



GUEST SPEAKER

Paulo Rodríguez, PhD

On November 2nd, G-RISE trainees along with research community participated in the seminar "Functional reprogramming of immunosuppressive myelopoiesis in cancer: PERK up Immunity" offered by Dr. Paulo C. Rodríguez, senior member and interim chair and leader of the Department of Immunology and Immuno-Oncology Program at Moffitt Cancer Center. Dr. Rodríguez presented his research program, which focuses on the suppressive effects induced by tumor-infiltrating myeloid-derived suppressor cells (MDSCs), a heterogenous population of immature myeloid precursors that are primary mediators of tumor-induced anergy and a significant obstacle for the development of successful cancer immunotherapies. Also, he presented how PERK can modulate the immunosuppression of MDSCs in the tumor microenvironment. After the presentation, RISE trainees had the opportunity to lunch with the speaker, where they received advice on Ph.D. career and how to be successful while submitting a grant such as an F31. We thank Dr. Rodríguez for his excellent seminar and for sharing his knowledge with the G-RISE trainees.

By: Yadiel Rivera (2nd year G-RISE trainee)

SOCIETY FOR NEUROSCIENCE ANNUAL MEETING 2022

The Society for Neuroscience (SfN) is the world's largest organization of scientists and physicians devoted to understanding the brain and the nervous system. Its annual meeting took place November 12-16 in San Diego, CA. Our Neuroscience Labs were well represented by the following G-RISE trainees who presented their research projects:

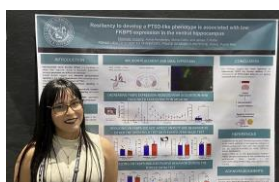
Joshua Pérez (3rd year): "Effects of Adolescent Stress on Adulthood Cocaine Use Disorder"

Yobet Pérez (3rd year): "Influence of stress prior to cocaine self-administration on cocaine seeking in adult rats"

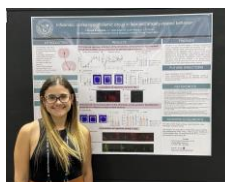
Nashaly Irizarry (3rd year): "Resiliency to develop a PTSD-like phenotype is associated with low FKBP5 expression in the ventral hippocampus"

Yesenia Rivera-Escobales (4th year): "Infralimbic cortex-hypothalamic circuit in fear and anxiety-related behavior"

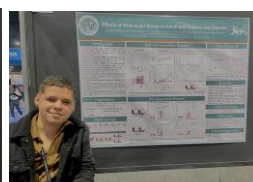
Also, we want to congratulate our former G-RISE trainee, Jessalyn Pla, who under the mentorship of Dr. Richard Noel presented her poster titled "Astrocytic HIV-1 Nef expression and cocaine reduce glutamate transporters and increase cocaine seeking behavior in rats" both at the Trainee Professional Development Awardee Poster Session (Nov. 12) as well as the regular poster session (Nov. 14).



Nashaly Irizarry



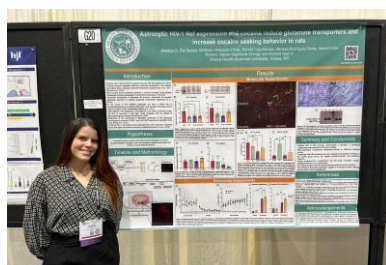
Yesenia Rivera



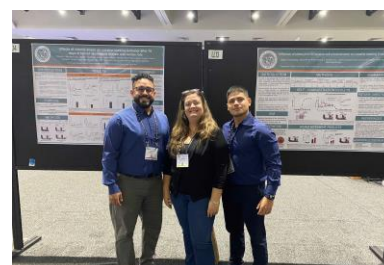
Joshua Pérez



Yobet Pérez



Jessalyn Pla



Roberto Morales, Dr. Marian Sepúlveda, Yobet Pérez

Congratulations to all our poster presenters for their very good work!

The PHSU/MSMS 2022 Graduate School Fair



The PHSU/MSMS 2022 Graduate School Fair, organized by Dr. Darah Fontanez, Assistant Dean for Master of Science in Medical Sciences, was held on November 18, 2022. As part of our recruitment efforts, we were represented by our Program Coordinator, Jean Marie Schmidt and PHSU Admissions Officer, Rafmarty Pomaes. Participants were able to come by our table and receive first-hand orientation about our PhD Program in Biomedical Sciences and G-RISE Program!

