrictions. All revenues, gains, and losses that are not restricted by donors are included in this classification. All expenditures are reported in the without donor restrictions class of net assets, including expenditures funded by restricted contributions. Expenditures funded by restricted contributions are reported in the without donor restrictions net asset class because the use of restricted contributions in accordance with donors' stipulations results in the release of such restrictions.
- Net assets with donor restrictions – Net assets with donor restrictions are limited as to use by donor-imposed stipulations that may expire with the passage of time or that may be satisfied by action of the Trust and its Subsidiaries. Net assets with donor restrictions are designated by donors for specific purposes which have not been appropriated by the Board of Trustees for distribution. Some net assets with donor restrictions are required by donors to be held in perpetuity.



Net assets with donor restrictions include the following:

- Purpose restricted:
  - Federal funds received in advanced for the implementation of programmatic initiatives, and funds received from private sources for the implementation of initiatives related to recovery efforts after the passing of Hurricane Maria through Puerto Rico on September 2017.
  - Monies for the Scientific Investigation Fund for the Centenary of the University of Puerto Rico. This fund was created to improve the infrastructure, activities and environment of investigative activities of the University of Puerto Rico and to facilitate the commercialization of the innovations that are developed there. Among the activities to be supported are the recruitment and retention of researchers and the promotion of technology transfer.
- Permanent in nature: consist of a land, described in Note 11 that was contributed with the restriction of using it for the purpose described in Act 214, as amended, through the implementation of a Master Plan.
- Expiration of donor-imposed restrictions - Net assets are released from donor restrictions by incurring expenses to satisfy the restricted purposes and by occurrence of events specified by the donors, including the passage of time. Donor restriction on long-lived assets or cash to construct or acquire long-lived assets are considered to have expired when the assets are placed in service.

In accordance with ASU 2016-14, net assets as of June 30, 2018 have been reclassified as follows:

	<b>Without Donor Restrictions - Undesignated</b>	<b>With Donor Restrictions - Purpose restricted</b>	<b>With Donor Restrictions - Perpetual in nature</b>	<b>Totals</b>
Unrestricted	\$ 90,673,971	\$ -	\$ -	\$ 90,673,971
Temporarily Restricted	-	4,062,138	-	4,062,138
Permanently Restricted	-	-	16,100,307	16,100,307
Total Net Assets:	<u>\$ 90,673,971</u>	<u>\$ 4,062,138</u>	<u>\$ 16,100,307</u>	<u>\$ 110,836,416</u>

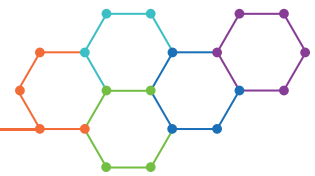
Accounting estimates – The preparation of consolidated financial statements in conformity with generally accepted accounting principles in the United States of America requires management to make estimates and assumptions that affect certain reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Accordingly, actual results could differ from those estimates.

Allowance for doubtful accounts – The Trust and its Subsidiaries provide an allowance for doubtful accounts equal to the amount of estimated uncollectible amounts. The estimate is based on the review of the current status of donor pledges, contributions and grants.

Investments – Until December 2018, the Trust and its Subsidiaries invested its cash reserves in certificate of deposits held at the Government Development Bank for Puerto Rico (GDB). These

DRAFT

Page 9



certificates of deposits were open-ended instruments, yielding annual interest rates from 1.5% and 6.75%, depending on their maturity dates. These investments were carried at the lower of cost or net realizable value. Since December 2018, the Trust and its Subsidiaries no longer have cash reserves in certificate of deposits held at the GDB, as these assets were settled and liquidated through a Restructuring Support Agreement (RSA) with the GDB and the Puerto Rico Fiscal Agency and Financial Advisory Authority, as explained in Note 3.

Equity investments – The equity investments are carried at the lower of cost or net realizable value.

