Channel Islands
CALIFORNIA STATE UNIVERSITY

BIOSCOPE

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

6TH EDITION - SPRING 2010

POE SYMPOSIUM

This year the Biology and Chemistry Programs teamed up for the 6th Annual Poe Symposium held on April 16, 2010 from 12:30-5:30 p.m. in the Aliso Hall Auditorium. The title of the symposium was: Climate Change in the 21st Century. The main topic of discussion was human influence on climate and the resulting global warming that scientists are observing in the last decades. Each year, scientific discoveries have built upon the understanding of climate change with large amounts of data, more sophisticated analysis, and more extensive exploration of the phenomenon; it has become a globally recognized problem that touches on many aspects of our civilization.

The purpose of this year's Poe Symposium was to educate the campus and the community at large on the ongoing research on the topic of climate change.

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

Also In This Issue:

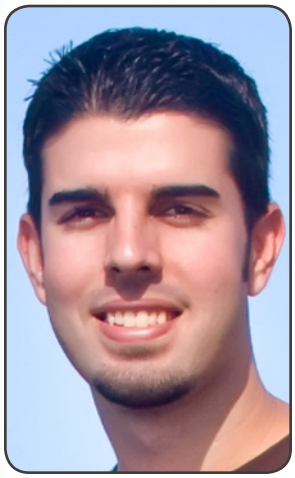
UNDERGRADUATE ALUMNI

Sabrina Adelaine is a 2006 CI graduate with a B.S. in Biology: Emphasis in Cellular and Molecular Biology. She finished a Masters degree in Molecular Microbiology at UCSB, and is currently working on a second M.S. Degree in Biosecurity and Public Disaster Preparedness from St. Louis University. Her present position at UCLA as an Assistant Biosafety Officer focuses on biosafety and security in high containment labs as well as labs working with Select Agents. Sabrina's job includes reviewing research protocols, designing incident response plans, and training both researchers and first responders who may need access to the lab. Sabrina's interests are in bioterrorism preparedness and response planning for institutions, hospitals, and governments.

Sabrina had this to say about her time at CI:

"I really enjoyed the small classroom sizes; it helped tremendously when the professor knew who you were including your strengths and weakness as a student. There were many times when a professor could see that I wasn't getting the information as presented, and would draw something out differently for me. The campus was beautiful, and being able to take a break from classrooms and go for walk in the grass created a great atmosphere for long hours of studying."

GRADUATE ALUMNI



Dev Chahil received his B.S. in Biology: Emphasis in Cellular and Molecular Biology in 2004. Following graduation Dev began work for Monsanto Company as a lab supervisor in the NA Genetic Quality Assurance lab in Oxnard, CA. Monsanto is the world's largest plant biotechnology company and the leader in seeds, traits and agricultural productivity products. Monsanto products can be found in almost everything you purchase: from gasoline, clothing, and soda to the vegetables in your grocery store. While employed at Monsanto, Dev received both his M.S. in Biotechnology and Bioinformatics and his MBA in 2008 from CI. Today, Dev is the Laboratory Manager for the NA Genetic Quality Assurance Lab. His role encompasses both the management of a high throughput genotyping lab as well as support, development, and training for the world wide program. The North American lab develops and rolls out new technologies to the other 5 labs worldwide in Thailand, Korea, China, Chile, and Holland. Training and support trips find Dev in these world areas a couple of times per year.

Dev had this to say about the M.S. in Biotechnology and Bioinformatics Program and MBA program:

"I feel very fortunate to have been involved with the university since day one. CI gave me the opportunity to work closely with a great group of faculty and to get exposure to both research and industry as an undergraduate. With my interests and aspirations in both science and the business of science, the M.S./MBA program was well aligned with my goals and passion. Being currently involved in both management and research, I apply concepts from both graduate degrees on a daily basis. These applied lessons from the program have certainly contributed to my success with Monsanto and the success of my department. In classic CI fashion, this unique program has filled an educational need for our county and for those employed or seeking employment in today's biotech field."

ALUMNI UPDATE

Zoya Kai earned a B.S. in Biology with a minor in Chemistry and certificate in Biotechnology from CI in 2005. She is currently pursuing her Ph.D. at UCSD in Dr. Amy Pasquinelli's Molecular Biology lab, with a graduation date expected in late 2010. At UCSD, she studies the biogenesis and regulation of microRNAs (miRNAs) in the C. elegans model organism. While at UCSD, she has received an extraordinary education; part of the educational curriculum is to travel to conferences. At her first International RNA conference in Madison, Wisconsin she won the Best Poster award. Later that year, Zoya and her Principal Investigator (PI) Dr. Amy Pasquinelli wrote two different reviews (one for Cell Cycle and one for Nature Structural & Molecular Biology (NSMB)). Within the next month, she will publish as a second author on a paper defining the protein LIN-28's role in the let-7 miRNA biogenesis. Soon after, she is slated to publish two other papers on the biogenesis of let-7.

