



# TITLE V COOPERATIVE

## MSC-UPR & UCC

TWO PRCTRC PARTNERS, UCC AND MSC JOIN EFFORTS TO CREATE  
A PIPELINE FOR FUTURE CLINICAL AND TRANSLATIONAL RESEARCHERS.

NEWS



Supported by the US Department of Education: Title V Grant Award # P031S160068

## Clinical and Translational Research Course successfully completed for the second time



During the pandemic, the Project continues to meet its objectives and goals in its curricular offerings, as well as in the institutionalization processes. During the second semester – January to May – of the academic year 2020-2021, the Project offered (for the second time) the elective course INTD 5998 - Clinical and Translational Research: Introduction and Principles. The course was offered by the University of Puerto Rico-Medical Sciences Campus (UPR-MS) in a hybrid mode thus, providing undergraduate and graduate students from

different academic institutions and different geographical areas of Puerto Rico, the opportunity to enroll and to gain theoretical and hands-on exposure in Clinical and Translational Research (CTR). The course exposed students to the main concepts underlying the performance of CTR through lectures, workshops, and presentations. The Blackboard Ultra and Teams platforms were used and the students used digital technology to successfully complete the tasks required in the course. Enrollment totalled 14 students from the following campuses of the University of Puerto Rico: Cayey, Humacao, Medical Sciences and Mayaguez. One hundred percent (100%) of the enrolled students completed the course and indicated that the course: was a good learning experience, helped them increase their knowledge in CTR, met their expectations and that they would recommend other students to take it. The course offers a valuable opportunity for interprofessional participation of undergraduate students with graduate students as they get initiated in CTR. The immediate plan is to expand the availability of the course throughout the two semesters of the academic calendar of the Medical Sciences Campus.

## Dissemination, workshops and achievements - Center for Research Education and Science Communication Opportunities (CRESCO)

As part of its dissemination activities, Dr. Efraín Flores Rivera, CRESCO's Co-Coordinator, offered an oral presentation in the UPR-MSC 41st Annual Research and Education Forum, which was celebrated in a virtual modality on May 17-28, 2021. In his presentation entitled, *CRESCO: Its Successful Transformation in Pandemic Times to Promote the Development of Research and Scientific Communication Competencies*, Dr. Flores-Rivera, described the transition of CRESCO from an on-site and remote facility to a completely remote facility as of March 2020. This transition was made in response to the COVID-19 emergency lockdown and further restrictions, and with the purpose of achieving CRESCO's goals and objectives. CRESCO's staff and mentors rapidly developed and launched a variety of online tutorials, workshops, and mentoring services to support UPR-MSC and Universidad Central del Caribe (UCC) students and faculty, especially those conducting research in their Clinical and Translational Mentoring Teams (CTMTs). Some of the topics covered in these educational interventions were: 1) PubMed/MEDLINE, 2) Mendeley, 3) statistical analysis, 4) Intellectus Statistics, and 5) Turnitin. In his conclusions, Dr. Flores Rivera stressed that CRESCO's service model proved its adaptability even in challenging scenarios such as the ongoing coronavirus pandemic.



Dr. Efraín Flores Rivera delivering his oral presentation at the UPR-MSC 41<sup>st</sup> Annual Research and Education Forum

CRESCO's mentors continue to offer online workshops on a variety of topics of relevance for students and faculty interested in research. The following table summarizes the attendance statistics from March to May 2021.

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Workshop	Attendees
How to use Turnitin for plagiarism prevention	21
Mendeley - citations and references	26
PubMed - scientific literature search	26
Introduction to Intellectus Statistics	20
How to select the right statistical analysis for your research	26
The importance of significance in statistical analysis	31

In addition, for the same time period, 94 participants received online mentoring services on one or more of the above-mentioned topics as part of their development in research and science communication skills.

## The last Clinical and Translational Research Mentoring Teams (CTMTs): An example of perseverance during the COVID-19 pandemic

During the five years of the Project, 34 CTMTs have been organized to provide participants a hands-on experience in research. The last five (CTMT 30-34) were organized as a result of the 7th RETO-MOTOR II training which took place from October to December 2020.

These five teams, organized during the COVID-19 pandemic and whose members received all the training through distance learning modalities, have shown tremendous will power to continue through the process of writing and submitting a research proposal for approval, while addressing big challenges. The five teams submitted successful proposals and received funding. In addition, it is worth noting that the teams' members represent a diversity of post-secondary institutions in Puerto Rico, which highlights that the Project was able to reach beyond the projected campuses of UPR-MSU and UCC, to other post-secondary institutions.

What follows is a summary of the topics of research and the members of each of these CTMTs.



