



Channel Islands

# BIOSCOPE



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

9TH EDITION - WINTER 2012

## SYMPOSIUM

This year the 8th Annual Poe Symposium will be held on April 20, 2012. The title of the symposium is: Agriculture in the Golden State: Challenges in Feeding California in the 21st Century. California is the nation's top agricultural producer generating over \$30 billion annually. However, the ability of growers to feed California and beyond is continually being challenged by the introductions of new insect pests, drug resistant pathogens and environmental concerns at the urban-agricultural interface.

The purpose of this symposium is to educate the campus and the community at large about the ongoing research on agriculture and the challenges facing growers and policy makers.

**To register for the 8th annual Poe, visit: <http://biology.csuci.edu/poe>**

### ALSO IN THIS ISSUE:

Alumni Spotlight - Graduate Alumni.....	2
Developmental Biology.....	2
Under the Scope.....	3
Faculty-Student Research Interest Group (FRIG).....	4
Did You Know?.....	5
Degree Spotlight.....	5

## ALUMNI SPOTLIGHT - GRADUATE ALUMNI



Photo courtesy of Warren Conerly Photography:  
[www.warrenconerlyphotography.com](http://www.warrenconerlyphotography.com)

Ken Diffenderfer first graduated from CI with a B.S. in Biology, with an emphasis in Cell and Molecular Biology. After graduating he entered the M.S. in Biotechnology and Bioinformatics Program, emphasizing in Stem Cell Technology and Laboratory Management. After graduating in October 2011 Ken found employment at the Salk Institute for Biological Studies in La Jolla, California. At the Salk Institute, Ken works as a research assistant in the stem cell core which provides resources, facilities and expertise to numerous researchers interested in utilizing various stem cell technologies. In addition to lab management duties, Ken is also actively involved in optimizing new non-integrative reprogramming strategies, as well as developing robust assays to more accurately define the pluripotent (a cell that has the potential to become a different cell type) state.

Ken wishes to eventually pursue a Ph.D. in neurobiology, utilizing his stem cell technology background to explore cell based models of diseases affecting the nervous system.

### **Ken had this to say about the M.S. in Biotechnology and Bioinformatics Program:**

*"As a graduate of both the B.S. and M.S. programs, I have come to greatly appreciate the strong foundation in biological sciences that a degree from CI provides. The hands-on and diverse curriculum offered at CI has provided me with the knowledge and skills necessary to excel and adapt in my field."*



## DEVELOPMENTAL BIOLOGY

Developmental biology is one of the most exciting fields in biology; it creates a structure that incorporates anatomy, cancer research, cell biology, ecology, evolutionary biology, immunology, molecular biology, neurobiology, and physiology. The study of development has become vital for understanding any other area of biology.

This fall semester the Biology Program will be offering Biology 427, Developmental Biology. The course will use descriptive, experimental and comparative approaches in the study of animal development. Developmental stages including gametogenesis, fertilization, cleavage, gastrulation and organogenesis will be discussed in a variety of animal phyla. The molecular and cellular mechanisms underlying morphogenesis and the evolutionary conservation of developmental mechanisms in various animal phyla will be examined.

If you have questions about this course please contact Dr. Nancy Mozingo, [nancy.mozingo@csuci.edu](mailto:nancy.mozingo@csuci.edu) or 805-437-8989.



# ANDREW WILSON - PEACE CORPS

Alumni Andrew Wilson (Class of 2010) recently became our first CSU Channel Islands biology graduate to join the Peace Corps. Andrew completed his training last summer and recently started his placement, serving as a Community Health adviser in Uvs, Mongolia.

Typically, Peace Corps is a two year commitment with a three month training commitment. Peace Corps Mongolia is considered one of the hardest countries to serve in; volunteers are spread out across the country, the language is especially challenging and the region is known for its extreme weather (typically above 100° F in the summer but dropping to 40° below zero in the winter). However, Peace Corps volunteers rank Mongolia as one of the best countries to serve in and judging from Andrew's updates from the field it's certainly proving to be an enriching and exciting experience.