Zoya had this to say about her career:

"This Ph.D. has been a very circuitous route for me. Before coming to UCSD, my work experience included project management for companies that designed and implemented interactive computer software as well as film and video editing software and systems. I eventually opened my own business in this dynamic field and was successful for several years before selling it and changing careers. My second career, getting my Ph.D. in Molecular Biology, has been an amazing education and it would not have been possible without CI giving me the foundation I needed to succeed."

UNDERGRADUATE ACCOMPLISHMENT

Ashley Bonneau has had two major accomplishments occur while earning her B.S.in Biology: Emphasis in Cellular and Molecular Biology at CI. First, she won the Goldwater Scholarship. The Goldwater Scholarship is very prestigious, and the selection process is exceptionally competitive. Not only is she the first CI Scholar, CI is the only CSU with a Goldwater Scholar this year. (To learn more about the Barry M. Goldwater Scholarship please visit: http://www.act.org/goldwater/yyschrel.html). Second, Ashley and her research mentor Dr. Nitika Parmar, with whom she has been working for the past 18 months, had their original research article "Production and characterization of a highly specific and potent antibody capable of detecting endogenous RhebL1 protein in mammalian tissues and cell lines" published in the Journal of Biotech Research. (To view the article please visit: http://btsjournals.com/2010v2.aspx). Congratulations to Ashley Bonneau and Dr. Parmar!

CONDOR CHOCUYENS EXHIBIT

One of the first two captive-bred California condors was born in May 1991 at the San Diego Wild Animal Park. He was named Chocuyens (choo-KOO-yens), which means "Valley of the Moon" in the language of a people native to the coast of California. His parents were a male brought in from the wild in 1987 and the last female condor captured from the wild.

On October 10, 1991, Chocuyens was transported to the Sespe Condor Sanctuary, about 75 miles north of Los Angeles, to a fenced enclosure on a rocky cliff. After three months adjusting to his surroundings, he was allowed to fly free, one of the first California condors to do so since they were all brought into captivity in 1987. Biologists fitted Chocuyens and other condors with wing markers and radio transmitters to aid in tracking their movements.

Chocuyens' radio transmitter emitted a fatality signal on the afternoon of October 7, 1992, suggesting that he had stopped moving. He was tracked to the side of a cliff by the field crew, where they found him dead with no immediate cause. An autopsy was performed and showed that he had been poisoned by ethylene glycol, the main ingredient in antifreeze.

Chocuyens had spent nine successful months in the wild before his poisoning and was otherwise in good condition when he died. Several of the condors released after Chocuyens have died, which was expected by the condor recovery team. Some have died in collisions with power lines and some have had close calls when they ventured into nearby towns. The absence of adult condors to guide them in the wild in addition to their natural curiosity have proven to increase the young birds' chances for getting into trouble.

The successes of the California condor recovery program as well as its unsolved challenges were illustrated by Chocuyens. He was the product of a captive-breeding program that produces more condors each year, and his death showed that the environment remains far from safe for condors in the wild.

With help from Dr. Angela Chapman, CI Biology Lecturer, Chocuyens was placed on display in the Millennium News Center at the John Spoor Broome Library. The exhibit opened on Thursday, March 11, 2010 and is on loan to CI from the U.S. Fish and Wildlife Service (USFWS) until February 2011. The exhibit is open to the public. Dr. Chapman hopes this exhibit will motivate people to learn more about these magnificent birds and how to protect them by keeping the wilderness areas free of microtrash (e.g. bottle caps and glass) which is extremely harmful to wild animals. Despite his untimely death, Chocuyens story will now be part of a wider educational effort to conserve his species.

If you are interested in knowing more about the exhibit or birds, please contact Dr. Chapman at: angela.chapman@csuci.edu. The information in this article about Chocuyens and the California condor's was provided to CI John Spoor Broome Library by the USFWS.

CLIMATE CHANGE

WHAT YOU CAN DO!

Making a few small changes in your home and yard can lead to significant reductions of greenhouse gas emissions as well as save you money! Here are nine steps you can take around the house and yard to reduce greenhouse gas emissions:

1. Change a light and you help change the world. Replace the conventional bulbs in your 5 most frequently used light fixtures with bulbs that have the ENERGY STAR and you will help the environment while saving money on energy bills.

2. When buying new products, such as appliances for your home, look for ENERGY STAR qualified products and get the features and performance you want AND help reduce greenhouse gas emissions and air pollution.

3. Simple steps like cleaning air filters regularly and having your heating and cooling equipment tuned annually by a licensed contractor can save energy and increase comfort at home, and at the same time reduce greenhouse gas emissions.

4. Sealing air leaks and adding more insulation to your home is a great do-it-yourself project. The biggest leaks are usually found in the attic and basement. If you are planning to replace windows, choose ENERGY STAR qualified windows for better performance.

5. Green power is environmentally friendly electricity that is generated from renewable energy sources such as wind and the sun. There are two ways to use green power: you can buy green power or you can modify your house to generate your own green power.