Property and equipment and equipment under capital leases – Property and equipment are stated at cost, or if donated, at the fair value at date of receipt. Equipment under capital leases is stated at the net present value of the minimum lease payments. Expenditures for major additions and improvements are capitalized, while minor replacements, maintenance, and repairs are charged to expense as incurred.

Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the related assets, as follows:

Description	Estimated Useful Life
Furniture and fixtures	5 years
Computer and laboratory equipment	3 to 5 years
Leasehold improvements	Lease term
Equipment under capital leases	Lease term

At the time property and equipment is sold or otherwise disposed of, the cost and related accumulated depreciation or amortization are removed from the books and the resulting gain or loss, if any, is credited or charged to operations.

Accounting for the impairment or disposal of long-lived assets – The Trust and its Subsidiaries' long-lived assets held and used in operations are tested for recoverability whenever events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. Assets are considered to be impaired if the carrying amount of the asset exceeds the sum of the undiscounted cash flow expected to result from the use and eventual disposition of the asset.

If such assets are impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds its fair value. Assets to be disposed of, other than by sale, continue to be classified as held and used until they are disposed of. Assets to be disposed of by sale are classified as held for sale in the period in which certain criteria are met and reported at the lower of the carrying amount or fair value. At the time such criteria are no longer met, such assets are reclassified as assets held and used in operations.

Land development costs – Represent costs for a land site consultation approval, certification of environmental compliance, architectural design, and other costs incurred in connection with land received by the Trust and its Subsidiaries for the construction of its facilities.

Fair value measurements – Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Market or observable inputs are the preferred source of value, followed by assumptions based on hypothetical transactions in the absence of market input.



The valuation techniques are based upon observable or unobservable inputs. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the entity's market assumptions. These two types of inputs create the following fair value hierarchy:

- Level 1 – Quoted prices for identical instruments in active markets.
- Level 2 – Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-derived valuations whose inputs are observable or whose significant value drivers are observable.
- Level 3 – Significant inputs to the valuation model are unobservable.

The Trust maintains policies and procedures to value financial instruments using the best and most relevant data available.

Contributions and support revenue – The Trust and its Subsidiaries derive its revenues from contributions received from the government, corporations, sponsors and individuals. All contributions are available for unrestricted use, unless specifically restricted by the donor. Amounts received that are restricted by the donor for specific purposes or future period are reported as net assets with donor restriction, which increases the net assets of those net asset classes. When a donor restriction expires, that is, when a stipulated time restriction ends, or purpose restriction is accomplished, net assets with donor restriction are reclassified to net assets without donor restrictions and reported in the statement of activities as net assets released from restrictions. However, if a restriction is fulfilled in the same time period in which the contribution is received, the Trust and its Subsidiaries report the support as unrestricted.

Contributed services – Contributions of services are only recognized if services received: (a) create or enhance non-financial assets or would typically need to be purchased if not provided by donation, (b) require specialized skills and are provided by individuals possessing those skills. The contribution revenue for services received is recognized at the fair value of those services. There were no contributed services during the years ended June 30, 2019 and 2018.

Income taxes – The Trust and its Subsidiaries are exempt from Puerto Rico income taxes under the provisions of Act No 214, as amended, and from federal taxes under the provisions of Section 501(c) of the Internal Revenue Code. Accordingly, no provision for income taxes has been recorded in the accompanying consolidated financial statements.

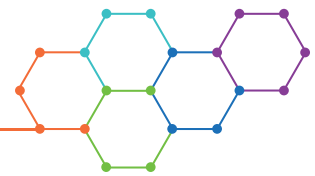
The Trust and its Subsidiaries follow the guidance for uncertainty in income taxes issued by the Financial Accounting Standards Board. Management evaluated the Trust and its Subsidiaries' tax positions and concluded that the Trust and its Subsidiaries had taken no uncertain tax positions that require adjustments or disclosure in the consolidated financial statements.

