

BIO SCI BRIEFS



A Newsletter for Alumni and Friends of the School of Biological Sciences

FALL 2007



DEAN'S MESSAGE

I want to welcome all of you officially to the 2007-2008 academic year. I am the newly appointed Dean of the School of Biological Sciences. For me that is an exciting opportunity and a great challenge to lead a part of UCI that has been in the forefront of innovation and excellence since the founding of the campus. I look forward to leading the School to continue to expand and develop in the fifth decade of the life of our campus.

It is truly impressive how much our School has grown and developed, both previously but especially in the last few years. This past June, we graduated a record 908 students with bachelors degrees and an additional 54 students with advanced degrees. This fall, we have enrolled 4,341 undergraduate majors. That number is a 70% increase in the past 5 years, and an increase of 10% above last year's record levels. This year we have 441 graduate students in our program, a 40% increase in the past 5 years. According to *US News and World Report's* latest rankings, the School is ranked 32nd nationally among all biological sciences programs in the nation. Our programs in neuroscience, neurobiology and behavior, and developmental biology ranked 5th, 16th and 21st respectively.

During the past academic year, faculty from all areas of the campus were invited to suggest significant new programs and growth initiatives to be designated as Programs of Excellence. These are designated to be focal areas of future growth to be supported with new faculty positions and significant resources. These proposals were widely discussed and ranked in an open campus competition. I am very pleased to tell you that initiatives involving the School of Biological Sciences were extremely successful. We will be participating in three new Programs of Excellence: Complex Biological Systems, Energy and the Environment, and Regenerative Medicine. In the previous round of such awards, we were awarded two Programs of Excellence, one in Evolutionary Genetics and one in Learning and Memory. Other initiatives that will play prominent roles in the growth of our school also include neurobiology and science education training. The School has made a commitment to new programs to educate and train highly skilled science teachers who will have a great impact on our K-12 educational system.

Lastly, our growth is not just contained by new programs and new students. A new research and teaching facility, Biological Sciences 3, is set to open in Spring of 2008. We are also in the planning stages for new research facilities for stem cell biology and brain aging & dementia. We also hope to begin to plan for Biological Sciences 4, another new research and teaching facility that will help us accommodate our immense expansion.

As I begin my new position, I welcome the chance to meet with anyone interested in learning more about the School and its future plans. Thank you for your continued interest in the School of Biological Sciences, and I look forward to partnering with the community to continue to support its growth and success.

Sincerely,

Al Bennett

IN THIS ISSUE

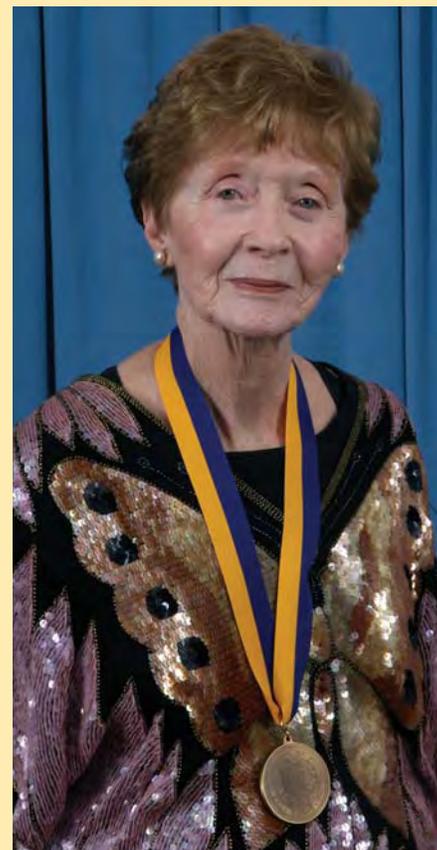
Faculty Spotlight	2	External Relations	3
Faculty News	3	Student News	6
Research	3	Alumni News	8



Audrey M. Schneiderman Receives 2007 UCI Medal

Audrey Schneiderman, long-time friend of the School of Biological Sciences, received UC Irvine's top honor this year, the UCI Medal, in recognition of her exceptional support of the university's mission of teaching, research and public service.