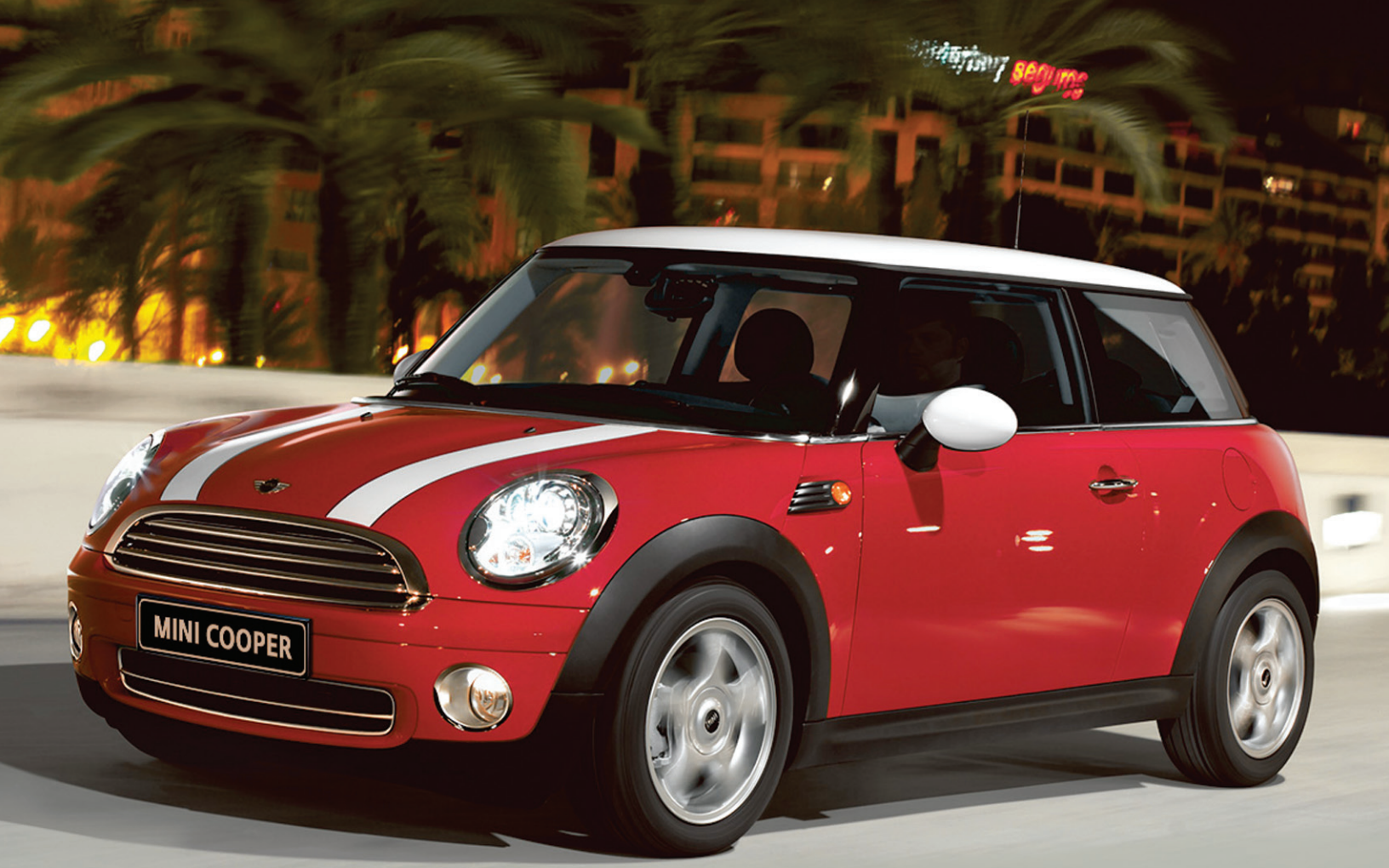
6. If there is a recycling program in your community, recycle your newspapers, beverage containers, paper and other goods. Use products in containers that can be recycled and items that can be repaired or reused.

7. Use a push mower, which, unlike a gas or electric mower, consumes no fossil fuels and emits no greenhouse gases. If you do use a power mower, make sure it is a mulching mower to reduce grass clippings. Composting your food and yard waste reduces the amount of garbage that you send to landfills and reduces greenhouse gas emissions.

8. Saving water around the home is simple. Municipal water systems require a lot of energy to purify and distribute water to households, and saving water, especially hot water, can lower greenhouse gas emissions.

9. Tell family and friends that energy efficiency is good for their homes and good for the environment because it lowers greenhouse gas emissions and air pollution. Tell 5 people and together we can help our homes help us all.

Information taken from the U.S. Environmental Protection Agency (EPA). To learn more please visit:
http://www.epa.gov/climatechange/wycd/home.html



DID YOU KNOW?

A vehicle that gets 30 MPG will cost you $650 less to fuel each year than one that gets 20 MPG (assuming 15,000 miles of driving annually and a fuel cost of $2.60). Over a period of 5 years, the 30 MPG vehicle will save you $3,250.

DEGREE SPOTLIGHT

The Bachelor of Science in Biology with an Emphasis in Cell and Molecular Biology offers students an opportunity to study the exciting developments in genetics, molecular biology, cloning, biotechnology, and bioinformatics. The program leads to careers in medical sciences, biotechnology, pharmaceuticals, research and development, intellectual property, and patent law.

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 catherine.hutchinson@csuci.edu