Functional allocation of expenses and operational expenditures – The costs of providing the Trust and its Subsidiaries' programs and other activities have been summarized on a functional basis in the accompanying consolidated statements of activities. During the years ended June 30, 2019 and 2018, certain costs have been allocated among the following programs and support activities:

- *Research Infrastructure:* includes expenses aimed to improve, analyze and/or strengthen the local research and development (R&D) infrastructure and the breadth of science and technology activity in Puerto Rico. Examples of expenses within this function include: clinical trials, grants to support laboratory infrastructure, research grants, research institute and educational organization initiatives,

DRAFT

Page 11



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Contributed services – Contributions of services are only recognized if services received: (a) create or enhance non-financial assets or would typically need to be purchased if not provided by donation, (b) require specialized skills and are provided by individuals possessing those skills. The contribution revenue for services received is recognized at the fair value of those services. There were no contributed services during the years ended June 30, 2019 and 2018.

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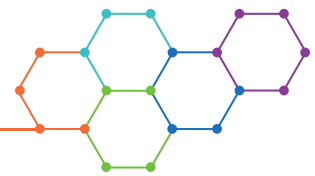
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Functional allocation of expenses and operational expenditures – The costs of providing the Trust and its Subsidiaries' programs and other activities have been summarized on a functional basis in the accompanying consolidated statements of activities. During the years ended June 30, 2019 and 2018, certain costs have been allocated among the following programs and support activities:

- *Research Infrastructure:* includes expenses aimed to improve, analyze and/or strengthen the local research and development (R&D) infrastructure and the breadth of science and technology activity in Puerto Rico. Examples of expenses within this function include: clinical trials, grants to support laboratory infrastructure, research grants, research institute and educational organization initiatives,

DRAFT

Page 11



grants to attract or retain distinguished researchers, studies to determine R&D, innovation, knowledge economy activity in the Island; and, salaries and professional services to support this area.

- *Public Health Initiative:* includes expenses incurred regarding the *Puerto Rico Public Health Trust*, an initiative established by the Trust and its Subsidiaries to act as Public Health Institute (PHI). Acting as a PHI, the Trust implements programs which aim is to improve public health capacity, systems and outcomes by fostering innovation, leveraging resources and building partnerships to improve the public's health. Expenses within this function include: integrated vector management initiatives, health-outcome-and-measures research and studies, and salaries and professional services to support this area.
- *Technology transfer and commercialization* includes expenses incurred in initiatives to support technology transfer and commercialization and direct investments in technology development projects which have a clear commercialization aim. Examples of expenses within this function include intellectual property assistance, sponsorship, grants for technology developments; investment in technology commercialization accelerators and startup incubators, salaries and professional services to support this area.
- *Science City development:* includes non-capitalizable expenditures necessary for the on-going development and construction of sites at the Science City. These expenditures include salary and professional services to support this area, planning and assessment projects, security services to enable construction work, etc.
- *General and administrative:* includes all administrative expenses incurred to support all functional areas as described above which are not directly allocable to any of them. Example of these expenses include administrative staff salaries, accounting fees, depreciation and amortization, utilities, etc.
- *Fundraising:* includes expenses incurred in soliciting contributions, gifts, grants, etc. Example of these expenses include: publicizing and conducting fundraising campaigns, soliciting grants from foundations and government agencies, costs of participating in federated fundraising campaigns, preparing and distributing fundraising manuals, instructions and other materials. The Trust and its Subsidiaries did not engage in any fundraising activity during the years ended June 30, 2019 and 2018.

Advertising and promotion - The Trust and its Subsidiaries charge to operations advertising and promotion costs as they are incurred. During the years ended June 30, 2019 and 2018, the Trust and its Subsidiaries incurred in advertising and promotion expenses of approximately \$232,000 and \$91,000, respectively.

## 2) Concentration of credit risks:

Financial instruments, which potentially subject the Trust and its Subsidiary to concentration of credit risks, consist of cash deposits and accounts receivable.

