



Special Thanks to the RISE Programs' Staff –

Ms. Noelia López

RISE Secretary

Mr. Giovanni Cruz

RISE Lab Technician

Ms. Carmen Rodríguez

RISE Administrative Assistant

Support for

Student Salary & Materials were  
provided by both

– National Institute of Health

Research Initiative for Scientific Enhancement (RISE) Program

Support for Mentors

was provided by the



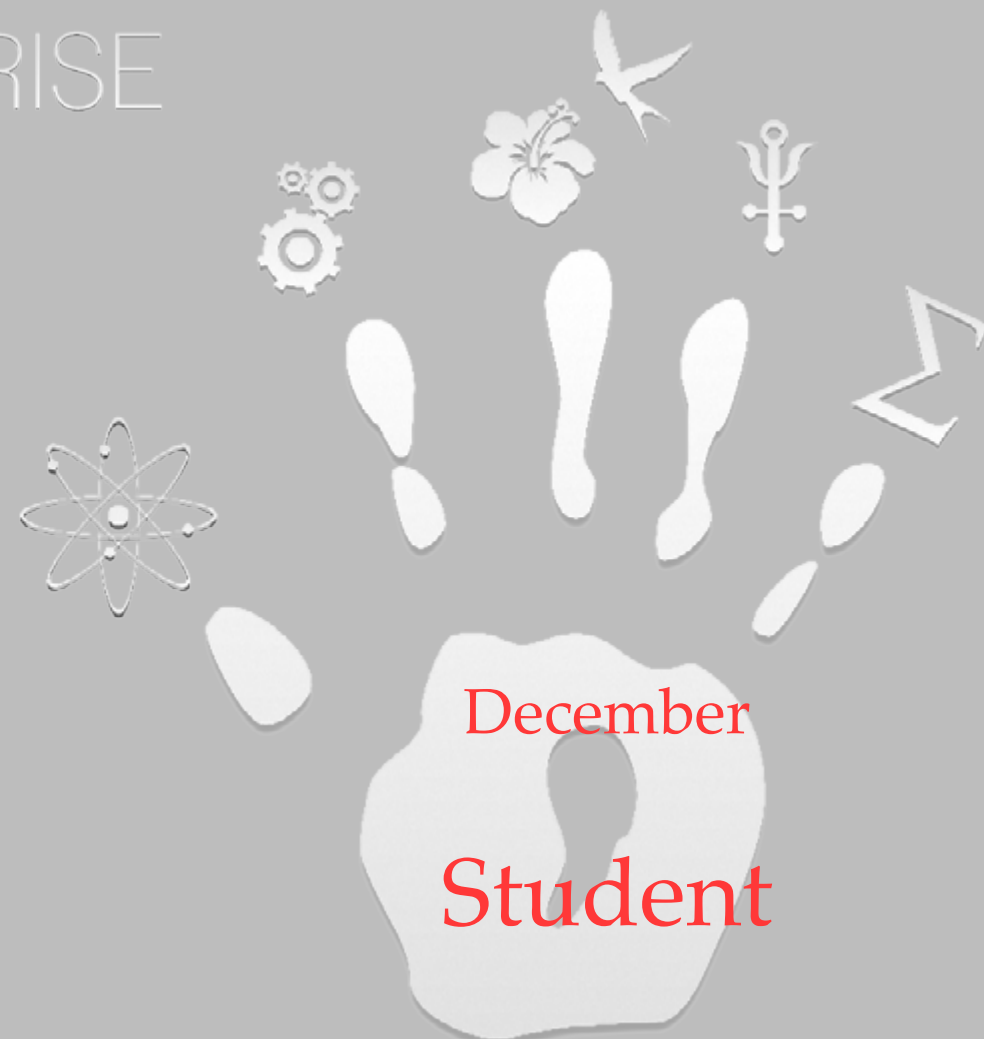
Universidad Central del Caribe  
University of Puerto Rico- Cayey

Refreshments provided by University of Puerto Rico- Cayey

Morning refreshment – Chancellor, Dr. Juan Varona

Luncheon – RISE Program

RISE



December

Student

Research

Symposium

2012

# 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 by two faculty listed on the last page.

# Schedule

Dec. 8, 2012 North Science Room 108

- 8:00 Setup & Refreshments
- 8:30 Welcoming Statements – Dr. Robert Ross, RISE Director  
Ms. Gladys Ramos,  
Special Assistant to the Chancellor
- 8:45 – 10:00 Seminar Session I
- 10:00 – 10:10 Break for Refreshments
- 10:20 – 10:30 Why the PhD? by Ms. Wendy Pacheco at Ponce Medical School
- 10:30 – 11:45 Seminar Session II
- 11:45 – 12:15 Break for Pizza
- 12:15 – 1:15 GRE Hour

Thanks to the following Cayey alumni for their help with judging this symposium.

