

The New Ph.D.s of

by Erica Tortorella

“Minorities are as underrepresented in the scientific community as they are in society,” said Judit Camacho, executive director, Society for Advancement of Chicanos and Native Americans in Science (SACNAS). With only about 3 percent to 4 percent of minorities attaining Ph.D. degrees, it is more than a numbers game when it comes to science and technology.

“There is a severe underutilization of our communities in developing new sciences and discovering new tools,” she said.

For 35 years, SACNAS has been advancing opportunities for minorities in science through conferences, chapter workshops and mentoring efforts. The SACNAS annual conference is the society’s major event, at which students are encouraged to present their research and are able to connect with university officials, program directors, industry leaders and, most importantly, successful scientists of color.

Students typically learn about the program through faculty mentors at their institutions.

“Faculty is the backbone of our program; they identify the student gems,” said Camacho. To help facilitate the experience, SACNAS offers travel scholarships that pay travel and lodging expenses for students to attend the conference.

“Half of our funding is used to support travel scholarships, about 500-700 scholarships per year,” she said.

The 2008 SACNAS Annual Conference will be held in Salt Lake City, Utah, on Oct. 9-12. For more information, visit SACNAS at www.sacnas.org.

Following are profiles of seven recent Hispanic Ph.D.s who have come through the SACNAS program.

Nancy Hurtado-Ziola

Once a single mother “earning a living to stay alive,” Nancy Hurtado-Ziola, Ph.D., persisted through life’s obstacles to fulfill her dream of becoming a research scientist. “I love what I do,” she said of her current position as biomedical scientific researcher at Gc-Free Inc., a research center co-founded by her graduate school advisor Ajit Varki and his wife Nissi, both of the Varki Lab at the University of California-San Diego School of Medicine.

Hurtado-Ziola’s research focuses on NN-gly-

colylneuraminic Acid (Gc), a nonhuman molecule that contaminates the human body through dietary intake from red meats and dairy products. The goal of the research is to be able to make a direct link between Gc intake and diseases that involve inflammation, such as breast and prostate cancer, rheumatoid arthritis and endometriosis.

Gc-Free is a small company, and Hurtado-Ziola is the only paid employee. Asked what a typical day on the job is like, she said her responsi-



Nancy Hurtado-Ziola, Ph.D.

bilities range from “writing grant proposals all the way down to emptying the dust bin.”

As a young Latina, Hurtado-Ziola said she was discouraged from pursuing her academic dreams. Once her son graduated high school, she let her passion set the course for a new career. Although she still met with criticism from society and family who told her she was “too old” to go back to school, she enrolled in an undergraduate program at California State University-Fullerton. Through Minority Access to Research Careers (MARC), she was accepted by a summer program at Cambridge University.

Upon the advice of her mentor, Dr. Robert Cook, she attended her first SACNAS conference, an experience she said literally changed her life.

“Here I was surrounded by these accomplished scientists – it made me believe that I could do it. I was so happy that I almost started to weep,” she said.

Her short-term goal is to continue to work with Gc-Free and make it a successful and competitive company, but her long-term goal is to create her own company.

“I hope to bring along any Latinas and Latinos that want to be involved.”

Roberto Marrero-Ortiz

Roberto Marrero-Ortiz, Ph.D., is a microbiologist enrolled in a postdoctoral program at the Marshfield Clinic Research Foundation, National Farm Medicine Center (Wisc.). He received his Ph.D. in environmental microbiology from the University of Arizona. His research interests include waterborne bacteria, groundwater microbiology, virology and molecular methods.

As a child growing up in the central mountainside region of Puerto Rico, Marrero-Ortiz knew that he wanted to become a scientist. Although his ultimate goal was a Ph.D., Marrero-Ortiz was concerned that it might not happen for him, mainly due to language barriers. “My English was not good, so I enrolled in an intense



Roberto Marrero-Ortiz, Ph.D.

SACNAS



English course.” He is the oldest of five children and the first to obtain a Ph.D.

He began teaching at the junior high school level in 1991, upon completion of his bachelor’s degree. It was during his graduate studies at the University of Puerto Rico-Medical Science Campus that he first learned about the SACNAS program. He attended his first meeting in 2001 and was selected to receive the K-12 Distinguished Educator Award at the 2003 conference in Anaheim, Calif.

Upon accepting his award, he met with a representative of the University of Arizona who encouraged him to apply for a minority fellowship and continue his studies.

“After SACNAS, I felt I had the opportunity to achieve this dream of becoming a Ph.D. graduate,” he said.

Hugo Magaña

Hugo Magaña, Ph.D., is a fisheries research biologist, USDA Forest Service, Rocky Mountain Research Station, and a graduate of the University of New Mexico Department of Biology. He has been working at the Rocky Mountain Research Station since 2002, when he was hired as part of a minority scientist recruitment initia-



Hugo Magaña, Ph.D.

tive. His research centers on aquatic trophic interactions, stable isotope analyses, feeding preferences of endangered fishes and primary productivity.

Although he always enjoyed the water and aquatic life, Magaña did not always dream of becoming a fisheries biologist. He found his passion and the path to the Ph.D. upon returning to college from the computer field at age 30. Once he earned a bachelor’s degree from Humboldt State University, he set his sights on a master’s and eventually the Ph.D.

Magaña learned of the SACNAS program from his graduate advisor at Texas A&M University. He was outfitted with a SACNAS travel scholarship that enabled him to attend his first conference and present his research to an audience of scientists and academics. Magaña said he was “overwhelmed” by the support at the conference, which led directly to a job offer in Florida (which he declined) and opportunities to apply to Ph.D. programs across the country.