For information about our programs, please contact admissions@psm.edu



GUEST SPEAKER

Thomas Wisniewski, PhD



On December 6, Dr. Thomas Wisniewski offered a seminar at the 30th Puerto Rico Neuroscience Conference titled: "Insights into novel therapies and pathogenesis of Alzheimer's disease and the possible role of Covid-19." Dr. Wisniewski is a neurology, pathology, and psychiatry professor at the New York University School of Medicine. Currently, he is the Director of the New York State Center of Excellence for Alzheimer's Disease at the Pearl I. Barlow Center for Memory Evaluation and Treatment. To create potential treatment approaches, his laboratory has been investigating the pathophysiology of prion disorders and Alzheimer's disease. His research group has contributed to the development of new treatments for Alzheimer's, particularly a variety of immunotherapeutic strategies that influence both the innate and adaptive immune systems. More than 330 peer-reviewed articles and 30 US-issued patents have resulted from this effort.

By: Nashaly Irizarry (3rd year RISE trainee)

PUERTO RICO NEUROSCIENCE CONFERENCE 2022

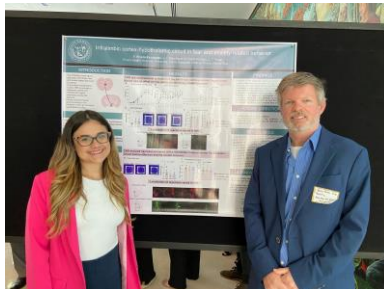
The Puerto Rico Neuroscience Conference was held on Saturday, December 3, at the Pontifical Catholic University of PR, in Ponce. This is the most important annual neuroscience event in Puerto Rico. It is a one-day event that supports neuroscience research and training and consists of three talks by leading researchers in neuroscience. The conference also included oral and poster presentations by high school students, graduates, post docs, and faculty members.

Our G-RISE Program hosted the visit of guest speaker, Dr. Thomas Wisniewski, Director of the New York University Langone's Alzheimer's Disease Research Center and Center for Cognitive Neurology, who gave a conference titled "Insights into Novel Therapies and Pathogenesis of Alzheimer's disease, and the possible role of Covid-19".

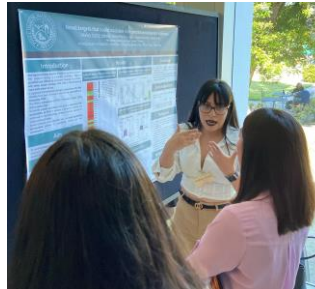
We congratulate our G-RISE trainees, Yesenia Rivera-Escobales (4th year) and Nashaly Irizarry (3rd year) who, under the mentorship of Dr. James Porter, presented their research work.

- Yesenia Rivera Escobales: Infralimbic cortex-hypothalamic circuit in fear and anxiety-related behaviors
- Nashaly Irizarry: Novel targets that could modulate fear conditioned behaviors in females

Congrats on your excellent presentations, good job!



Yesenia Rivera & Dr. James Porter



Nashaly Irizarry



G-RISE trainees & Dr. Thomas Wisniewski

DATA BLITZ



(L-R) Yobet Pérez, Joshua Pérez, Nashaly Irizarry & Yadiel Rivera.

Congratulations to our G-RISE trainees who presented their research work at our Data Blitz that was held on November 4, 2022. The following were the works presented:

Yobet Pérez: "Influence of stress prior to cocaine self-administration on cocaine seeking in adult rats"

Joshua Pérez: "The Effects of Adolescent Traumatic Events on Adulthood Cocaine Use Disorder"

Yadiel Rivera: "Characterization of Myeloid-Derived Suppressor Cells in response to restraint stress in preclinical models of ovarian cancer"

Nashaly Irizarry: "Identifying novel targets that could modulate conditioned fear responses in females"

Good job everyone!



PONCE RESEARCH
INSTITUTE

PONCE MEDICAL SCHOOL FOUNDATION INC.