Audrey is a community leader, philanthropist and longtime supporter of UC Irvine. She currently serves as an Ambassador of the University of California, Irvine Foundation and is a lifetime member of the Center for the Neurobiology of Learning and Memory. She is the widow of Dr. Howard A. Schneiderman, who served as the third dean of the School of Biological Sciences from 1970 to 1979. After her husband's recruitment to UC Irvine, Schneiderman opened their home to faculty, students and visiting dignitaries, serving as a bridge between campus and community. Schneiderman made her largest gifts to the campus in honor of her husband, who died in 1990. She established the Howard Schneiderman Fellowship in the School of Biological Sciences, the H.A. Schneiderman Scholarship, the Howard Schneiderman Endowment, and the Howard A. Schneiderman Memorial Bioethics Lecture Series. Through her widespread volunteer support, Schneiderman regularly shares UC Irvine's achievements with others. Her generosity, including extraordinary support for the School of Biological Sciences and the Center for the Neurobiology of Learning and Memory, has provided scholarships, fellowships and opportunities for tremendous growth.



The UCI Medal Ceremony and dinner to honor the 2007 recipients was hosted by the UCI Foundation on Saturday, October 6, 2007. More than 800 campus and community leaders attended the ceremony, which is one of Orange County's premier events. Proceeds support the UCI Regents' Scholars program as well as graduate fellowships.

FACULTY SPOTLIGHT

Faculty Highlight: **New Associate Dean for Research Named**



Andrea Tenner, recently named the first Associate Dean for Research in the School of Biological Sciences, is a Professor in the Department of Molecular Biology & Biochemistry, with dual appointments in the Department of Neurobiology & Behavior, as well as in the Department of Pathology in the School of Medicine.

Dr. Tenner is a highly recognized scientist in the field of Immunology, or how the body responds when injured or invaded by a foreign pathogen. Dr. Tenner was a founding faculty member of the UCI Center for Immunology, and served as the Associate Director during the Center's formative years. Dr. Tenner's research focuses on the molecular pathways that lead to and regulate inflammation, which can cause tissue damage if improperly controlled, particularly in individuals with conditions that inhibit or create an excess response. Dr. Tenner also investigates the role of inflammation in Alzheimer's Disease, and is currently testing inhibitors that may lead to therapies that would slow the progression of the disease.

Continued on Page 5

RESEARCH FOCUS

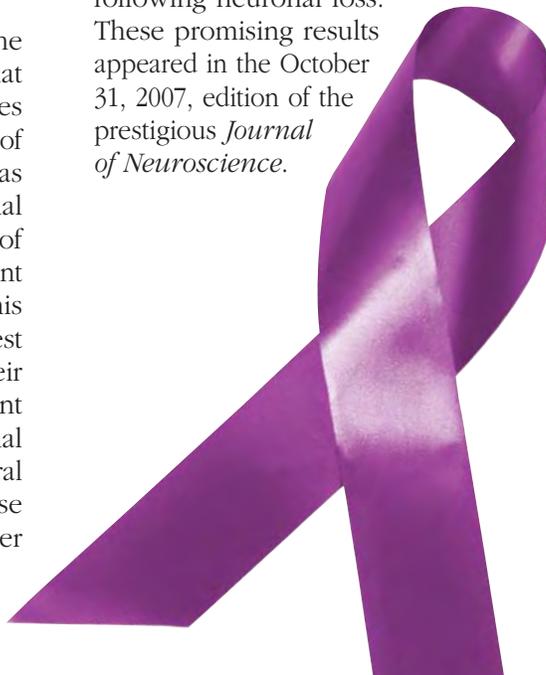
Alzheimer's Disease

The Institute for Brain Aging and Dementia at the University of California, Irvine (UCI) seeks to better understand and discover the causes of Alzheimer's disease, create effective treatments, and provide support for families/caregivers of those diagnosed with this debilitating disease. This Institute is one of only 29 designated Alzheimer's Disease Centers across the country and only one of 10 *Alzheimer's Research Centers* of California. The Institute houses many well-known scientists from different disciplines working together towards these common goals.



Dr. Frank LaFerla, co-director of the Institute, is one such scientist that has recently made significant strides in the understanding and treatment of Alzheimer's Disease. Dr. LaFerla has created a very sophisticated animal model that mimics the symptoms of this disease. This critical development has allowed Dr. LaFerla and his colleagues to more accurately test treatment modalities and gauge their effectiveness. The latest treatment modality being tested on this animal model encompasses the use of neural stem cells. It is believed that these cells may help restore memory after the brain has been damaged.