- Dr. Rosa Torres, UPR-Cayey
- Dr. Wilfredo Resto, UPR-Cayey
- Mr. Nelson Almodóvar, UPR-Medical Sciences

## *Congratulations*

to the following RISE alumni who were admitted to Ph.D. programs during the last two years (2011 & 2012). Research experiences enabled them to continue their career development at these institutions.

Yadira	Ortíz	Univ. of Puerto Rico	Biology	2009
Andres	Betancourt	Univ. of California, San Diego	Biology	2011
Jaritz	Gómez	University of Wisconsin	Chemistry	2011
Elvin	Morales	University of Wisconsin	Chemistry	2011
Isamar	Ortíz	Pennsylvania State University	Chemistry	2011
Frances	Rodríguez	Univ. of California, Berkeley	Chemistry	2011
Desiree	Rolón	Michigan State University	Biology	2011
Luis	DeJesus	University of Buffalo	Chemistry	2012
Jesyka	Meléndez	Univ. of California, Berkeley	Biology	2012
Gabriel	Porrata	Univ. of Iowa	Math	2012



RESEARCH INITIATIVE FOR SCIENTIFIC ENHANCEMENT

11:00

Magnetic Nanoparticles  
Based Separation Matrices  
for Protein Isolation

*Mr. Osvaldo Vega*

& *Dr. Vibha Bansal*

*UPR-Cayey*



11:15

Developing Method for the Estimation  
of Lysine Bound to Regenerated  
Cellulose Membranes

*Ms. Karina Nieves*

& *Dr. Vibha Bansal*

*UPR-Cayey*

11:30

Crosslinking of Collagen Nanofiber Scaffolds  
for Biomedical Applications

*Ms. Claudia Colón*

& *Dr. Wilfredo Otaño*

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

## Seminar Session I

8:45 – 10:00



8:45

PCR Amplification, Cloning,  
Sequence Determination, and  
Bioinformatics Analyses of Collagenase (MMP1)  
Domains Cloned from Primate Genomic DNAs

*Ms. Melisa Medina*

& *Dr. Michael Rubin*

*UPR-Cayey*



9:00

PCR Amplification, Cloning,  
Sequence Determination, and  
Bioinformatics Analyses  
of Novel Plant GAPDH Genes

*Ms. Valeria Rivera*

& *Dr. Michael Rubin*

*UPR-Cayey*



9:15  
In-Silico Discovery  
of Wee1 Kinase Inhibitors

*Mr. Carlos Santos  
& Dr. Héctor Maldonado  
Universidad Central Del Caribe*

9:30  
In-Silico Discovery  
of Methyltransferase Inhibitors

*Ms. Jessica Díaz  
& Dr. Héctor Maldonado  
Universidad Central Del Caribe*

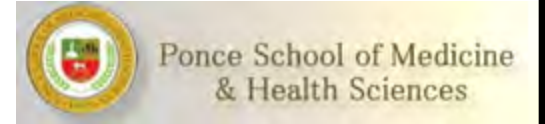


9:45  
Water Quality:  
A Microbiological Approach

*Ms. Krystal Ortiz  
& Dr. Javier Arce  
UPR- Cayey*



10:00 – 10:10  
Break for Refreshments & Questions



10:10 – 10:30 **Why the Ph.D.?**  
by Ms. Wendy Pacheco at PSMHS

Seminar Session II

10:30 – 11:45

10:30  
The Relationship Between  
Watershed Composition and Water Quality  
of non-PRASA System: a GIS Analysis

*Ms. Wilmarie Morales  
& Dr. Javier Arce  
UPR- Cayey*



10:45  
Validity and Reliability  
of a Self Efficacy Scale  
for Latino Heterosexual Youth

*Mr. Héctor Cay  
& Dr. Patricia Nöboa  
UPR- Cayey*

