



GUEST SPEAKER



Kandy Velázquez, PhD

On April 10th, Ponce Health Sciences University hosted an enlightening seminar led by Dr. Kandy Velazquez from the University of South Carolina School of Medicine. Dr. Velazquez delved into the intricate landscape of cancer treatment challenges, with a focused examination of pain and cachexia. Her academic journey, beginning in Puerto Rico with a bachelor's degree from UPR-Mayagüez, a master's degree from UPR-Medical Sciences Campus, and obtaining her Ph.D. from the University of South Carolina underscores her steadfast commitment to advancing cancer research. Supported by multiple grants, Dr. Velazquez's lab is deeply entrenched in exploring cancer-induced pain, particularly nociception and potential therapeutic interventions such as the Ojeok-san herbal formula. The seminar provided a platform for G-RISE trainees to engage directly with Dr. Velazquez, fostering collaboration and knowledge exchange in the realm of cancer care. Dr. Velazquez's seminar not only highlighted the complexities of cancer-related pain, but also illuminated promising avenues for redefining boundaries in oncological research. Through her dedication and innovative approaches, Dr. Velazquez continues to pave the way for enhanced cancer care, offering hope to patients and researchers alike.

By: Luinet Meléndez (2nd year G-RISE trainee)

SOCIETY FOR IMMUNOTHERAPY OF CANCER (SITC) MEETING

The SITC Spring Scientific meeting was held in Miami, FL, from March 10-12, 2024. This event, delves into the crucial roles of the immune system, microbiome, and tumor metabolism in cancer treatment with immunotherapy. We want to congratulate our exceptional G-RISE trainees, Luinet Meléndez (2nd year) and Yadiel Rivera (3rd year), for their stellar participation at this meeting.

Yadiel delivered an exceptional performance with his oral presentation titled "Characterization of Myeloid-Derived Suppressor Cells in Response to Restraint Stress in Preclinical Models of Ovarian Cancer," highlighting his team's commitment to advancing cancer treatment through groundbreaking research, during the Metabolic Stress in Anti-Tumor Immunity section.

Keep shining, Luinet and Yadiel - you are making us proud!



SOCIETY ON NEUROIMMUNE PHARMACOLOGY (SNIP) 28TH SCIENTIFIC CONFERENCE NIP MEETING

We are thrilled to announce that our students made a significant impact at the Society on NeuroImmune Pharmacology (SNIP) 28th Scientific Conference in Charleston, SC from March 10-13, 2024!

Representing Dr. Richard Noel's lab, our first-year G-RISE trainee, Stephanie Hernández, and former trainee, Jessalyn Pla, highlighted their groundbreaking research at this prestigious event.

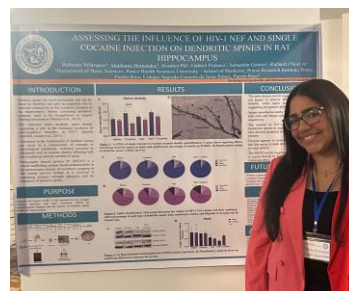
Under Dr. Noel's mentorship, Stephanie presented her poster titled "Assessing the influence of HIV-1 NEF and single cocaine injection on dendritic spines in rat hippocampus," while Jessalyn presented her research titled "HIV-1 Nef decreases glutamate transporter expression on astrocytes of the nucleus accumbens and increases cocaine-seeking behavior in rats," both in poster and oral formats.

We are especially proud to share that Jessalyn was awarded the Early Career Investigator Travel Award (ECITA) for her exceptional contributions to the field.

Congratulations to Stephanie, Jessalyn, and the entire team for their dedication and hard work!



(L-R) Dr. Richard Noel, Stephanie Hernández & Jessalyn Pla



Stephanie Hernández



Jessalyn Pla



G-RISE LAB SEMINAR

(By: Dr. Grissell Tirado, G-RISE Lab Supervisor)

On Friday March 22, 2024, the G-RISE Lab held the workshop, "Cell Counting and Viability Measurements with the Countess II FL Counter using Brightfield and Fluorescence Illumination" with Zuleika Sanoguet, MSc, from BioAnalytical Instruments. The workshop was held at the G-RISE Lab and consisted of a short presentation followed by a hands-on session that gave the Trainees the opportunity to gain knowledge about the usage and applications of this instrument. As part of the Workshop, the Trainees also had the opportunity to observe the installation of a fluorescence filter and learn about the several types available. This hands-on experience allowed the Trainees to get familiarized with the operation of the instrument, discuss applications in cell research and to ask questions about possible applications for their research projects.



