



Special Thanks to the RISE Programs' Staff –

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provided by
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was provided by the



University of Puerto Rico- Cayey
University of PR–School of Medicine

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RISE



December

Student

Research

Symposium

2015

Goals

The goal of the December Research Symposium is to provide Cayey students with an opportunity to present their research results. Research projects were conducted either on Campus with UPR faculty mentors or at other research institutions. Research site is listed next to each student photo.

Research results will be given in a series of oral presentations. Questions are welcomed and indicate that these young researchers have been successful with their projects. These presentations help us achieve two primary goals. First, students convey to the public their skills as researchers and as communicators of scientific knowledge. In addition, the progress that each student makes in their professional development is made self evident.

This activity is co-sponsored by the Biology, Chemistry, and Math Departments and by an NIH grant which has been awarded for five years (2011-2016) to UPR-Cayey for developing Biological Undergraduate Research Programs. Since 1985 Minority Biomedical Research Support (MBRS) has provided research experiences to over 800 Cayey students. Additional funds and their sources are listed on the back of this pamphlet. The efforts of mentors, lab technicians, and staff are gratefully acknowledged.

Certificates of participation will be provided to those speaking today. In addition, first, second and third place awards will be determined by UPR-Cayey judges. Selection will be made by four judges listed on the next page.

Schedule

Dec. 5, 2015 MMM 201

8:15 Setup & Refreshments

8:30 Welcoming Statements – Dr. Robert Ross, RISE Director
Dr. Dean of Academic Affairs

8:45 – 9:45 Seminar Session I

9:45 – 10:15 Break for Refreshments

10:15 – 11:45 Seminar Session II

Congratulations

to the following RISE alumni who were admitted to Ph.D. programs during the three years (2011 – 2013). Research experiences enabled them to continue their career development at these institutions.

Desiree Rolón	Michigan State University	Biology	2011
Isamar Ortíz	Pennsylvania State University	Chemistry	2011
Frances Rodríguez	Univ. of California, Berkeley	Chemistry	2011
Jaritzza Gómez	University of Wisconsin	Chemistry	2011
Elvin A. Morales	University of Wisconsin	Chemistry	2011
Jorge León	University of Iowa	Math	2011
Janice Díaz	Michigan State Univ.	Biology	2012
Mónica Rios	Michigan State Univ.	Biology	2012
Jesyka Meléndez	Univ. of California, Berkeley	Biology	2012
Wanda Figueroa	Univ. of Missouri	Biology	2012
Luis DeJesús	Texas A & M	Chemistry	2012
Gabriel Porrata	University of Iowa	Math	2012
Melissa Medina	Univ. of Buffalo	Biology	2013
Dorianmarie Vargas	Univ. of Central Florida	Biology	2013
Jennifer Ocasio	Univ. of North Carolina	Biology	2013
Elvin E. Morales	Univ. of Notre Dame	Biology	2013
Amaris Borges	Univ. of Buffalo	Chemistry	2013
Maria Huertas	Univ. of Georgia	Biology	2014
Karina Nieves	John Hopkins	Chemistry	2014
Antonio Romero	Univ. of Calif.-San Diego	Chemistry	2014
Jaylissa Torres	Yale University	Chemistry	2014
Carlos Baez	Univ. of Wisconsin	Chemistry	2014

The alumni table is sorted by-year of graduation, area, and institution.



RESEARCH INITIATIVE FOR SCIENTIFIC ENHANCEMENT

11:00

Synthesis of Mixed-Metal Oxides

Fabrication of Cellulose Membranes

Reinforced with Nanocrystalline Cellulose

Ms. Delaine Zayas

& Dr. Victor Pantojas

UPR-Cayey



11:15

A Computational Study of Stability and

Infrared Characterization of

Single Metal Clusters Supported

by an Organic Fiber

Ms. Alejandra de Jesus

& Dr. Juan Lopez

UPR-Cayey



11:30

Compartmental Model for *Chlamydia*,

a Sexually Transmitted Disease

Mr. Hector Figueroa

& Dr. Maytee Cruz

UPR-Cayey

Guidelines for seminars –

During these sessions students are presenting seminars.

Students will be speaking for eight minutes

followed by a seven-minute question period.

If there was insufficient time for all questions,

please approach the student during a break and ask your questions.

Each student, at the end of the question period, will introduce the following speaker.

Thanks to the following

for their help with judging this symposium:

Seminar Session I

8:45 – 9:45

8:45

Expression of Tissue Plasminogen Activator (tPA)

Mutants in *E. coli*

Ms. Angelica Gonzalez

& Dr. Vibha Bansal

UPR-Cayey





9:00
 Behavioral and Molecular Effects of
 Anabolic Androgenic Steroids in
 Generalized Anxiety throughout Development

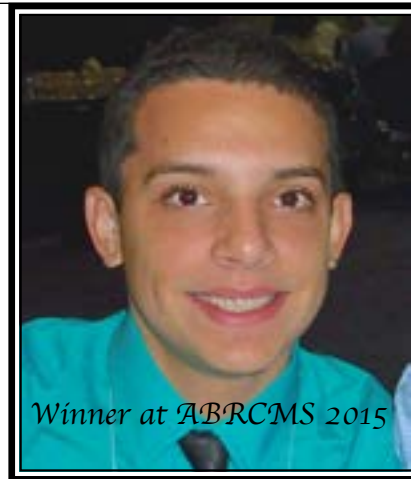
*Ms. Carolina Montañez
 & Dr. Jennifer Barreto
 UPR- School of Medicine*



10:15
 The Role of Pre-mir-21 in
 Cisplatin Resistant Ovarian Cancer Cells

*Mr. Juan Apiz
 & Dr. Pablo Vivas
 UPR- School of Medicine*

9:15
 Classifying Land Cover Composition of
 La Plata Watershed in Puerto Rico Using
 Historical Aerial Imaging and
 Remote Sensing Raster Graphic Editors
*Mr. Luis Perez
 & Dr. Javier Arce
 UPR- Cayey*



Winner at ABRCMS 2015

10:30
 Molecular Phylogenetic Analyses of
 Plant Genomic Regions
 Amplified Using PCR

*Ms. Patricia Claudio
 & Dr. Michael Rubin
 UPR- Cayey*



9:30
 Optimizing the
 Average Precipitation Model of Puerto Rico

*Mr. Edwin Alvarado
 & Dr. Javier Arce
 UPR- Cayey*



10:45
 Evolutionary Relationship Between
 GAPDH Genes in
 Plants Found in Puerto Rico

*Ms. Nicolle Rosa
 & Dr. Michael Rubin
 UPR- Cayey*