The Trust and its Subsidiaries have cash deposits with three financial institutions. Until December 2018, part of the Trust and its Subsidiaries' cash deposits aggregating approximately \$3,518,000 were maintained with the GDB, which were uninsured and uncollateralized. The Trust and its Subsidiaries no longer have cash deposits at the GDB as these assets were settled and liquidated through a Restructuring Support Agreement (RSA) with the GDB and the Puerto Rico Fiscal Agency and Financial Advisory Authority, as explained in Note 3. Cash deposits maintained in other financial

DRAFT

Page 12



institutions, at times, may exceed the amount insured by the Federal Deposit Insurance Corporation (FDIC). As of June 30, 2019 and 2018, the Trust and its Subsidiaries' cash deposits exceeded the FDIC guarantee of \$250,000 per financial institution by approximately \$17,920,000 and \$14,576,000, respectively. As of June 30, 2019 and 2018, the Trust and its Subsidiaries' cash deposits exceeded the FDIC guarantee of \$250,000 per financial institution by approximately \$17,920,000 and \$14,576,000, respectively.

For the year ended June 30, 2019, grants and contributions from state and federal entities represent approximately 56% and 27%, respectively, out of total revenues. The balance due from these state and federal entities represent approximately 72% and 17%, respectively, of total accounts receivable. For the year ended June 30, 2018, grants and contributions from state and federal entities represent approximately 67% and 18%, respectively, out of total revenues. The balance due from these state and federal entities represent approximately 72% and 18%, respectively, of total accounts receivable.

### 3) Investments held at GDB, settled during FY2018-19

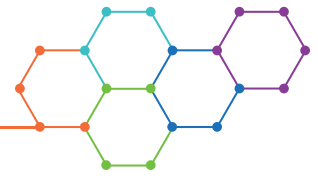
As of June 30, 2018, the investments consist of certificates of deposits held at GDB, as follows:

Description	June 30, 2018	
	Unrestricted	Restricted
CD, 1.64% rate yield, maturing in December 2017	\$ -	\$ 3,199,726
CD, 1.5% rate yield, maturing in November 2017	14,409,932	-
CD, 6.75% rate yield, maturing in March 2020	30,409,942	-
	<u>\$ 44,819,874</u>	<u>\$ 3,199,726</u>

The Commonwealth of Puerto Rico (the Commonwealth), is experiencing a severe economic and fiscal crisis resulting from continuing economic contractions, persistent and significant budget deficits, and high debt burden, unfunded legacy obligations and lack of access to the capital markets, among other factors.

In response to this crisis, in June 2016, the U.S. Federal Government enacted the Puerto Rico Oversight, Management and Economic Stability Act (PROMESA), which among other things establishes an oversight board composed of seven members appointed by the U.S. Federal Government, with broad powers over finances of the Commonwealth and its instrumentalities. PROMESA seeks to provide the Commonwealth with (i) fiscal and economic discipline through the creation of the Oversight Board, (ii) relief from creditor lawsuits through the enactment of a temporary stay on litigation to enforce rights or remedies related to outstanding liabilities of the Commonwealth and its instrumentalities and municipalities and (iii) two separate processes for the restructuring of the debt obligations of such entities.

On June 16, 2017, the Trust, as approved by its Board of Trustees, entered into a Restructuring Support Agreement (RSA) with GDB and the Puerto Rico Fiscal Agency and Financial Advisory Authority. The RSA is enabled by Title VI of PROMESA. The Trust participated in the RSA as a non-public Supporting Deposit Claimant entity, as the organization held claims against GDB that constitutes Participating Bond Claims on account of certain deposits held at GDB.



During FY2018-19 the RSA was approved by the District Court pursuant to Section 601(m)(1)(D) of PROMESA. As a holder of Participating Bond Claims, the Trust was entitled to exchange 55% of the value of assets held at GDB, settling the transaction on December 2018 through the exchange of \$10.3 million in cash and a new \$44.644 million bond with 7.5% annual coupon interest rate with maturity on August 20, 2040.