Drs. LaFerla, Blurton-Jones and Yamasaki created mice that developed brain lesions, which in turn destroyed certain neural cells vital to memory formation. To test memory, researchers gave recognition tests to healthy mice and the mice with the brain lesions. Healthy mice remembered their surroundings about 70% of the time while the brain-injured mice remembered their surroundings only about 40% of the time. To test their theory, these researchers injected the brain-injured mice with about 200,000 neural stem cells. Three months after implanting these neural stem cells, the mice were again administered a recognition test. This time, the mice remembered their surroundings 70% of the time, the same level as the healthy mice. A key conclusion suggests that stem cells could provide support to vulnerable and injured neurons in the brain, keeping them alive and functional by making beneficial proteins called neurotrophins. This creates the hope that one day a drug could be created to boost the production of these proteins, thus restoring patients' ability to remember following neuronal loss. These promising results appeared in the October 31, 2007, edition of the prestigious *Journal of Neuroscience*.



EXTERNAL RELATIONS UPDATE

This new year has brought about several positive transitions for the School of Biological Sciences. We have a new Dean, a new Associate Dean for Research, hundreds of new students and a new External Relations and Communications team. The Dean has been working very closely with his management team on creating a dynamic strategic plan that will propel the School to new heights in the coming years. Exciting initiatives such as global biological change, regenerative medicine and K-12 science teacher training are just a few of the priority areas in which we will focus.

Many of the School's previous successes would not have been possible without the generosity of individuals such as yourself, we truly appreciate your continued support. Now, more than ever, is the perfect time for all of our friends to reengage with the School, and for the community to learn about the renowned research and innovation occurring daily. We will continue to update you on our progress and opportunities for involvement in the School in upcoming issues of this newsletter. As mentioned earlier, the School has a new External Relations and Communications team that will be responsible for providing our community with these important updates.

Continued on Page 7



FACULTY IN THE NEWS

Albert Bennett

Dean of the School of Biological Sciences and Professor in the Department of Ecology & Evolutionary Biology, received the 2007 Western Evolutionary Biology Evolutionist of the Year (WEBEY) awarded by the UC Network for Experimental Research on Evolution (NERE). NERE supports collaboration, communication and graduate education concerned with research on biological evolution, and awards one individual from the west of North America (including Western Canada and Mexico) annually at the Western Evolutionary Biology meeting. This year, Dean Bennett received the award for his seminal role in founding evolutionary physiology. His notable research areas include evolutionary exercise physiology, the aerobic capacity model for the evolution of endothermy, and the application of experimental evolution to classic problems in thermal biology and adaptation.

Carrie Brachmann

Assistant Professor in the Department of Developmental and Cell Biology, received the 2007 Chancellor's Faculty Award for Excellence. Dr. Brachmann started her laboratory at UCI in 2003, and has been extensively recognized by students as an outstanding mentor and professor who has influenced and helped shape future career goals.

Tom Carew

Donald Bren Professor and Chair of the Department of Neurobiology and Behavior, was elected President of the Society for Neuroscience (SfN). With close to 37,000 members worldwide, SfN is the largest and most prominent neuroscience organization for scientists and physicians. The mission of SfN is to advance the understanding of the brain and the nervous system and to identify and develop treatments and cures for neurodegenerative diseases. Dr. Carew will begin his term as President in fall 2007.

Hung Fan

Director of the Cancer Research Institute and Professor in the Department of Molecular Biology and Biochemistry, was awarded the 2007 Daniel Aldrich Distinguished Faculty Award for Service. Professor Fan started at UCI in 1981, and currently oversees cancer virus research including growth factors and signaling, carcinogenesis, structural molecular biology, immunology and tumor virology. These awards are the most prestigious honor UCI Senate faculty members can receive from their colleagues.

Anthony James

Professor in the Departments of Molecular Biology & Biochemistry and Microbiology & Molecular Genetics, was elected into the National Academy of Sciences (NAS). Election into the NAS is considered one of the highest honors by the scientific and engineering communities. Dr. James was also named a UCI Distinguished Professor and received the 2007 National Institute of Health (NIH) MERIT Award for his outstanding scientific research and contributions. A renowned vector biologist, Dr. James and his research team develop methods to control the spread of dengue fever, malaria, and other mosquito-borne viral diseases. Dr. James is a Biological Sciences alumnus who received his undergraduate and doctorate degrees from UCI.

