

RCMI Newsletter

Volume 1, Issue 4



RCMI Program Grant U54MD007579



Administrative
Core



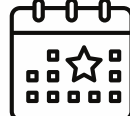
Clinical



Behavioral



Community



2022 EAC Meeting

Season's Greetings

From our RCMI Principal
Investigators

To our RCMI Community,

As the end of the year draws near, we'd like to take this opportunity to extend a heartfelt "thank you" for your support. Your progress over these past few years has been exceptional and noteworthy not only by our institution, but by our External Advisory Committee members as well. It is because of each and every one of you that the RCMI Program continues to shine. Thank you for being part of our team and for always saying "Yes!" when we need you most.

We wish you a happy and healthy holiday season with your loved ones!



José Torres-Ruiz, Ph.D.
RCMI Contact PI
PHSU Chancellor



Richard Noel, Jr., Ph.D.
RCMI PI
Chair of Basic Sciences



“As a researcher I am interested in infectious diseases (arboviral and respiratory infections), developing preventive measures, and educating the population. Addressing disparities in communities and reaching the most vulnerable populations. Being an epidemiologist allows me to perform community research, empower the population, and keep them healthy. I want to contribute all the knowledge in research for the well-being of the population.”



MEET

Robert Rodriguez, DrPH, MPH
(Assistant Professor)

Administrative Core

Professional Development Activities

Professional Development Seminar on the Capabilities of the IVIS Lumina S5

Kyle Kloeping
Senior Field Application Scientist
University of Iowa
Preclinical Imaging at Perkin Elmer, Inc.



September 1, 2022 | Perkin Elmer Training

RCMI-ORD Team Building

Our amazing RCMI Research Administrators collaborated with the Office of Research Development (ORD) to serve our researchers throughout the grant life cycle. To enhance and optimize service as well as strengthen team dynamics to accomplish ORD's new Strategic Plan.

-Doris A. Andújar, MPH
RCMI Executive Program Manager



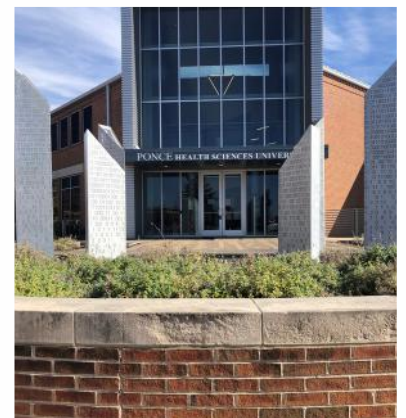
September 16, 2022 | Team Building RCMI-ORD



Streamlyne Training
Jean M. Torres Vázquez, SWE
Administrative Support IT Specialist



REDCap Overview and Basic Training
Soreli M. Santana-Muñiz, DrPH
RCMI Project Coordinator



October 27-28, 2022 | St. Louis Training

Administrative Core

Professional Development Activities



Congratulations to the team for winning the People's Choice Award at the SRAI meeting in Las Vegas for the poster presentation titled "A strategic framework to optimize sponsored research services: A transition from a small to medium Institution." This was truly a TEAM effort dedication. I'm incredibly proud of everyone."

- Claris Vega, MBA (ORD Director)

October 31 - November 4, 2022 | SRA International

Graduate Student Association in Biomedical Sciences (GSABS)

The GSABS dedicated their Induction Ceremony to Myrella Cruz Rentas. She has been a Lab Technician for 21 years and currently works in Dr. Appleyard and Dr. Noel's lab. She is the first Lab Technician to be recognized for her hard work and unconditional support to graduate students during her years at Ponce Health Sciences University.



Awarded Supplements



Normarie Torres-Blasco, PhD

Assistant Professor

Hispanic/Latinxs coexisting chronic health conditions, mental illness and social determinants of health

Hispanics/Latinxs (H/L) encounter higher rates of mental illnesses (MI) and chronic diseases (i.e., cancer, heart disease, diabetes) than other ethnic minority groups. Thus, H/L living with a MI are presumably a particularly at-risk population for experiencing significant health inequities. However, no research to date has established the prevalence of co-existing health conditions among this population.

The proposed administrative supplement will examine the All of Us database to determine the prevalence of co-existing health conditions among Hispanic/Latinx (H/L) living with MI in the United States (US). The team will also assess the contribution of social determinants of health (i.e, sex assigned at birth, sexual orientation, healthcare access, discrimination, and others) and genetic ancestry in the prevalence, progression, and outcomes of coexisting chronic diseases in H/L. The team is comprised of Ponce Research Institute investigators, namely: Normarie Torres-Blasco, Ph.D. (PI, Early Stage Investigator), Eliut Rivera-Segarra, Ph.D. (Co-I, ESI), Alixida Ramos-Pibernus, Ph.D. (Co-I, ESI), Caleb Esteban, Ph.D. (Co-Is-ESI), Julie Dutil, Ph.D. (Co-I, Senior Investigator), and Cristina Peña, Ph.D. (ESI)

Pediatric Outcomes of Prenatal Zika Exposure (POPZE II)



Luisa Alvarado, MD
POPZE II PI



Mary Rodríguez, Ph.D.
POPZE II CO-PI

The Zika epidemic struck Puerto Rico from 2016-2017. In addition to causing microcephaly in newborns of mothers infected during pregnancy, there was a critical need for evidence of the full spectrum of early brain injury. The Pediatric Outcomes of Prenatal Zika Exposure (POPZE) study responded to this need on May 2017. In 2019, the cohort study (POPZE II) joined the RCMi Program at Ponce Research Institute/Ponce Health Sciences University and further research was possible.