**4) Bond Receivable**

The Trust is a holder of a \$44.644 million bond issued by the GDB during FY2018-19 as settlement regarding claims of assets held under GDB (see note 3). The bond yields a 7.5% annual coupon interest rate and matures as of August 2040. A portion of this bond is restricted, representing the balance of monies for the Scientific Investigation Fund for the Centenary of the University of Puerto Rico which remain in custody of the Trust (see Note 1). During FY2018-19 a total balance of \$192,617 of bonds were redeemed and a total of amount of \$734,776 in interest were paid.

As of June 30, 2019, the bond balance is the following, separated for its unrestricted and restricted portions:

	30-Jun-19		
	Unrestricted	Restricted	Total
Bond Receivable, Par Value	\$ 41,934,738	\$ 2,709,861	\$ 44,644,599
Less: Bond Redemption	(180,925)	(11,692)	(192,617)
Less: Unrealized Loss in Bond Value:	<u>(9,290,223)</u>	<u>(600,343)</u>	<u>(9,890,566)</u>
Ending Balance:	<u>\$ 32,463,589</u>	<u>\$ 2,097,827</u>	<u>\$ 34,561,416</u>
Interest paid:	<u>\$ 690,176</u>	<u>\$ 44,600</u>	<u>\$ 734,776</u>

**5) Promissory note receivable:**

As of June 30, 2019 and 2018, the Trust and its Subsidiaries were holders of a non-bearing interest note receivable of \$150,000, which was due on September 23, 2018. The note was collected in full during fiscal year 2018-19.

**6) Convertible promissory notes receivable:**

As of June 30, 2019 and 2018, the Trust is the holder of five (5) convertible notes of \$75,000 each. The notes accrue interest at an annual interest rate between 2% and 6%. These notes may be converted into shares of common stock upon the occurrence of certain events, including the companies' failure to pay in full the principal and accrued interest upon its maturity date or a change of control transaction.

**7) Equity investments:**

As of June 30, 2019 and 2018, the equity investments consist of the following:



Description	2019	2018
49,222 shares of common stock of CDI Laboratories, Inc. (CDI), a nonaffiliated company, which as of June 30, 2018 and 2017, represent approximately 9.63% and 9.57% of the CDI's common stock, respectively.	\$ 867,292	\$ 867,292
312,500 shares of Series Seed preferred stock of Timokids, Inc., a nonaffiliated company. These preferred shares provide its holders voting and liquidation preference rights and the option to convert to shares of common stock.	75,000	75,000
62,500 shares of Series Seed preferred stock of Brands of Holdings Inc., a nonaffiliated company. These preferred shares provide its holders voting and liquidation preference rights and the option to convert to shares of common stock.	75,000	75,000
150,000 shares of Series Seed preferred stock of Abartys Health Corp., a nonaffiliated company. These preferred shares provide its holders voting and liquidation preference rights and the option to convert to shares of common stock.	150,000	150,000
	<u>\$1,167,292</u>	<u>\$1,167,292</u>

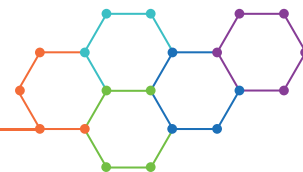
**8) Simple agreements for future equity (SAFE) investments**

As of June 30, 2019, the Trust is the holder of four (4) simple agreements for future equity (SAFE) investments, amounting to \$225,000. These SAFE provide rights to the Trust and its Subsidiaries for future equity in its investees without determining a specific price per share at the time of the initial investment.