Arthur Lander

Professor in the Department of Developmental and Cell Biology, received \$14.5 million over five years by the National Institute of General Medical Sciences (NIGMS), one of the National Institutes of Health (NIH) to support the Center for Complex Biological Systems. The Center will facilitate collaborations between biologists, mathematicians, physicists, engineers and computer scientists to study why the human body and other organisms work the way they do. The Center will be the only one of its kind in California.

Michael Leon

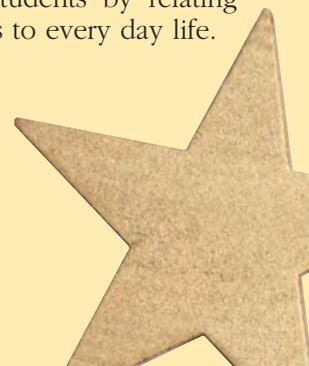
Associate Dean for Undergraduate Studies and Professor in the Department of Neurobiology and Behavior, received the 2007 Professor of the Year Award. To engage undergraduates in the learning of neurosciences, Dr. Leon utilizes various approaches including a Neuroscience Mystery Theater when students view videos related to neurobiology. Dr. Leon's dedication to teaching is affirmed by many students who were enrolled in his class.

Diane O'Dowd

Professor in the Departments of Developmental & Cell Biology, and Anatomy & Neurobiology, was the recipient of the Teaching Assistant Development Award. In 2006, the first year of her Howard Hughes Medical Institute (HHMI) Teaching Fellows Appointment, Dr. O'Dowd worked with Teaching Assistants (TAs), Ph.D. discussion leaders, and faculty who teach large core courses to create recruitment materials and interactive teaching methods for TAs. Dr. O'Dowd's enthusiasm and commitment for developing a successful program for TAs benefited thousands of undergraduate students.

Sheryl Tsai

Professor in the Department of Molecular Biology and Biochemistry, received the 2007 Golden Apple Award for Teaching Excellence in Biological Sciences. Dr. Tsai's teaching style is consistently praised by students who enroll in her Bio 98 class, where her techniques allow her to connect very effectively with students by relating biological subjects to every day life.



DEAN'S PROFILE

Albert F. Bennett

Education and Academic Positions:

Albert F. Bennett is Professor in the Department of Ecology & Evolutionary Biology in the School of Biological Sciences. He has been Dean of the School of Biological Sciences since August 2007. Prior to that appointment, he served as Acting Dean for one year and Chair of the Department of Ecology and Evolutionary Biology for eight years. Dr. Bennett graduated summa cum laude from the University of California at Riverside with a BA in Zoology in 1966. He received his PhD in Zoology from the University of Michigan in 1971 and subsequently completed a postdoctoral period of study at the University of California, Berkeley as a Miller Fellow. He joined the faculty at UCI in 1974, and was promoted to Associate Professor in 1978 and to Professor in 1983. He has previously served as Chair of the Department of Developmental and Cell Biology and Acting Dean of the School of Biological Sciences in a previous appointment.



Research: Dr. Bennett does research in the areas of comparative, ecological, and evolutionary physiology. He is interested the evolution of form and function, particularly in regard to adaptation to changing temperature and energy availability. His published work includes research on thermobiology, energetics, and muscle, pulmonary, cardiovascular, and digestive physiology. He has been particularly interested in the evolution of endothermy (warm-bloodedness) and is the author of the principal evolutionary model concerning the emergence of that condition. In addition, he conducts experimental laboratory studies using bacteria as a model evolutionary system to observe and test theories concerning environmental adaptation to environments of diverse temperature and acidity.

Professional Service: In addition to his professorial and administrative appointments at UCI, Dr. Bennett has also been President of the Society for Integrative and Comparative Biology (then the American Society of Zoologists), with a membership of approximately 2000 in a dozen diverse divisions, and Chair of the Comparative Physiology section (300 members) of the American Physiological Society. He is a member of Phi Beta Kappa and Sigma Xi. He has served on several taskforces and working groups of the National Science Foundation and chaired the Committee of Examiners for the Graduate Record Examination Biology Test.

