

# The Public Health Research Institute Summer High School Research Internship Program

The Summer High School Research Internship Program serves minority students who attend high schools, or live in or near Newark, NJ, and their science teachers. Our goal is to nurture, through hands-on laboratory research experience, the students' interest in science. Mr. Yaakov Saturen, a science teacher with more than twenty years experience in inner city high schools, directs the program. Students begin with a two-week workshop that introduces them to the vocabulary of molecular science and basic laboratory skills, tools and techniques. They meet PHRI Principal Investigators (PI), who give a series of lectures. After the workshop, each student is assigned to a PI's lab, paired with a scientist/mentor, and is assigned his or her own research project. Over the course of the summer, they meet weekly to discuss their projects. Each one writes a short research paper on his or her project. Program members also take field trips to various sites where they can see how research is being applied for the benefit of society. Support for the Summer 2011 program has been provided by the Victoria Foundation, PSE&G, Prudential Foundation, Becton Dickinson, PHRI - Center of the New Jersey Medical School, ACS-Project SEED and private individual donations.



**Front:** Hannah, Jannie, Shmilah, Victoria, Makeba, Jean-Carlos  
**Back:** Tamara, Steven, Darven, Khaheem, Mr. Saturen

*"I have enjoyed learning about science as a process and learning about infectious diseases in an interactive and original manner."* Jean-Carlos Arenas 2011

## Summer 2011 Research Internship Participants

**Program Director:** Yaakov Saturen, Jane Addams HS, Bronx, NY  
**Teaching Assistant:** Tamara Adebajo, B.S., Rutgers University, New Brunswick, NJ  
**High Schools:** Malcolm X Shabazz HS, Mother Seton Regional HS, Science Park HS, Saint Vincent Academy, Arts HS, and Seton Hall Preparatory HS

Student	Principal Investigator	Mentor	Research Topic
Makeba Green	Min Lu PHRI <sup>1</sup>	Jun Cai PHRI	Performing protein biochemical studies on and characterization of the gp120 V1/V2 domain
Khaheem Carleton	Sanjay Tyagi PHRI	Khyati Shah PHRI	Synthesis of fluorescently labeled probes to image target DNA <i>in situ</i>
Shmilah Choudhary	David Perlin PHRI	N. Zhao, P. Paderu & S. Park PHRI	Modification of labeled oligonucleotide probes to improve fungal diagnostics
Jannie Delos Reyes	Xillin Zhao PHRI	Liping Li PHRI	Effect of cyclic-di-GMP on bacterial response to antimicrobial treatment
Hannah Delos Reyes	Barry Kreiswirth PHRI	N. Kurepina PHRI	The role of barrier precautions (gloves) in preventing the spread and transmission of bacteria in the community.
Victoria Hale	Lisa Ryan PHRI	Gill Diamond PHRI	Testing of several strains of <i>Saccharomyces</i> species, eg. <i>S. cerevisiae</i> , for susceptibility to killing by several new anti-fungal agents.
Darven Dort	Neeraj Chauhan PHRI	John Mavrianos PHRI	Functional characterization of a two-component response regulator of <i>Candida albicans</i> .
Jean-Carlos Arenas	Abraham Pinter PHRI	C. Reichman PHRI	Production of an HIV envelope protein using co-expression of green fluorescent protein as a selection marker
Steven Barroqueiro	Salvatore Marras PHRI	Wei Yang PHRI	Development of a detection assay for single nucleotide polymorphisms associated with an increased risk for cancer

<sup>1</sup> PHRI = Public Health Research Institute Center of the NJMS at the UMDNJ

*"Students who complete the program leave with much more than research experience. They develop analytical, critical thinking and leadership skills that they can use in all areas of learning and throughout their lives."* - Yaakov Saturen