With this continued support, the POPZE leaders were able to follow a growing spectrum of birth and developmental abnormalities, while uncovering environmental and health system factors that impact the health and well-being of exposed children. The RCMi POPZE II continuation is currently among the few longitudinal and structured active follow-up studies of the Zika epidemic emergency that contribute to the medical literature. Further, the study has documented developmental abnormalities in at least one-third of exposed children at 36 months and highlighted to pediatric providers the vulnerabilities that are present in the language/communication developmental domains.

Critical to the science of child development, the study publication "Early Childhood Neurodevelopmental Outcomes in Children with Prenatal Zika Virus Exposure: A Cohort Study in Puerto Rico" describes a prevalence of developmental impairment in some domains that decreases over time (between 24 and 36 months), suggesting the reassuring prospect that protective factors and early intervention can have a gradual, positive effect on the outcomes. Congenital infections of the brain are known to have long-term consequences. The follow-up provided by this study is imperative, as it now seeks to examine risks to the critical milestone of preschool learning readiness among exposed children. For this purpose, POPZE II is enrolling children between the ages of 54 to 65 months (4.5-5.5 years) without prenatal exposure to assess and compare their learning readiness to that of exposed children.



RCMI Behavioral Full Project

Biopsychosocial Predictors of Tumor-associated Inflammation



Guillermo Armaiz, Ph.D.
Assistant Professor



Eida Castro, PsyD, MSc
Associate Professor

There is growing evidence suggesting that depression symptoms in cancer patients can emerge due to tumor and treatment-related inflammatory process. Chronic sympathetic nervous system (SNS) activation leads to increased immune inflammation levels in tumors including the breast cancer (BC) tumor microenvironment. Depression has been associated with multiple markers of inflammation. Exposure to social environmental adversity (chronic traumatic stressors- e.g., child abuse, crime, physical/sexual

abuse, natural disasters) modulates inflammatory activity and, in turn, induces symptoms of depression. Thus, the central hypothesis is that past exposure to social-environmental adversity exacerbates the biopsychosocial response [stress and depression] to current social stressors [cancer experience] leading to depression symptoms and inflammation driven cancer progression. To address this, the research team are generating and analyzing data from psychosocial, clinical, and pre-clinical models of disease, obtained following a prospective longitudinal cohort and experimental basic science designs.

First, the team is examining longitudinal relationships among self-reported stress, depression, anxiety, circulating cytokines and myeloid/lymphoid-derived cells in 175 Puerto Rican breast cancer patients. Second, the team is investigating if exposure to social-environmental adversity mediates the relationship between depression and breast tumor-associated inflammatory processes. Lastly, via orthotopic mouse models, the investigators are profiling stress-induced, tumor-associated lymphoid and myeloid-derived cells and their role in breast cancer progression. The animal model findings will complement the human data by adding mechanistic data that delineates the interplay between early-life traumatic events, inflammatory processes, and behavioral responses in breast cancer patients. The team anticipates that early life pre-cancer stress will exacerbate the effect of post-cancer stress on breast cancer biology, such as increased angiogenesis and proliferation resulting in increased growth. Currently, patient recruitment for this project is rolling (134 BC patients recruited) and pre-clinical animal model experiments are ongoing.



Hurricane Fiona's Relief Efforts

Resilience to adversities



Fernando Rosario, MPH

CEC Coordinator

The Community Engagement Core's relief efforts on affected communities in Southern Puerto Rico

After Hurricane Fiona made landfall in September 2022, the RCMI-Community Engagement Core, under the direction of Dr. Julio Jiménez, with our community partners and doctoral student volunteers (Psychology and Public Health Programs) took to offering educational activities and materials centered on chronic medical condition control and mental health coping strategies to affected communities. In addition, the CEC and its volunteers provided vital donations such as water, mosquito repellent, adult diapers, and hygiene kits.

Throughout five events, the CEC impacted approximately 184 community members in Peñuelas, Ponce, Salinas, and Villalba.



Community Impact: Post Hurricane Fiona

Ponce Medical School Foundation along with student volunteers from PHSU's Medicine, Psychology, Public Health, and Nursing programs have been distributing food, water, clothing, cleaning supplies, medicine, tarps, solar lamps, among other provisions to affected southern communities like Ponce, Peñuelas, Guánica, Adjuntas, and Yauco.