Dr. Tenner

continued from page 2

Dr. Tenner has long been an advocate for opportunities that promote the exchange of ideas and expertise between researchers. Through her work initiating the Center for Immunology, Dr. Tenner guided the seminar series and one-day “UCI Immunology Fair,” an event that annually draws over 100 participants, with over 30 posters presented by UCI graduate students and post docs in Immunology. Dr. Tenner sees these types of events as ways to engender formal research collaboration, which often lead to more rapid progress of basic research and the translation of new advances into the clinic. Dr. Tenner also recognizes the growing ‘systems’ approach to the investigation of problems. “The School was originally structured to study different levels of complexity of biology, and those developed departments are now collaborating to work as teams to arrive at multidimensional pictures of biological processes; thus creating greater predictive power in how to beneficially manipulate those systems.”

In her new role as Associate Dean, Dr. Tenner will facilitate the submission of program project grants, center grants and other proposals that support core research, in conjunction with Dr. Jacob Levin, the School’s Director of Research. Dr. Tenner will also strengthen the School’s research infrastructure by optimizing animal services (in coordination with veterinarians and the Office of Research), and will improve the School’s shared research facilities through efficient reorganization and/or expansion, and by promoting accessibility and awareness of these facilities to faculty research groups. With over 15 years of experience as a faculty member, researcher, and leader at UCI, Dr. Tenner is the ideal individual to help guide the School in future research activities and funding efforts.

STUDENT AWARDS



Students Honored at Annual Honors Convocation Ceremony

On June 7, 2007, the School of Biological Sciences held a joint ceremony for the Graduate Honors Convocation and Bio Sci Teaching and Faculty Awards. Donors, students and their faculty mentors as well as Bio Sci Faculty gathered to honor the recipients of 17 graduate student awards and 8 teaching and faculty awards. The ceremony was followed by a reception where students were able to meet the donors who generously contributed funds for the scholarships and awards and faculty members were recognized for their excellence in teaching.

UNDERGRADUATE AWARDS

Brian Atwood Scholarship

- Yetunde Fatunde

Audrey M. Schneiderman Prize

- Imithri De Silva
- Stephanie Minami
- Minh Tran

Joseph H. Stephens Memorial Prize - Biochemistry & Molecular Biology

- Heather Stalker

Joseph H. Stephens Memorial Prize - Ecology & Conservation

- Christina Cuevas

Robert Ernst Prize - Biological Sciences

- Julie Wu



Robert Warner Award for Outstanding Achievement in Nucleic Acid Biochemistry

- Daniel Clemens

Fine Science Tools Graduate Travel Awards

- Darius Gleason
- Christopher Rex

William F. Holcomb Scholarships

- Marianne Porter
- Noriko Yokoyama

Robert Ernst Prize - Plant Biology

- Sophia Luu

M. Marlene Godoy Award

- Zlatko Devcic
(for a second year)

Carol Becker McGaugh Award

- Kwan Wong

Robert H. Avnet Memorial Scholarship

- Dimple Ajwani
- Marissa Camilon
- Rehan Motiwala

William F. Holcomb Scholarship

- Cynthia Bui
- Scott Mackenzie

Laurence J. Mehlman Prize

- Lauren Gold
- Dharmi Patel

Edward Mittleman Memorial Fund Scholarship

- Emily Yee

Jayne Unzelman Scholarship

- Lakshmi Ganesan
- Jarrod Larson
- Vicky Zhou

UCIRVINE
SCHOOL OF
BIOLOGICAL SCIENCES

GRADUATE AWARDS

Grover C. Stephens Memorial Fellowship

- Marilou Sison-Magnus

Edward A. Steinhaus Graduate Teaching Awards

- Allison Holt
- Chris Lay
- Jessica Monserrate
- Sarah Kimball

William D. Redfield Graduate Graduate Fellowships

- Jason Stagno
- Kym Garrod

Paul H. Silverman Memorial Fellowship

- Wei Wei Fan

Barbara K. Burgess Fellowship

- Dr. Christopher Schaumburg

Howard A. Schneiderman Graduate Fellowship

- Aaron Fay

If you are interested in receiving information about providing an award or scholarship for a student, please contact Jeanette Storey at (949) 824-8030 or jstorey@uci.edu.



