

BRINGING FUN AND INTERESTING FACTS ABOUT THE CI BIOLOGY PROGRAM TO YOU!

8TH EDITION - SUMMER 2011

SYMPOSIUM

This year the Biology and ESRM Programs teamed up for the 7th Annual Poe Symposium held on April 15, 2011. The title of the symposium was: Hurricanes, Po Boys, and Tar Balls: The role of interdisciplinary science in addressing ecological disturbance in the Gulf of Mexico. Recent ecological disturbances in the Gulf such as hurricanes Katrina, Rita and Ike and the Deepwater Horizon oil spill have posed unique challenges for scientists engaged in understanding these ecological catastrophes. The magnitude of these storms and pollution events requires an interdisciplinary approach to science if we are to adequately address the social, economic, and ecological implications of these disturbances. The purpose of this year's Poe Symposium was to educate the campus and the community at large on the magnitude of impact associated with these events and the "geography of vulnerability" of people in the Gulf region.

To view the presentations online please go to: <u>http://biology.csuci.edu/poe</u>

ALSO IN THIS ISSUE:

Alumni Spotlight2
Undergraduate Alumni2
Graduate Alumni
Student Accomplishments
Newly Awarded Grant and Degree Conversion
Under the Scope4
Did You Know?
Degree Spotlight5

UNDERGRADUATE ALUMNI



Lydia Nguyen is a 2008 Cl graduate who earned a B.A. degree in Biology. After completing her Biology degree, she was accepted into, and immediately entered, the Nursing program at Cl. She successfully completed the program this past May 2011

as part of the Nursing program's second graduating class. Since graduating, she has been studying for the NCLEX (National Council Licensure Examination for Registered Nurses), which she is scheduled to take this summer. In addition to studying for the boards, she has begun applying for RN New Graduate programs throughout the state, which she hopes will help guide her transition into clinical nursing. She has already been called into interviews with hospitals such as UCLA and Cedars-Sinai, but continues to actively apply to various hospitals and keep her options open.

Lydia had this to say about the Biology program:

"The Biology program at CI provided me with so many opportunities to assist in research, which I find is invaluable and unique of this program. Conducting research helped me to develop the critical thinking skills that I would need in nursing and enabled me to have a better grasp on the importance of evidence-based research in practice."

GRADUATE ALUMNI



Shortly after receiving his undergraduate degree in 2008, Garrett Asanuma joined Amgen, Inc. where he worked in a laboratory supporting several scientific groups. While working full time, he completed his M.S. in Biotechnology and Bioinformatics from CI in 2010. Today, Garrett's roles and responsibilities encompass the development of applications, process improvements, finance management, and data

analysis in support of business operations for asset contract management at Amgen. He is part of a core team that manages a global program vital to the functionality of research laboratories across multi-sites.

Garrett had this to say about the M.S. in Biotechnology and Bioinformatics Program:

"After joining Amgen, I realized that I wanted to pursue higher education to further my knowledge of all aspects behind the science that was shaping the industry. Cl offered the perfect program. I found the program both unique and impressive given the wide range and expertise of the faculty, and their ability to bring in real world application to the subject matter being taught. The transition between academia and industry is something that is vital to our field of work, and CI helped bridge this gap. Aside from providing a scientific education, the M.S. Biotechnology and Bioinformatics program was challenging, practical, and instilled transferable skills relevant for survival within any job market and even opened up opportunities in my career advancement. In addition to the great faculty, I also owe my experience and education to my classmates. After graduation, I walked away with a deeper scientific appreciation, enhanced project and organizational management (both professionally and personally), increased analytical thinking, presentation confidence, and great new friends."

STUDENT ACCOMPLISHMENTS



Congratulations to Ashley Bonneau who recently received an award from the American Society for Biochemistry and Molecular Biology (ASBMB) at their annual meeting held in Washington DC. Ashley won the Thematic Best Poster Award, taking the top prize in her category, entitled "RNA Theme." Her particular poster was titled, "Double knockdown of the Rheb gene in mammalian cells using RNA interference." This award included a cash prize. Ashley has been accepted at Yale University to pursue a Ph.D. in molecular biology. Congratulations also to Kartheek Dokka, a graduate with a M.S. in Biotechnology and Bioinformatics: Emphasis in Stem Cell Technology and Laboratory Management degree, who along with colleagues at the Scripps Research Institute published an article in Nature. The title of the article is "Sensory maps in the olfactory cortex defined by long-range viral tracing of single neurons". It can be found in: Nature. 2011 Apr 14;472(7342):217-20.