Following a three month training period in Sukbaatar, just 10 miles from the Russia-Mongolia border, Andrew has been assigned to a small town called Uvs as a community health adviser. Andrew teaches English as a foreign language to health clinic employees and is working on a community education project to address a rising tide of Type II diabetes in the country. Certainly, conditions onsite take some getting used to. As a Peace Corps volunteer, Andrew lives with a host family in the local community. He eats all his meals with his host family and generally becomes a member of the family.

Andrew's new home for the next two years is a tent, called a ger, within the family compound. Essentially it's a round tent made of wooden boards with a wool covering, a hole at the top and no windows. He has no running water and just one electrical outlet. He uses a coal fire for heating in winter, and shares an outhouse with all 12 members of his host family.

When not working, Andrew is free to explore the surrounding country, which includes the Unesco World Heritage site and the Uvs Nuur Basin. The steppe ecosystem of the region also supports a rich diversity of birds and the desert is home to rare gerbil, jerboas and the marbled polecat. The mountains around the region are also an important refuge for the globally endangered snow leopard, mountain sheep and the Asiatic ibex.

Andrew describes his experience so far as "demanding, but it's definitely making me a stronger person". His weekends are "jam packed with funny, interesting, tongue-tied, exciting times" with his host family and fellow volunteers. You can follow Andrew's adventures on his Facebook page. So far, Andrew sums up his experiences as "Zügeer, Zügeer" which means "it's all good", apparently a favorite expression in Mongolia.



## FACULTY-STUDENT RESEARCH INTEREST GROUP (FRIG)

A new FACULTY-STUDENT RESEARCH INTEREST GROUP (FRIG) seminar series was started this fall. The seminar series provides a casual forum for faculty and students to learn about on campus research being conducted in the Sciences, and present their research to others. The seminar is held every two weeks and the faculty have talked about their research in Ecology, Biochemistry, Molecular Biology, Drug Discovery and other topics.

The speakers so far have been:

**Dr. Blake Gillespie:** "Ligand-dependence in the folding and stability of CusF, a bacterial copper chaperone."

**Dr. Charles Sackerson:** "Using Bioinformatics to Build a Model for Regulation of the Cetacean Myoglobin Gene."

**Dr. Ruben Alarcon:** "Analysis of plant-pollinator communities."

**Dr. Rachel Cartwright:** "Between a rock and a hard place:  
Habitat choice in maternal humpback whales on the Hawaiian breeding grounds."

**Dr. Chunnian Zhao:** "MicroRNA Regulation of neural stem cells."

**Dr. Steve Norris:** "Biodiversity - How well do we know it? Examples from fishes."

**Dr. Jerry Clifford:** "Stardust Made Us What We Are: The Production of Elements in Stellar Evolution."

**Dr. Ahmed Awad:** "Nucleic Acid Drugs."

**Dr. Simone Aloisio:** "A new way to measure greenhouse gas emissions from a point source, a national disaster, and the perfect cup of Japanese tea: reflections on my sabbatical semester."

An upcoming talk is planned featuring Dr. Nitika Parmar. We expect to have student researchers presenting this spring as well. The best thing about the talks is there are always cookies and sodas! For more information, or to be included on the notification list for future talks, please contact Dr. Charles Sackerson, [charles.sackerson@csuci.edu](mailto:charles.sackerson@csuci.edu) or 805-437-8806.





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### DID YOU KNOW?

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California has been the nation's top agricultural state for more than 50 years. California also produces more than 350 crops and grows more than half of the nation's fruits, vegetables and nuts. Of those 350 crops, the following are commercially-produced only in California: almonds, artichokes, clingstone peaches, dates, dried plums, figs, kiwifruit, ladino clover seed, olives, persimmons, pistachios, pomegranates, raisins, sweet rice and walnuts.

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### DEGREE SPOTLIGHT

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The Bachelor of Arts degree is designed to obtain a general background in both the concepts and the technical skills of modern biology. Students completing the Bachelor of Arts major will find that their strong general background will allow them flexibility in both completing minor fields of study and career choices. The degree prepares graduates for careers in medical and other health professions (Emphasis in Pre-Professional Studies), science education (Emphasis in Subject Matter Preparation in Teaching Biology), industry or government (Emphasis in General Biology).

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](mailto:catherine.hutchinson@csuci.edu)