**9) Property and equipment:**

As of June 30, 2019 and 2018, property and equipment consist of the following:

	June 30, 2019		
	Cost	Accumulated Depreciation	Book Value
Furniture and fixtures	\$ 104,420	\$ 101,035	\$ 3,385
Computer and laboratory equipment	244,532	110,970	133,562
Leasehold Improvements	612,272	304,467	307,805
Facility under construction	<u>6,985</u>	<u>-</u>	<u>6,985</u>
	<u>\$ 968,209</u>	<u>\$ 516,472</u>	<u>\$ 451,738</u>



	June 30, 2018		
	Cost	Depreciation	Book Value
Furniture and fixtures	\$ 100,727	\$ 100,727	\$ 0
Computer and laboratory equipment	138,477	82,628	55,849
Leasehold Improvements	<u>474,725</u>	<u>197,802</u>	<u>276,923</u>
	<u>\$ 713,929</u>	<u>\$ 381,157</u>	<u>\$ 332,772</u>

Depreciation and amortization expense for the years ended June 30, 2019 and 2018, amounted to approximately \$322,500 and \$207,000, respectively, and are allocated to programmatic operations and as general and administrative expenses in the accompanying statements of activities and changes in net assets.

#### 10) Building:

As of June 30, 2019 and 2018, building consists of the following:

Description	2019	2018
<i>Innovation Center Building</i> - a three-story building which houses the Trust's headquarters and provides space for both, the incubation of local hi-tech startups and strategic service providers, creating a synergistic effect to accelerate the commercialization of technologies.	\$ 3,056,568	\$ 2,670,131
<i>Environmental Research Laboratory of the Puerto Rico</i> . It houses the laboratory facilities of the Puerto Rico Environmental Quality Board and the laboratory facilities of the Puerto Rico Vector Control Unit.	3,546,932	3,537,461
Less: Accumulated depreciation	(599,033)	(415,560)
	6,004,467	5,792,032
Construction in progress	66,597	-
	<u>\$ 6,071,064</u>	<u>\$ 5,792,032</u>

The construction in progress as of June 30, 2019 includes the construction of the Forward Center Building, a 30,000 sq.ft., three-story building to be located at the Science City. This construction is partially funded by the US Department of Commerce – Economic Development Administration.

#### 11) Restricted land and property for research, development and infrastructure project related to science and technology:

On October 22, 2007, the Trust received 67.95 acres of prime real estate in the metropolitan area of San Juan, which includes the former Río Piedras Correctional Facilities (Oso Blanco State Penitentiary). The land and property were valued at \$18,000,000, based on a market appraisal opinion report, dated October 20, 2008.

As established by Act 214, as amended, the Trust and its Subsidiary plan to develop the 67.88 acres of Oso Blanco State Penitentiary site into a research park, which combines residential, retail, educational,



and civic facilities with laboratory and research and development facilities with the purpose of facilitating the development of infrastructure favorable to the research and development of science and technology. Costs related to the design, development and improvements of the campus are capitalized as incurred.

During the year ended June 30, 2017, the Trust and its Subsidiaries transferred ownership of 8.3 acres of the land to the Puerto Rico Department of Transportation and Public Works (DTPW), as a donation. The purpose of the transfer is to enable DTPW to seek financing from the Federal Highway Administration (FHA) for the construction of the Science City Boulevard. The transfer was approved by the FHA and the Federal Transit Administration as part of the Statewide Transportation Improvement Program (STIP) for fiscal years 2017-2020. During the year ended on June 30, 2018, the Trust and its Subsidiaries recognized a donation of land of approximately \$1,900,000 in the accompanying consolidated statement of activities.

**12) Program service payable:**

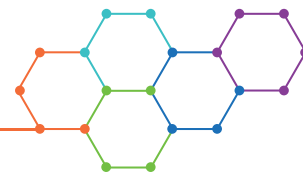
As of June 30, 2019 and 2018, program service payable consists of accrued obligations related to program support grants awarded during the period through both, unrestricted and restricted funds. The balance of program service regarding program support grants as of June 30, 2019 and 2018, are as follows:

Description	2019	2018
Program support grants payable	<b>\$717,035</b>	\$820,989
Program support grants payable – Donor restricted Funds	-	44,000
	<b><u>\$717,035</u></b>	<b><u>\$864,989</u></b>

**13) Liquidity and availability**

The following table reflects the Trust and its Subsidiaries' financial assets as of June 30, 2019 and 2018, reduced by amounts not available for general use because of contractual or donor-imposed restrictions within one year of the consolidated statement of financial position date:

