

## News From Around the College

### Biological Science

**Aimee Bullard** and **Lisa Gilbane** presented papers at the 2004 annual meeting of the Phycological Society of America in Williamsburg, Virginia. **Kim Whiteside** and **Victor Galvan** (SCERP program) presented posters at the same meeting. Aimee won the society's prestigious Harald C. Bold Award for the best student paper at this national meeting. This is a highly competitive national award given each year to the best student oral presentation. Most presentations represent the culmination of Ph.D. dissertation work so this was quite an honor.

**Dr. Steven Murray** taught the summer 2004 Marine Phycology course along with two other professors from the University of Washington at the Friday Harbor Laboratories in Washington State. This course draws students seeking specialized study in phycology from the U.S. and internationally. **Aimee Bullard** and **Lisa Gilbane** were selected to serve as teaching assistants for the course.

**Dr. Marcelo Tolmasky** presented the keynote address of the Symposium "Molecular characterization of the new mechanisms of resistance to antimicrobial agents." Dr. Tolmasky's talk entitled, "Multiresistance to aminoglycosides: mechanisms, dissemination, and new trends to combat the problem", took place at the XVII Latin-American Congress of Microbiology, held in Buenos Aires, October, 17-21.

Undergraduate research students attended The Society for the Advancement of Chicano and Native American Scientists (SACNAS) meeting held in Austin, TX October 21-23. **Dr. Amybeth Cohen** accompanied the Minority Access to Research Careers Scholars. They were: **Richard Ancheta, Ron Coleman, Paul Gerard, Thao Do, and Diego Miranda. Drs. Darren Sandquist and Bill Hoes** accompanied the Southern California Ecosystems Research Program (SCERP) Scholars. Poster presentations were made by MARC Scholar **Ron Coleman** and SCERP Scholars **Melissa Romero, Leslie Buena, Cristian Vasquez, Romeo Sison, Victor Galvan, Maria Vega Velez, and Christine Goedhart**. Also attending were SCERP scholars **Robin Keber, Chris Kehrier, Lorelee Larios, Tracy Valentovich, Erin Seale, Andres Carrillo, and Albert Rodriguez**. Scholars networked with other undergraduate minority students and gathered information on graduate programs.

*continued on page 2*

## Upward Bound Program

The Upward Bound Program is currently looking for Tutors in Chemistry. The program involves tutoring students at 4 Santa Ana Unified School District High Schools. There are multiple tutoring sessions throughout the week.

#### Requirements:

- Applicant must be a CSUF student in good standing
- Junior/Senior standing with prior experience preferred
- Must have completed 30 units of course work
- Must have an overall GPA of 2.75 and 3.0 in subject tutored

To apply, pick up an application at UH-215 or call (714) 278-3254

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## NSM NEWS CONTINUED

### Geological Sciences

**Drs. Phil Armstrong and Brady Rhodes** received a \$100,000 grant from NSF to purchase a new gravity meter for the Department of Geological Sciences. This portable meter will be used by faculty and students to evaluate Earth's subsurface structures and is capable of detecting centimeter-scale elevation changes for evaluation of subsidence due to ground water withdrawal or vertical surface motions due to earthquakes around the world.

**Dr. Brady Rhodes** received a Type UFS (Undergraduate Faculty Sabbatical) grant of \$49,684 from the Petroleum Research Fund (administered by the American Chemical Society) for "Gravity Modeling of the Pai Basin, Northern Thailand." This grant will provide matching funds for a one year sabbatical for Dr. Rhodes to work in Thailand on this project. This study is part of Dr. Rhodes' continuing research related to the tectonics of northwestern Indochina and its relationship to the Himalayan collision between India and Asia.

**Dr. Adam Woods** organized a theme session at the annual meeting of the Geological Society of America entitled: "Anatomy of an Anachronistic Period: The Early Triassic Environment, and its Effect on the History of Life." In addition, Dr. Woods presented his research at the session in a talk entitled: "The Smithian-Spathian anoxic event and its possible impact on the biotic recovery from the Permian-Triassic mass extinction."