THESIS DEFENSE

Congratulations to our fifth year G-RISE trainee, Sheila Valle Cortés, on a successful thesis defense! Under the mentorship of Dr. Pedro Santiago, Sheila defended her thesis dissertation titled 'Phosphorylation of the Retinoblastoma protein at Serine 249 and the cadherin switch as biomarkers for the discrimination between indolent and aggressive forms of prostate cancer' on Thursday, April 18, 2024. The aim of her dissertation was to assess the clinical significance of the phosphorylation of the Retinoblastoma protein at Serine 249 and the cadherin switch in distinguishing between indolent and aggressive prostate cancer tumors. The ultimate objective of this research was to identify biomarkers that could assess with cost-effectiveness and that could precisely distinguish indolent from aggressive prostate cancer tumors, with a particular focus on the Puerto Rican population. By achieving this, enhanced personalized treatment strategies can be implemented, reducing excessive overtreatment, and ensuring optimal care for individuals with aggressive cancers. This is a huge accomplishment and milestone in her life and career. We are all proud and looking forward to seeing what she achieves in the future. Her hard work and dedication have paid off! Bravo, Sheila!



HOW TO PREPARE FOR YOUR THESIS DEFENSE

By: Stephanie Hernández (1st year G-RISE trainee)

On Friday, April 19, 2024, Drs. Alexandra Aquino, Luis Rivera & Elliot Rodríguez, former RISE trainees, gave a professional development session titled "How to prepare for your thesis defense" where they shared their insights and experiences to help graduate students feel confident and prepared as they approach this important academic milestone. The speakers emphasized the importance of understanding the purpose of a thesis defense and attendees were encouraged to view the defense not only as an academic requirement, but also as an opportunity to showcase their expertise and contributions to their field. Drs. Aquino, Rivera & Rodríguez discussed the importance of knowing your audience, which includes your thesis committee members, peers, and faculty. They also provided tips on how to present and convey complex information in a clear and precise manner, while highlighting the importance of structuring your presentation logically. This includes clearly defining your research question, outlining your methodology, presenting your findings, and discussing the implication of the research. Additionally, the speakers addressed common concerns and challenges faced by graduate students during the defense process, such as managing nerves, responding to unexpected questions, and handling feedback from committee members. They emphasized the value of seeking feedback and guidance throughout the thesis preparation process. This session proved immensely beneficial, equipping attendees with the essential knowledge to confidently approach their thesis defense.



#FaceOfScience campaign

Our PHSU G-RISE Program joined the Enhance Science and the NIH Diversity Program Consortium for the #FaceOfScience social media hashtag campaign on Wednesday, May 24, 2024. Its purpose was to celebrate the NIH/NIGMS Research Training Community. Our inspiring young researchers who enhance science across the nation (our current PHSU-G-RISE Program trainees) are pictured below!



PhD in Biomedical Sciences graduate students and G-RISE trainees



First year G-RISE trainees



(L-R) Joel Orengo (2nd year & Sheila Valle, 5th year)

THE 5TH INTERNATIONAL CONFERENCE ON CELL AND EXPERIMENTAL BIOLOGY (CEB) 2024

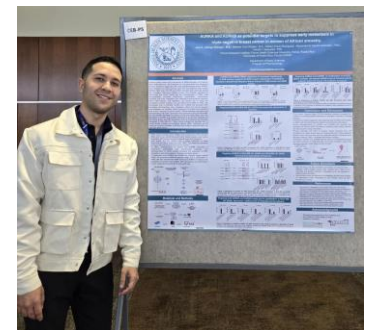
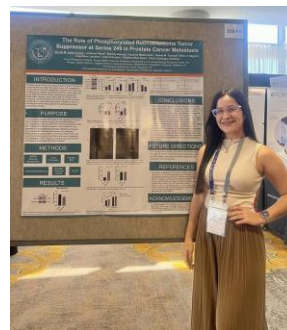
The 5th international conference on Cell and Experimental biology (CEB) 2024 was held from April 22 to 24, 2024, in Baltimore, MD. This conference gathers influential pioneers and speakers in biochemistry, cell and molecular biology, investigative pathology, pharmacology, and physiology to exchange scientific wisdom. Practitioners and academicians from across the globe come together to address rising scientific queries and provide solutions for a smarter and more advanced future.

We acknowledge the attendance and participation of our outstanding trainees, Sheila Valle (5th year), Joel Orengo (2nd year) & Gretchen Albarrán (1st year) at this significant scientific event.

Representing Dr. Pedro Santiago's lab, Sheila Valle presented her poster titled "Investigating the role of Phosphorylated Retinoblastoma tumor suppressor at Serine 249 in prostate cancer metastasis."

