



# BIOSPHERE

## The Weekly Bulletin of Biology

Biology Colloquium: Friday, 13 September 2013, 2:00 pm in CR 5125

### “Neuroscience of Human Sexual Response”

Barry Komisaruk, Ph.D.  
Department of Psychology, Rutgers University

### New Microbial Ecologist

Dr. **Gilberto Flores** is one of four new Biology professors starting this term. This fall, he is teaching Principles of Microbiology lecture and lab while he sets up his lab to conduct research in microbial ecology.

Flores joins us from the University of Colorado, Boulder, where he did a two-year postdoc studying the temporal dynamics of microbial communities living on and in the human body. He also studied where those microbes from our bodies ended up being deposited in our restrooms and kitchens. One of his major findings was that each of us hosts diverse microbial communities that are temporally dynamic, but some of us are more variable than others, a finding that could alter our understanding of human–microbe interactions.

Flores earned his Ph.D. in Biology from Portland State University in Oregon where he studied microorganisms living at the bottom of the ocean in volcanic hydrothermal environments. Heat-loving microbes inhabit these hostile environments. In addition to describing several new species of bacteria and Archaea, Flores found that the composition

of these communities was predictable largely based on the type of rock underlying the vent fields.



Flores says, “As a native of San Diego and a graduate of the CSU system, I’m excited to be joining CSUN.”

Flores plans to continue to study microorganisms in thermal and host-associated environments. He is also looking to expand his research into more local environments like coastal marshlands. He approaches his research from a community ecology perspective to try to

understand the factors influencing microbial community structure and composition. To this end, he uses a combination of cutting-edge molecular techniques, such as high-throughput sequencing and genomics, and more traditional microbiological techniques like cultivation and microscopy.

Flores is currently looking for talented undergraduate and graduate students with an interest in the microbial world to join his lab, so if you are interested please contact him directly.

When asked what he does when not studying microbial communities, Flores said, "I enjoy spending time with my wife, our young daughter, and our hairless dog Dexter. We like to get outside as often as possible to camp, hike, fish, or just lounge on the beach. I also enjoy playing and watching sports."

## Summer Freshman Enrichment

This past summer, 40 pre-freshmen were treated to a five-week enrichment program funded by the National Institutes of Health.

The overarching goal of the RISE program is to allow more of our students to succeed as research leaders in the biomedical sciences. Dr. **MariaElena Zavala** directs the project.

CSUN receives these funds because of our track record as a Hispanic-serving institution. Applications were solicited from incoming freshmen science students who are from groups under-represented in the sciences and/or Pell grant freshmen with a low income. Applications included high school transcripts, letters of recommendation, and a personal essay.

Dr. **Steve Oppenheimer** coordinated the freshman summer RISE program and gave research pep talks to help the students learn what Ph.D. scientists do in the biomedical sciences. A survey of participants conducted after the program

showed there was a substantial increase in interest for the Ph.D. degree.

The program included four days each week of intensive Math and English and one day each week for a fieldtrip, which provided opportunities to build friendships.

As a result of the program, some students tested into higher-level math courses this semester. Results from previous cohorts show that summer RISE participants have higher GPAs in their first CSUN semester than students in a matched control group who did not participate in the program.

This year, Dr. John Dye, Professor of Mathematics, directed the math component. Dr. Andrea Hernandez, of the English Department and the Learning Resource Center, directed the English component.

### *Biosphere: The Weekly Bulletin of Biology*

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