**Dr. Matthew Kirby** is taking two students to the Annual Geological Society of American meeting in Denver this November. Recently graduated geology major, **Ms. Margie DeRose**, will present her senior thesis research as a poster entitled, "Assessing the potential for paleoclimatic studies using sediments from Crystal Lake, San Gabriel Mountains, Southern California." Master's student, **Mr. Broxton Bird**, will present a portion of his research as a poster entitled, "Sedimentological evidence for a glacial response to the 8.2ka event from Dry Lake, San Gorgonio Wilderness: Southern California." Dr. Kirby will present initial results from his on-going research at Lake Elsinore as a poster entitled, "Initial drill core results from Lake Elsinore's central basin: sedimentology and chronology spanning 11,200 calendar years."

### Chemistry and Biochemistry

Five students from Troy High School worked in **Dr. Fu-Ming Tao's** research lab in the past summer as internship students. All five entered this year's Siemens Science Competition with their research projects and are among the semifinal winners. The names of the students are: **Mark Lewis, Steve Xu, Perry Johnson, Justin Kim, and Diana Lu**. Mark and Steve have made it to the finals and will compete at UC Berkeley. Last year, all four high school students who worked in Dr. Tao's lab won the Siemens semifinal and one student, **Angela Shih**, took sixth place at the national competition with a scholarship of \$20,000.

Troy student **Ameeta Gill**, who worked with **Dr. Kantardjieff**, recently was awarded the Outstanding Young Scientist Award for Orange County and is one of the three finalists for the state competition sponsored by the California Association of Professional Scientists.

### Mathematics

More than twenty of **Dr. Martin Bonsangue's** mathematics students attended the annual conference of the Orange County Mathematics Council in Irvine on October 6th. These future elementary teachers greatly appreciated the opportunity to learn new and creative ways of teaching mathematics, and to be part of a professional gathering. The students were sponsored by **Dr. David Pagni's** SUMS project.

## NSM NEWS CONTINUED

### Physics

**Dr. Murtadha “Morty” Khakoo** has been given the Award for Research in an Undergraduate Institution, awarded by the American Physical Society! This very prestigious award, given to only one person by the Society annually, recognizes Dr. Khakoo’s long and outstanding record of involvement of both undergraduates and high school students in his research on electron scattering.

**Dr. Heidi Fearn** has been invited to join the Optics delegation in the “People to People Ambassador Program” in South Africa in June 2005. “People to People International “ is non-political and was founded by President Eisenhower in 1956 to encourage dialogue with counterparts in other nations.

### Biology Publications, Presentations, and Awards

The following paper was recently published in which **Dr. Amybeth Cohen** shared first authorship and corresponding author. **Sean Fowler** a graduate student and **Dr. Katherine Kantardjief** also contributed; Barnes, D., Cohen, A., Bruick, R., Kantardjief, K., Fowler, S., Efueta, E. and Mayfield, S. P. 2004. Identification and characterization of a novel RNA binding protein that associates with the 5'-untranslated region of the chloroplast psbA mRNA. *Biochemistry*, 43: 8541-8550.

**The following are presentations given by students Dr. Cohen's Lab:**

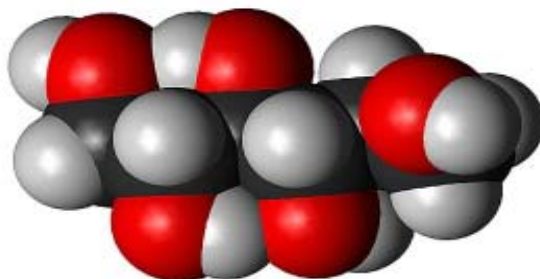
**R.L. Coleman, P. Gerard, and A. Cohen.** Expression of a single chain antibody variable region cocktail against botulinum neurotoxin in the unicellular alga *Chlamydomonas reinhardtii*. SACNAS. Austin, TX. Oct. 21-24, 2004.