	June 30, 2019	June 30, 2018
<b>Financial Assets at year end,</b>	<b>\$ 67,994,837</b>	<b>\$ 72,344,307</b>
Less those unavailable for general expenditures within one year, due to:		
Restricted by donor with time or purpose restrictions	1,099,186	1,010,615
Subject to appropriation and satisfaction of donor restrictions	<u>2,694,168</u>	<u>2,992,800</u>
Financial assets available to meet cash needs for general expenditures within one year	<u><b>\$ 64,201,483</b></u>	<u><b>\$ 68,340,891</b></u>



#### 14) Operating lease agreement:

The Trust and its Subsidiary entered into a lease agreement for the use of the facilities for P18, described in Note 1B. The agreement calls for escalating monthly rental payments ranging from \$11,983 to \$13,510 through December 2020. Total rent expense for the years ended June 30, 2019 and 2018, amounted to approximately \$206,000 and \$153,000, respectively.

Future minimum lease payments subsequent to June 30, 2019, are as follows:

Year ending June 30,	
2020	252,120
2021	171,060
2022	<u>22,500</u>
Total future minimum lease payments	<u><u>445,680</u></u>

#### 15) Rental income:

The Trust and its Subsidiary lease building spaces under operating lease agreements. The lease agreements are for periods of one year with a renewal option for an additional year on month to month basis. The aggregate future minimum rental income under these lease agreements subsequent to June 30, 2019, all of which are due during the year ending June 30, 2020, approximates \$331,000.

#### 16) In-kind contributions:

In-kind contributions for the years ended June 30, 2019 and 2018, amounted to approximately \$11,740, and \$2,100, respectively, which consisted mainly of services provided by tenants related to science, technology, and research.

#### 17) Supplemental disclosures for the statements of cash flows:

- A) Non-cash from investing and financing transactions – For the years ended June 30, 2019 and 2018, there were no non-cash investing and financing transaction.
- B) Other cash flows information – During the year ended June 30, 2019 and 2018, the Trust and its Subsidiaries paid approximately \$120 and \$90 respectively, in interest.

#### 18) Reclassifications:

Certain prior year amounts have been reclassified for consistency with the current year presentation. The reclassifications had no effect on the reported change in net assets.

**19) Subsequent events**

On July 2019, the Association of State and Territorial Health Officials (ASTHO), a non-profit organization and prime recipient of funds from the Center for Control and Disease Prevention, awarded a \$150,000 subaward to implement a project titled *Capacity Building for Jurisdictional Hurricane Recovery – US Virgin Islands Staffing Capacity Enhancement*. The project expires as of August 2020.

On August 2019, the U.S. Secretary of Commerce announced that the Economic Development Administration (EDA) awarded \$300,000 to the Puerto Rico Science, Technology and Research Trust for a project titled *Investor Bridge Project*. The project will provide an investor education series, expand the investor network, and launch a formal investment fund with a target size of \$10 million to acquire capital to invest in startups and other companies from the Puerto Rico tech ecosystem. The project expires as of July 2022.

On August 2019, the Medtronic Communities Foundation awarded the Trust a grant in the amount of \$4.650 million, to support activities of the Trust's Public Health Institute. This project expires as of August 2023.

On August 2019, the Board of Trustees approved the Trust's Statement of Investment Policy, Objectives and Guidelines. The aim of this policy is to enable the Trust and its Subsidiaries the creation of a Board-designated Endowment Fund (Fund), consisting of the reserves created by the Trust to assist in assuring the sustainability of the Trust and its projects into perpetuity. The following asset categories were identified as those most likely to attain or surpass the Fund's return objectives with the least volatility: listed equities of U.S. companies; listed equities of companies domiciled outside of the United States; debt or fixed income securities from U.S. and non-US governments, corporations and trusts; alternative investments, including real estate, private equity, credit and venture capital funds, as well as hedging and tactical allocation strategies; cash and equivalents.