Joel Orengo, from Dr. Harold Saavedra's lab, presented his poster titled "Exploring AURKA and AURKB as potential targets to suppress early metastasis in triple-negative breast cancer among women of African ancestry."

Their dedication and hard work contribute to the advancement of science! Keep up the excellent work!



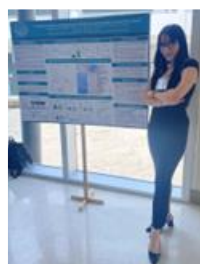
XXI SCIENTIFIC RESEARCH SYMPOSIUM

The XXI Scientific Research Symposium was held on April 26, at the Pontifical Catholic University of Puerto Rico in Ponce. We proudly acknowledge the participation of our G-RISE trainees: Nashaly Irizarry (4th year), Yobet Pérez (4th year), Gretchen Albarrán & Stephanie Hernández (1st year).

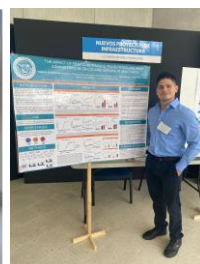
Under the mentorship of their dedicated professors, they presented their outstanding research:

- 📎 Nashaly: 'Exploring factors contributing to female rat vulnerability to traumatic stress' (Dr. James Porter's lab)
- 📎 Yobet : 'The Impact of Fear Conditioning prior to Cocaine Self-Administration on Cocaine Seeking in Adult Rats' (Dr. Marian Sepúlveda's lab)
- 📎 Gretchen: 'Silencing the kinases CDK4/6 TTK and NEK2 as a potential therapeutic approach for breast cancer patients' (Dr. Harold Saavedra's lab)- *Oral Presentation*
- 📎 Stephanie: 'Assessing the influence of HIV-1 NEF and single cocaine injection on dendritic spines in rat hippocampus' (Dr. Richard Noel's lab)

Congratulations on your excellent presentations! Keep up the fantastic work!



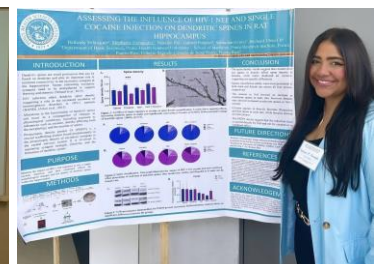
Nashaly Irizarry



Yobet Pérez



Gretchen Albarrán



Stephanie Hernández



BIOMEDICAL SEMINAR SERIES

As a requirement of our G-RISE Program, second- and third-year trainees are requested to give a scientific seminar on their research before the end of the Spring semester.

We congratulate our trainees, Yadiel Rivera (3rd year), Paola Flores (3rd year), Nashaly Irizarry (4th year) for their excellent presentations during the past months.

Yadiel Rivera presented 'Psychological stress drives immunosuppressive MDSC in ovarian tumors.'

Paola Flores presented 'Dengue Adaptive Immune Responses and HLA Diversity in a Puerto Rican Cohort.'

Nashaly Irizarry presented 'Breaking down stress responses: Proteomic and Immune signature variations in Resilient and Susceptible Female Rats.'

Good job!



Yadiel Rivera



Paola Flores

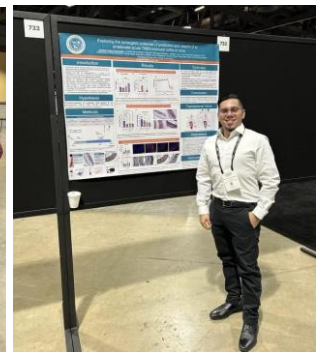
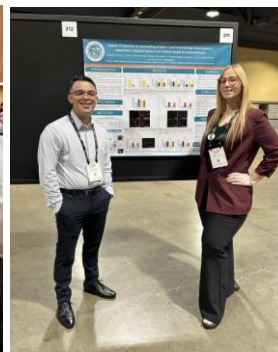


Nashaly Irizarry

AMERICAN PHYSIOLOGICAL SOCIETY (APS) SUMMIT

Held annually by the American Physiological Society (APS), the Summit convenes researchers, educators, and students from around the world who are teaching, learning, and working in the physiological sciences. This year's gathering was held from April 3-7 in Long Beach, California. Among them, Dr. Caroline Appleyard's team shone brightly. Alongside her was lab supervisor Myrella Cruz, and our talented students, Jonathan López and James Torres (1st year G-RISE trainee). Their poster presentations highlighted groundbreaking research, contributing to the summit's mission of advancing our understanding of life and health.