NEWLY AWARDED GRANT AND DEGREE CONVERSION

CSU The California State University

COMMISSION ON THE EXTENDED UNIVERSITY

The CSU Commission on the Extended University has awarded a grant to the M.S. in Biotechnology and Bioinformatics program. The total grant of \$50,000 plus \$16,730 of matching fund from CI's Extended University is to develop a Stem Cell Certificate Program. This is the fourth grant to have been awarded by the Commission to the program. The first three grants have allowed us to develop the M.S. in Biotechnology and Bioinformatics program, the M.S. in Biotechnology and Bioinformatics and MBA dual degree program, and the online M.S. level courses to be shared with other CSU campuses.

Effective Fall 2011 the Chancellor's Office has officially approved the conversion of the M.S. in Biotechnology and Bioinformatics program from an initial pilot program to a regular degree program.

POLLINATION ECOLOGY LAB

Pollination ecologists have typically studied a focal plant species and one or a few closely related pollinator taxa, such as bumblebees, which fostered the view that plant-pollinator relationships are highly specialized. However recent community-scale studies have revealed that many pollination systems are generalized, such that plants are visited by diverse, and spatiotemporally variable, pollinator assemblages. Dr. Ruben Alarcon's goal is to reconcile traditional views of "specialized" floral adaptation with ecological generalization. Specifically his lab will be incorporating aspects of pollinator foraging behavior and flower/pollinator phenotype, into the analysis of plant-pollinator communities using network techniques. To address this issue Dr. Alarcon's lab is exploring several plant-pollinator systems, including sub-alpine meadows in Colorado and California, the Sonoran Desert of southern Arizona, as well as the coastal sage scrub community surrounding the CI campus.

From an applied perspective Dr. Alarcon's lab is also working to promote and maintain honeybee populations for crop pollination. In the United States over 130 crops require insect pollination, with nearly one-third of our diet coming from honeybee pollination services. However, over the last several years large numbers of honeybee colonies have been lost to Colony Collapse Disorder. Working with beekeepers and growers from the Central Valley, his lab is trying to assess the benefits of providing supplemental forage for colonies transported to California every winter to pollinate almonds. They are also assisting local Ventura County beekeepers in identifying Nosema microsporidian infections and Varroa mite infestations.

In addition to working with honeybees, Dr. Alarcon's lab also studies the nesting and foraging behavior of native bees, including mason bees (Osmia). By furthering our understanding of native bee biology, we hope to increase their use as sustainable pollinators on small farms and for the various crops grown along the coast of California that depend on insect pollination.

Currently 10 undergraduates students are working in his lab on various projects. However, he anticipates accepting MS Biology graduate students for the 2012-2013 academic year. For additional information please contact Dr. Alarcon at: <u>ruben.alarcon@csuci.edu</u> or 805-437-2634.



DID YOU KNOW?

The 2010 explosion at Deepwater Horizon caused the worst oil spill in U.S. history. After the well was capped, the U.S. government used pressure readings and other data to determine that early on, 62,000 barrels per day had been leaking from the well. It was also found that about 5 million barrels of oil spilled from BP's well, that is nearly 6 percent of one day's global oil consumption of 85 million barrels.

For more information on the Gulf Oil Spill: One Year Later, please visit:

http://news.nationalgeographic.com/news/energy/2011/04/110420-gulf-oil-spill-anniversary/

DEGREE SPOTLIGHT

The Bachelor of Science in Biology with an Emphasis in Medical Imaging prepares students for graduate or professional study in the medical sciences (medical imaging, medical physics, health physics, dosimetry, nuclear medicine, radiotherapy, oncology, biomedical engineering), or for entry into professional positions in the clinical environment and in medical imaging research and development.

We'd love to hear from you ! Let us know what you think of our e-Newsletter. Please send your thoughts to: Catherine Hutchinson at <u>catherine.hutchinson@csuci.edu</u>