Magaña volunteers as a mentor for the USDA Forest Service’s Hispanic Career Camp. The camp is for Hispanic high school students interested in a career with the forest service. The students are taken to a forest site and given the opportunity to work in the field. Magaña’s students use a field microscope to examine what organisms inhabit pieces of wood they have collected. He said the students find it fascinating to see that “a little piece of bark may have a dozen or more aquatic insects living on it.”

José María Menéndez Gómez

José María Menéndez Gómez, Ph.D., currently enrolled in a three-year postdoctoral program in the Center for the Mathematics Education of Latinas/os (CEMELA) at the University of Arizona, is a mathematician and researcher focusing on the education of Latinos. Originally from El Salvador, Menéndez Gómez studied in the U.S. on a Fulbright Scholarship and received a bachelor’s degree in mathematics from Louisiana State University. He later attended Virginia Polytechnic Institute and State University for a master’s and doctorate in mathematics.

His research into Latino education is twofold, looking at education from the perspective of

parents and teachers. Part of the research looks at attitudes and perceptions that parents of Latino students in K-8 have about the teaching and learning of mathematics. His research also explores the professional development of teachers of Latino middle school students by “investigating the issues teachers grapple with and any adaptation to instruction style they make when teaching Latino students.” The teaching sample consists of Latino and non-Latino teachers.



José María Menéndez Gómez, Ph.D.

Menéndez Gómez attended his first SACNAS conference in 2002 at the urging of one of his professors. Although he did not present at his first conference, he was impressed with the breadth of activities offered at the conference and the ease with which students were able and encouraged to connect with academics and industry experts. The following year, he did present his material and considers the SACNAS experience an integral part of his academic career.

He remains active within the organization and will be presenting as part of a research symposium at this year’s conference. He donates time to review abstracts submitted by students who wish to present at a conference and offers feedback that will help them prepare a presentation.

“The feedback was helpful to me when I was receiving it, and I hope I can help them as well,” he said.

Jason Miranda

Jason Miranda, Ph.D., is a neuroscientist and a FIRST (First Fellowships in Research Science and Teaching) Post Doctoral Fellow at Emory University in Georgia. He graduated from the University of Texas-Austin with a doctorate in neuroscience. He researches neurothology, auditory processing and reproductive behavior. He monitors “how the brain controls social behavior in times when the animals are making major transitions between social states, such as the transition to becoming a parent that cares for its offspring.”

Miranda, who is interested in teaching and



Jason Miranda, Ph.D.

research, said the Emory program is a perfect fit for him. “The program is designed to create academic professors and show them how to teach.” The fellowship will allow him to teach at several surrounding schools, such as Spelman College and Morehouse College. In addition to teaching experience, he will get hands-on lab and course design.

“I wanted to get some experience in course design so I teamed up with a professor who wants to redesign her sensation and perception lab.”

As an undergraduate at Arizona State University in 1998, he was encouraged to attend a SACNAS conference by one of his professors. “It was amazing because there were recruiters from leading universities around the country, like Harvard and Yale. I was thinking of a mas-

ter’s and didn’t believe I could get a Ph.D. ... It changed my perception.” Miranda liked the atmosphere at SACNAS, one that allowed him to present research in a “friendly, supportive environment.” As a student, he was elected to a two-year term on the SACNAS Board of Directors.

Julita Ann-María Ramírez

Julita Ann-María Ramírez, Ph.D., is a postdoctoral biomedical researcher at the National Jewish Medical and Research Center in Denver, Colo. She recently completed a dual Ph.D. and Doctor of Veterinary Medicine (D.V.M.) program at Colorado State University. She completed her undergraduate studies at Yale University. Her current research is on the development of B cells and immunology. She became involved with SACNAS in 2005, attending her first conference in Denver.



Julita Ann-María Ramírez, Ph.D.

“I was never one who knew what I wanted to do, just that I loved science,” said Ramírez about her road to a Ph.D. and D.V.M. She credits the drive to achieve her academic goals to her family’s work ethic, and her love of science to her Mexican father. “My dad was always interested in science, so I was interested in science. He always told me I could do what I wanted to do,” she said.

A typical day for Ramírez begins and ends in the lab. She arrives at 8:15 a.m. each morning and often does not retire until 7 p.m. Once her postdoctoral studies are complete, she will be looking for opportunities to teach and to write.

“My ultimate career goal is teaching. I found out in grad school that I just loved teaching.”

Ulises M. Ricoy

Ulises M. Ricoy, Ph.D., originally from México, is a postdoctoral fellow at Oregon Health Sciences University-Neurological Science Institute, where he works in the Synaptic Biophysics Laboratory of Dr. Matt Frerking. He received his Ph.D. in neurobiology at the Cajal Neuroscience Institute at the University of Texas-San Antonio.

His research examines how the hippocampus (part of the forebrain involved in short-term memory and spatial navigation) communicates drug reward/reinforcement and addiction at the cellular level. “During my doctoral dissertation, it was shown that the local unilateral dialysis of methamphetamine into the hippocampus induced drug-seeking behavioral effects believed to be strongly implicated in addiction,” said Ricoy.

Ricoy’s professional goal is to have his own



Ulises M. Ricoy, Ph.D.

lab at a university and to be able to teach as well. “The distinction between teaching and research is too rigid. My goal is to do both at the same time.” He has taught courses in brain and behavior, human biology, drugs of abuse and ecology, and has worked as an abuse counselor in Mexico City. He was a Minority Access to Research Careers (MARC) Scholar from 1996-98 and has been a member of SACNAS since 1998. He has presented research in numerous venues, including two at SACNAS conferences.

The ability to balance his professional and personal life is paramount to Ricoy, who said that he used to sleep in the lab, before becoming a father. Now he rides his bicycle to his Portland lab each morning and leaves each day at 5 p.m. to pick up his daughter at day care.