Huge congratulations to James Torres on his excellent poster presentation titled 'Impact of exercise on uncoupling protein-1 and macrophage phenotype in mesenteric adipose tissue in an animal model of endometriosis'. Also, a big shoutout to former trainee, Jonathan López, for his insightful poster presentation titled 'Exploring the synergistic potential of probiotics and vitamin D to ameliorate acute TNBS-induced colitis in mice.' Great work, James, Jonathan, and all of Appleyard's lab team!



44TH ANNUAL RESEARCH AND EDUCATION FORUM & 8TH INTERDISCIPLINARY RESEARCH SYMPOSIUM

Congratulations to our third-year G-RISE trainee, Yadiel Rivera! We are thrilled to share that Yadiel has not only presented his groundbreaking research titled 'Characterization of Myeloid-Derived Suppressor Cells in Response to Restraint Stress in Preclinical Models of Ovarian Cancer' in both oral and poster formats, but he also showcased his work at the 44th Annual Research and Education Forum held at UPR-MSC Campus on March 13-15 and at the 8th Interdisciplinary Research Symposium at San Juan Bautista School of Medicine on April 2.

Your dedication and hard work are truly inspiring, Yadiel! Keep up the excellent work!





OUTREACH

Kudos to our trainees and grad students on the GSABS Graduate Studies Road Tour! Thank you for spreading insights with your talk 'Is a PhD for you? A Deep Dive into Doctoral Studies.' Your dedication to sharing knowledge is truly inspiring!



Yadiel Rivera (3rd year G-RISE trainee) University of PR in Aguadilla March 5, 2024



Paola Flores (3rd year G-RISE trainee) University of PR in Humacao (Virtual Talk), March 12, 2024



Luinet Meléndez, Yadiel Rivera & Dr. Guillermo Armaiz University of PR in Cayey March 19, 2024



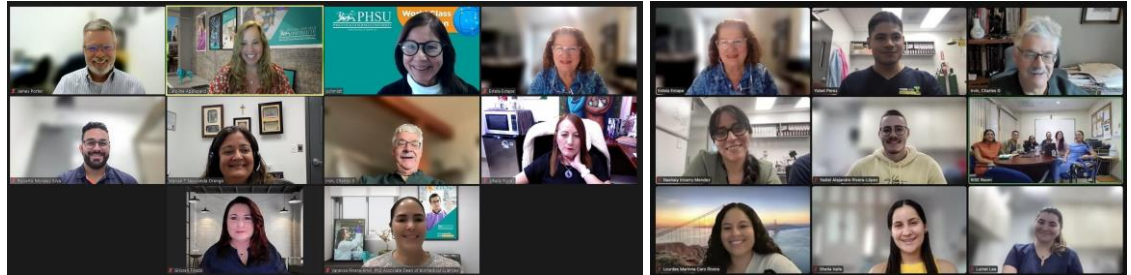
Nashaly Irizarry, Yesenia Rivera, Yobet Pérez-Brain Awareness Week March 15, 2024



Dorca Marciano (1st year G-RISE trainee) University of PR in Mayaguez March 21, 2024

ANNUAL ADVISORY COMMITTEE MEETING

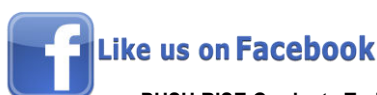
Our G-RISE Program (Virtual) Annual Advisory Committee was held virtually on Thursday, April 10. We thank our external members, Dr. Estela Estapé and Dr. Charles Irvin for monitoring the progress and productivity of our program, making their recommendations for completion of goals for our annual progress report to NIH, and addressing our students' feedback. We also thank our internal members, our G-RISE Lab supervisor and trainees for their participation and input!



SCIENZA E ARTE

By: Nashaly Irizarry (4th year G-RISE trainee)

On April 20th, the Graduate Students Association in Biomedical Sciences (GSABS) presented the fundraising gala "Scienza e Arte" at the Hotel Meliá. Under the charm of the evening, the combination of science and art became evident, producing a unique and captivating environment with the goal of continuing to encourage and foster new talent within the program. The event was a demonstration of talent and innovation, with artistic performances by students and doctors from the university, who delighted spectators with their enthusiasm and expertise in each presentation. From art exhibitions to musical performances and amazing dances, every moment exemplified the community's spirit of collaboration and excellence. But, most significantly, "Scienza e Arte" was more than just a night of entertainment, artists, and gastronomic pleasures; it was a chance for the community to join in support of science. Thanks to the generosity of everyone who contributed, significant funds were raised to continue promoting and supporting future biomedical science leaders.



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.ponceresearch.com/programs-partnerships/nigms-rise-program/>