**R.L. Coleman, P. Gerard, and A. Cohen.** Design of a single chain antibody variable region cocktail against botulinum neurotoxin for expression in the unicellular alga *Chlamydomonas reinhardtii*. American Society of Biochemistry and Molecular Biology. Boston, MA. June 12-15, 2004.

**V. Nguyen, C. Troxell, T. Velo, G. N. Ton, S. P. Mayfield, A. Cohen.** Assembly of the anti-cocaine antibody Fab fragments for expression in *Chlamydomonas reinhardtii*. American Society of Biochemistry and Molecular Biology. Boston, MA. June 12-15, 2004.

**T. Velo, G. N. Ton, V. Nguyen, C. Troxell, S. P. Mayfield, A. Cohen.** Construction of the Anti-cocaine Fab Antibody Genes for Integration into *Chlamydomonas reinhardtii*. Experimental Biology (FASEB) 2004. Washington, D.C. April 17-21, 2004.

**Ronald Coleman, Vincent Nguyen** have won CSUPERB Spring 2004 Student Travel Grants for ASBMB, and **Tatianne Velo** won a CUSPERB Spring 2004 Travel Grant for FASEB.



## Opportunities

### **Scholarships:**

The CSU Louis Stokes Alliance for Minority Participation (LSAMP) Scholars Program is providing funds of up to \$2500 per student for 40 students systemwide for spring and summer 2005 activities designed to enhance preparation for graduate school. These activities may include such things as participation in faculty guided research, attending professional meetings, visiting graduate schools, and participating in GRE preparation courses. To be eligible, students must be underrepresented (African-American, Hispanic, Native American, or Pacific Islander) upper-division students majoring in science, mathematics, engineering, or computer science, and must show potential for graduate school advancement in one of these fields. Selection criteria include the student's graduate school potential, a one-page personal statement, and faculty mentor nomination.

An application for the *CSU-LSAMP Scholars Program* will be available the first week of November and due to the CSU-LSAMP Statewide Office by December 6, 2004. The Program Committee will meet in Mid-December to award the 40 students in order for the funds to be available by the spring. Contact Dr. Ernie Solheid in the Mathematics Department at [esolheid@fullerton.edu](mailto:esolheid@fullerton.edu) for further information or to request an application.

### **Volunteer Opportunities:**

The Orange County Asian and Pacific Islander Community Alliance is holding an on campus tutoring recruitment event on Monday November 1 thru Friday November 5, 11 a.m. to 2 p.m. in front of the Titan Shops. OCAPICA is looking for tutors. Tutoring sessions are Tuesdays through Thursdays from 3-6pm during the school year. For more information contact Jennifer Kuo at [jkuo@ocapica.org](mailto:jkuo@ocapica.org) or (714) 626-9095

### **National Wildlife Federation:**

National Wildlife Federation is now accepting applications for its 2005 Fellowships for undergraduate and graduate students interested in enhancing the environment. Fellows receive a modest grant, project support, recognition of their accomplishments and other benefits. They assist with the research, design and implementation of projects to help reduce consumption and pollution, restore habitat and other environmentally helpful initiatives. Fellows also attend NWF's annual meeting in March of 2005 in Washington DC. New this year! Fellowship grants will be awarded in the following areas: campus greening, civic engagement and research projects addressing global warming, water policy, Native American and Alaska Native communities, volunteerism and greenspace protection.

Last chance for early review is December 1, 2004! Application deadline is December 15, 2004.

To learn more about the Fellowships go to [www.nwf.org/campusecology](http://www.nwf.org/campusecology).

# Mathematics Colloquium

# DR. MARIA H. NORONHA

**From Cal State Northridge**  
**Title: Soliton Geometry**

The theory of completely integrable (soliton) systems has many interpretations in Differential Geometry. A classical example, dating back to nineteenth century, is the Backlund Theorem, which asserts a correspondence between solutions of the sine-Gordon equation (SGE) and surfaces of constant negative curvature. The literature in soliton theory is enormous, so in this talk we will focus on only one aspect of this theory, namely the Backlund transformations. We will show how a recent method developed by Terng and Uhlenbeck generalizes the classical connection between solitons and differential geometry mentioned above. Since our examples will be on surfaces, the talk will be accessible to graduate and advanced undergraduate students.