Tamdiu Discendum Est. Quamdiu Vivas

RISE UP^{date}

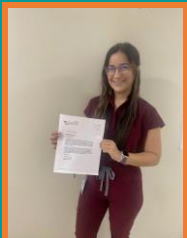
PONCE HEALTH SCIENCES UNIVERSITY

Ponce Research Institute

G-RISE Program Newsletter

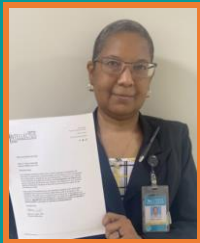
November-December 2022

INTELLECTUS AWARD RECIPIENTS



Sheila Valle Cortés

Join us in congratulating our 4th year RISE trainees, Nelly Arroyo and Sheila Valle, who were awarded with a scholarship from Fundación Intellectus. The objective of this scholarship is to support research on health prevention issues in Puerto Rico. It consists of financial aid to help support the applicant's graduate studies. Sheila's research project focuses on identifying the clinical relevance of phospho-Rb S249, N-cadherin, E-cadherin, and B-catenin that can be used in the clinic for the risk classification of indolent and aggressive PCa tumors. Nelly's research project aims to assess the functional impact of germline variants in the promoter regions of BC susceptibility genes on gene expression levels, gene functions on DNA repair mechanisms and breast cancer risk.



Nelly Arroyo Alvarado

Information about this scholarship can be accessed through:

<https://fundacionintellectus.co/investigaciones-salud/>

Congrats, well deserved!

G-RISE LAB WORKSHOP

By: Grissell Tirado, PhD



On Friday December 16th, the G-RISE Lab held the workshop, "Next-Generation Sequencing for Genetic Surveillance of Infectious Diseases and Emerging Pathogens: Methods and Applications" by Dr. Grissell Tirado, Ph.D. The workshop consisted of a discussion session followed by a demonstration at the PRI-CCR Core sequencing laboratory. The G-RISE trainees had the opportunity to gain knowledge about this technique and its application in research and public health services. Some of the topics that

were discussed included: basic notions of genomic surveillance, background on emerging pathogens and epidemics; methodology for sample extraction and preparation, sequencing and analysis; and examples of technical approaches and their applications in research. The demonstration portion, assisted by Raphael Sanchez from the PRI-CCR Core, served to familiarize the students with the equipment utilized for this technique and provided basic understanding of the sequence processing and analysis. Attendees had the opportunity to ask questions and to share their experiences and ideas regarding this technique.

PD: The 3-minute Thesis

By: Nelly Arroyo (4th year RISE trainee)

On December 2nd, Dr. James Porter, Associate Director of the G-RISE Program and Director of the RCMI BRAIN Core at Ponce Health Sciences University, gave an in-person Professional Development (PD) session titled: "The 3-minute Thesis." Created in 2008 by the University of Queensland in Australia, the 3-minute Thesis, or 3MT, is a research communication competition where participants give a three-minute presentation of their thesis research to a general audience using one slide. The purpose of the competition is to develop good communication skills, expose the students to broader audiences, and increase networking among their peers and other researchers. For the PD session, the G-RISE trainees prepared and read a 3-minute draft of their thesis projects and received feedback from their peers as well as from Dr. Porter. Also, the students watched videos of first-prize winners of several 3-MT competitions. Both activities were an excellent exercise to identify strengths and weaknesses when the goal is to communicate research in a clear and concise manner. Dr. Porter encouraged the students to practice their 3-MT to improve their communication skills because in the near future he hopes to hold a 3MT competition locally. As Dr. Porter stated: "We would like to hold a 3MT competition at PHSU following the rules developed at the University of Queensland. We would also like to have the families of the graduate students participate in the evaluation."

THE PUERTO RICO SCIENCE TRUST FORWARD RESEARCH SYMPOSIUM 2022



So very proud of our 1st year RISE trainee, Joel Orengo, who attended and presented at the Puerto Rico Science Trust Forward Symposium 2022 that was held in San Juan, PR, on November 3! Under the mentorship of Dr. Carlos Díaz-Osterman, Joel presented his poster titled "Lipid metabolic enzymes in extracellular vesicles from chemoresistant prostate cancer cells may influence macrophage polarization". He was also awarded the Mitel Award for his service excellence and commitment with the development of research and science. *Congratulations, Joel, well deserved!*

DATA BLITZ



(L-R) Joel Orengo, Luinet Meléndez, Elvin Hernández & Paola Flores.