In our visits after Hurricane Fiona, we have witnessed how many people live in extreme poverty in Puerto Rico, and that both their health and mental health have been compromised by the COVID-19 pandemic. Many of our patients' health has been affected because they have not followed up with their appointments or their treatments. It is sad to see this happening in our island; better health care and follow up needs to be a priority.



Strategic Academic Research Training



The START Core offers a seminar as part of the START Scholars curriculum on the third Monday of each month. Due to the COVID-19 pandemic, the seminars have been offered virtually. After spending so many months seeing each other only through Zoom, the time has come to be face-to-face with our colleagues again. And so, for Dr. Sanjay Maggirwar's seminar "Changing backdrop of funding environment and my take on how to meet it squarely" we did just that. Starting in January 2023, in-person seminars are back!

October 17, 2022 | Sanjay Maggirwar, PhD
"Changing backdrop of funding environment"

PHSU faculty can enroll in START through the following link:

<https://bit.ly/3Ha23en>

ACADEMIC RESEARCH CAREER ADVANCEMENTS FOR JUNIOR FACULTY

- Facilitate the training and career development for junior Faculty.
- Establish individualized career spanning mentoring.
- Provide funds to develop research ideas into preliminary data.
- Pilot projects and Pre-Pilot funding for scholars.
- Grant Writing support.
- Monthly seminars with experts.

OUR AIMS

1. Implement a targeted Training Program for START Scholars. Addressing fundamental knowledge and skills in leadership, communication, research, education and publishing.
2. Match Scholar with team of mentors That will provide professional development by comprehensive



READ MORE

ENROLLMENT PROCESS

To enroll in our Core you should complete the enrollment form in the following link.



<https://bit.ly/3Ha23en>

EVALUATION

Yearly evaluations on the individual progress are based on the following:

Mentor/Mentee monthly meetings

Outcomes should be reported



Development Plan

After meeting with your mentor and discussing scholar's academic and research goals you complete your yearly Career Development Plan by scanning the following QR Code.

- Promotions- Track Career Advancement
- Research project
- Grant development - Develop and implement an annual Grant Interest Plan
- Publications - Peer reviewed
- Progress in developing research

External Advisory Committee Meeting

Meet our 2022 EAC Members!



Marino De León, Ph.D.

Loma Linda University
Investigator Development Core
(START) & Research
Infrastructure Core (CRR)



Shelley S. Tworogger, Ph.D.

H. Lee Moffitt Cancer Center &
Research Institute
Behavioral Full Research Project



Zoë H. Hammatt, JD, MPhil

Z Consulting, LLC
Compliance
EAC Report Compilation &
Editing



**Denice Cora-Bramble, MD,
MBA**

Children's National Hospital
Community Engagement Core &
Clinical Full Research Project



Laura E. O'Dell, Ph.D.

University of Texas, El Paso
Basic Full Research Project



**José Ruben Parra-Cardona,
Ph.D.**

Steve Hicks School of Social Work
University of Texas at Austin
Community Engagement Core
CBPR Research



Caroline Palavicino-Maggio, Ph.D.

Harvard Medical School
Investigator
Development Core (START),
Research Infrastructure Core (CRR),
Basic Full Research Project

Highlights from the EAC 2022 Report

"The RCMI program demonstrates exemplary administrative strength that supports a sense of connectivity and relevance to improving health outcomes and fostering community trust. Meaningful outreach and dissemination through the various cores have helped solidify PHSU-PRI's role as a trusted partner in Ponce and the island. RCMI offers Puerto Rican communities a forum for authentic connection and trusting relationships."



EAC Meeting

November 16, 2022 | Core Presentations



This year's External Advisory Committee Meeting was divided into two full-day sessions. The advancement of each RCMI Core was discussed during the first. The Committee praised the progress of our Faculty Recruitment Core, led by Dr. José A. Torres-Ruiz, in acquiring three promising recruits (Drs. Normarie Torres-Blasco, Marcos J. Ramos, and Wilfredo De Jesús) for the RCMI program. The Community Engagement Core (CEC), led by Dr. Julio Jiménez, was also praised for its mindful integration with the community and how well the community has embraced PRI as an ally for their needs.



EAC Meeting

November 17, 2022 | Scientific Presentations

The second session was our Scientific Day, where all RCMI Full Project PIs presented their overall progress. There were presentations from the START Pilot Project PIs, Drs. Margarita Bonilla, Caleb Esteban, and Eliut Rivera. Likewise, the awarded Administrative Supplements from Drs. Marian Sepúlveda, Cristina Peña, and Normarie Torres were also discussed.



Publications



Normarie Torres Blasco, Ph.D.

[Important End-of-Life Topics among Latino Patients and Caregivers Coping with Advanced Cancer](#)



Eliut Rivera Segarra, Ph.D.

[COVID-19 impact on the psychological health of Latinx transgender and non-binary individuals in mainland United States and Puerto Rico: a mixed-methods study](#)

[Click here to see full photo gallery](#)



Happy Holidays from our RCMi Family!



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