**Wednesday, November 10, 2004**

**2:00 PM**

**MH 476**

**Please Join Us!**

**Sponsored by the Department of Mathematics**

## Cal State Fullerton Hosts NASA Officials

CSUF recently hosted the NASA Administrator's Fellowship Program (NAFP) Regional Awareness Days. The purpose of the conference was to recruit faculty and staff to become NAFP Fellows and to identify opportunities that will build collaborative partnerships between NASA and Minority Serving Institutions. The event featured a keynote presentation by CSUF alumnus Tracy Caldwell (B.S., Chemistry) who spoke about her life as an astronaut. Her first mission will be on a space shuttle, but no date has been set yet. The program also featured talks by two NSM faculty: Dr. Charles Lee (Mathematics) whose talk was titled "Orbit Design Based on the Global Maps of Telecom Metrics" and Dr. Murtadha Khakoo (Physics) who spoke about "Electron Impact Excitation of Fundamental Atomic and Molecular Species in Planetary Aurora."

## Opportunities

### PROBLEM SOLVING SEMINAR

SPONSORED BY THE  
DEPARTMENT OF MATHEMATICS

The goal of the seminar is to provide information on W. L. Putnam Examination and prepare for the December 2004 Putnam competition. 21 students from CSUF are registered or will participate in the competition. All the talks will take place in McCarthy Hall, room 476. W. L. Putnam Examination at CSUF will be held in MH 476. All students are welcome. No registration or no fee are necessary.

#### **Saturday, November 13, 2004**

9:00 – 9:50 Scott Annin (CSUF) – The Matrix

10:00 – 10:50 Adrian Vajiac (Chapman Univ.) – Geometric Transformations

11:10 – 12:00 Bogdan Suceava (CSUF) – Fundamental Theorem in Mathematical Analysis and Their Applications

12:10 – 1:00 Steven Davis (LA Valley College) – Easy Problems

#### **Saturday, December 4, 2004**

8:00 am – 11:00 am; 1:00 pm – 4:00 pm W.L. Putnam Examination

The William Powell Putnam Competition was established in 1938 and it is administered by the Mathematical Association of America. For more information on the competition:

<http://math.scu.edu/putnam>

### Publication Opportunities

*Dimensions*, the NSM undergraduate research journal is looking for students interested in publishing their research. Author information packets for the 2005 edition will be available November 8th in the Opportunity Center MH-488.

For more information contact **Rochelle Woods** or **Rosanne Yetemian**:

[rwoods@fullerton.edu](mailto:rwoods@fullerton.edu)

[RosanneYetemian@yahoo.com](mailto:RosanneYetemian@yahoo.com)

# Lecture Series

## Biological Science

Place: McCarthy Hall 513

Day: Wednesday

Time: 4 pm

Schedule for November:

Nov. 3

Dr. David Gray

Department of Biological Sciences, California State University, Northridge

**"The evolution of reproductive behavior in crickets: investigating the role of sexual and natural selection in speciation."**

Nov. 10

SCERP Seminar

Dr. Douglas Capone

Department of Biological Sciences  
University of Southern California

**"Planet of the Prokaryotes"**

Nov. 17

Dr. William Wright

Department of Biological Sciences, Chapman University

**"Piquant or savant: Evolutionary trade-offs between chemical and cognitive predator defenses"**

## Chemistry and Biochemistry

Place: McCarthy Hall 238

Day: Thursday

Time: 4 pm

Schedule for November:

Nov. 4

Dr. James Nowick

Department of Chemistry, UCI

**"Molecular Recognition Between beta-Sheets in Proteins and in Model Systems "**

Nov. 11

Dr. Madeline Rasche

Microbiology & Cell Science Dept.,  
University of Florida

**"Biosynthesis of Methanopterin, a Folate Analog in Archaea and Bacteria "**

November 18

**"TBA"**

Graduate Student

Department of Chemistry & Biochemistry,  
CSUF