Congratulations to our G-RISE trainees who presented their research work at our last Data Blitz of the semester that was held on December 9, 2022. The following were the works presented:

Paola Flores (2nd year): "T follicular helper cell & memory B cell frequencies in a convalescent DENV immune cohort"

Joel Orengo (1st year): "Characterization of Lipid Metabolic Enzymes from Therapy-Resistant Prostate Cancer-Derived Extracellular Vesicles"

Elvin Hernández (2nd year): "The role of chronic stress in tumor-associated macrophage function in ovarian cancer"

Luinet Meléndez (1st year): "Characterizing the Immunosuppressive Effects of Restraint Stress on Cytotoxic T-cells in a Syngeneic Mouse Model of Ovarian Cancer"

Good job everyone!



PONCE RESEARCH
INSTITUTE

PONCE MEDICAL SCHOOL FOUNDATION INC.

Tamdiu Discendum Est. Quamdiu Vivas

RISE UP^{date}

PONCE HEALTH SCIENCES UNIVERSITY

Ponce Research Institute

G-RISE Program Newsletter

November-December 2022

Tropical Medicine & Hygiene (ASTMH) 2022 Annual Meeting

Our G-RISE trainees benefit from paid trips to attend a National scientific conference per year. Paola Flores (2nd year RISE trainee), from Dr. Rivera-Amill lab, attended the American Society of Tropical Medicine & Hygiene (ASTMH) 2022 Annual Meeting in Seattle, Washington, from October 30-November 3, 2022.

This Annual Meeting is the premier international forum for the exchange of scientific advances in tropical medicine, hygiene and global health. It offers access to all that is new, evolving, challenging, successful and exciting in tropical medicine, hygiene and global health.

Paola had the opportunity to attend plenary sessions, science and clinical sessions, poster sessions, and an exhibit hall featuring the latest products and services.

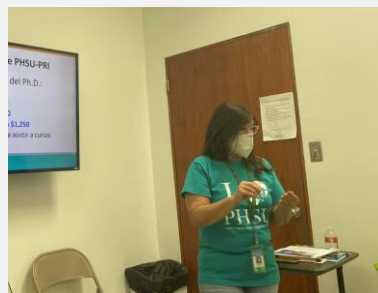
This was a great opportunity for her to learn, network and have fun! Congrats, Paola!

PHSU OPEN HOUSE

Very thankful with our trainees Nashaly Irizarry (3rd year) and Yadiel Rivera (2nd year) for joining our Program Coordinator, Jean Marie Schmidt, to participate in the PHSU Open House and School of Medicine Campus Tour Event that was held on November 11. A group of students interested in our PhD Program in Biomedical Sciences had the opportunity to receive an orientation from our school ambassador, Agnes González, about the program, the admissions process and requirements. Jean Marie talked about our G-RISE Program and trainees shared their science, experiences and the benefits that they receive as G-RISE trainees. Yadiel was also able to show them his lab and explain what he does.

For more information about our PhD in Biomedical Sciences and G-RISE Programs, visit our web link: <https://www.psm.edu/pri/rise/> and contact admissions@psm.edu

Be part of the new generation of scientists and of great scientific advances! 🧬🔬



HAPPY HOLIDAYS!



OUR G-RISE TEAM WISHES YOU A MERRY CHRISTMAS AND A
HAPPY & HEALTHY NEW YEAR 2023!



Like us on Facebook

PHSU RISE Graduate Training Program

Research reported in this publication was supported by the National Institute Of General Medical Sciences of the National Institutes of Health under Award Number T32GM144896. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. Please send questions, suggestions or contributions for RISE UPdate to Jean Schmidt at jschmidt@psm.edu or call 787-284-2038. For more information about the G-RISE program and past issues of RISE UPdate, please visit our website at <https://www.psm.edu/pri/rise/>