Members of CTMT 30

### **CTMT 30: Determinantes sociales que influyen en la adherencia y acceso al tratamiento de la pérdida auditiva en adultos y adultas en Puerto Rico.**

**Team:** Dra. Soami Santiago de Snyder, Dra. Wanda Lugo Vélez, Karen Pabón Cruz, Cristina Rivera Febres , Marcos Roche Miranda

**Principal Investigator-Mentor:** Dr. Edna Acosta Pérez (UPR-MSU)

### **CTMT 31: A Pharmacogenomic Study of Major Adverse Cardiovascular Events in Caribbean Hispanic Patients on Clopidogrel by using Machine Learning Tools.**

**Team:** Krystal S Román Rodríguez, Carola F González Lebrón, Luis Rosario Arroyo, Ed.D.,

**Principal Investigator-Mentor:** Dr. Jorge Duconge Soler (UPR-MSU)

**Collaborator:** Dr. Abiel Roche-Lima (UPR-MSU)



Members of CTMT 31



**CTMT 32**

**MENTORA:**  
Michelle M. Martínez Montemayor, PhD  
Universidad Central del Caribe



**MENTOREADA**  
Camiled Quirindongo Rivera  
Estudiante graduada, Programa de  
Epidemiología, Escuela de Salud Pública,  
Ponce Health Sciences University



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Members of CTMT 32

**CTMT 32: Caracterización de la población de mujeres con cáncer inflamatorio de seno en Puerto Rico.**

**Team:** Camiled Quirindongo Rivera

**Principal Investigator-Mentor:**

Dr. Michelle M. Martínez Montemayor (UCC)

**CTMT 33: Creation of a Mobile Application aimed at patients diagnosed with breast cancer with the purpose of promoting self-care and providing tools for the benefit of their current treatment.**

**Team:** Adriana F. Arroyo Fernández, Dra. Brenda Soto Torres, Elan A. Reynoso Jiménez, Jenniffer Abreu Santana

**Principal Investigator-Mentor:** Dr. Carlos Acevedo Suárez (UPRM)



**CTMT 33**

**MENTOR:**  
Carlos Acevedo Suárez, PhD (UPR-Mayagüez)

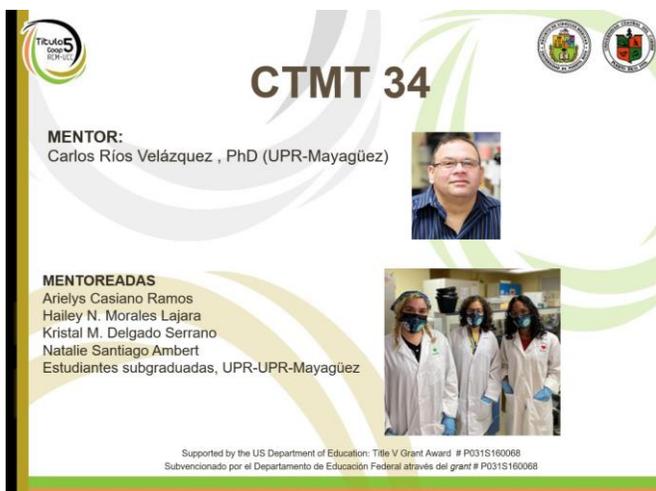


**MENTOREADOS**  
Adriana F. Arroyo Fernández, estudiante subgraduado, UPR-Mayagüez  
Dra. Brenda Soto Torres, profesora subgraduado, Ponce Health Sciences University  
Elan A. Reynoso Jiménez, estudiante subgraduado, UPR-Mayagüez  
Jenniffer Abreu Santana, estudiante subgraduado, UPR-Humacao



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Members of CTMT 33



**CTMT 34**

**MENTOR:**  
Carlos Ríos Velázquez, PhD (UPR-Mayagüez)



**MENTOREADAS**  
Arielys Casiano Ramos  
Hailey N. Morales Lajara  
Kristal M. Delgado Serrano  
Natalie Santiago Ambert  
Estudiantes subgraduadas, UPR-UPR-Mayagüez



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Members of CTMT 34

**CTMT 34: Aislamiento e identificación de bioprospectos capaces de metabolizar  $17\beta$ -estradiol y  $17\alpha$ -etinilestradiol utilizando metagenómica y técnicas dependientes de cultivo en Puerto Rico.**

**Team:** Arielys Casiano Ramos, Hailey N. Morales Lajara, Kristal M. Delgado Serrano, Natalie Santiago Ambert.

**Principal Investigator-Mentor:** Dr. Carlos Ríos Velázquez (UPRM)

The teams are continuing their research through 2021 and plan to publish their results between January and March 2022.