STUDENT SPOTLIGHT

Student Highlight: Zlatko Devcic



For Senior Biology Major Zlatko Devcic, beauty is a quantifiable aesthetic that lies in the eyes of the cultural beholder. “My current research is focused on defining ethnic-specific perceptions of facial beauty. Within this context, we are also trying to determine new principles of facial beauty, verify older theories using innovative methods, and find ways to quantify facial beauty.” Zlatko sees the applications of his research particularly relevant to head and neck reconstructive surgery, where standards of beauty reference Caucasian, or “westernized” features. Zlatko is also working on a retrospective clinical study investigating the optimal length of time that

antibiotics should be administered after head and neck surgery, which he will present for an Otolaryngology (Head and Neck Surgery) Expo.

Zlatko Devcic moved to the United States from Croatia when he was five. Like many families new to the United States, his parents had to rebuild their entire lives, through which Zlatko saw the power of determination and self-sacrifice. “My founding inspiration and unwavering source of motivation is my mother who is a doctor. She exposed me to the field of medicine and initiated my interest early in life.” Zlatko was also influenced by his father, from whom he learned ‘drive and passion’ through his efforts to build a business in a foreign country.

During his academic career at UCI, Zlatko Devcic has actively pursued research mentoring from Dr. Brian Wong, an Otolaryngologist with the UCI Medical Group. Zlatko shadowed Dr. Wong in operating rooms, at seminars and cancer management boards, all of which contributed to his current desire to become a clinician and specifically, a surgeon. “It has been deeply inspiring to watch him successfully lead an entire team of professionals, skillfully control the operating room’s dynamic environment, and use a broad range of intricate knowledge critically and analytically.”

Zlatko also participates in the Bio Sci Mentor Program (see side article), through which he has won two M. Marlene Godoy Scholarship Awards for students pursuing the health sciences. As part of the Bio Sci Mentor Program, Zlatko receives guidance from Dr. Godoy, to whom he credits as showing him, “...the power of positive attitude, productive lifestyle and a sense of humor. She has always pushed me to reach for the highest standards and motivated me with praises. I consider myself fortunate to be her mentee and receive her scholarship; both have made a great contribution to my education.”

As a source of balance in his life, Zlatko Devcic also engages in competitive Latin ballroom dancing. “At the time I selected Latin ballroom because I needed a creative, social and athletic outlet. Dancing was particularly challenging because I had never played an instrument and I guess you could say I was a bit, ‘rhythmically challenged.’” Today, Zlatko actively trains and competes in Latin ballroom, which he says, “...requires rigorous practice and dedication, stimulating my drive to be a perfectionist.” When asked how Zlatko manages to balance his dancing, education and career-related activities, he answers, “It is difficult to explain exactly how I balance everything. I have learned that as long as I am passionate about something, I find a way.”

External Relations Update

continued from page 3

We are pleased to welcome these individuals:

Nancy Weintraub has assumed the role of Assistant Dean of External Relations and Communications. Nancy will be responsible for creating and implementing plans to generate support for biological sciences. In addition, she will provide strategic guidance to the Dean in developing annual and multi-year plans and benchmarks to help the school achieve its fundraising, alumni relations, marketing, communications and campaign priorities. Other positions Nancy has held during her 7+ years at UC Irvine include Executive Director of Technical/Professional Programs and Senior Director of Corporate Relations. Prior to arriving at UCI, Nancy spent 10 years in healthcare administration and development. Nancy began her career conducting clinical trials where she tested treatment modalities for patients suffering from cancer and HIV/AIDS. Nancy received her bachelor’s degree from UCLA.

Jeanette Storey has recently joined UC Irvine as the School’s Director of Development. Jeanette was formerly with Loyola Marymount University as the Associate Director for Corporate Relations, and previously with the Getty Foundation in Education Policy. Jeanette will be reaching out to Bio Sci friends throughout Southern California to help connect alumni and the community with the School’s research and student-centered education.

To reach Nancy Weintraub or Jeanette Storey, please call 949.824.5697.

Bio Sci Mentor Program Reception

This past November marked the seventh year of the Bio Sci Mentor Program, and more than 140 students and alumni mentors attended a reception to kick-off the start of the 2007-2008 academic year. The evening's keynote speaker was Dr. Susan Hutchinson, Director of the Orange County Migraine and Headache Center, who offered the following insight:

"The UCI Bio Sci Mentor Program is an incredible opportunity for both mentor and mentee. As a mentor, I can share my career and life experiences with students trying to decide their path in life. The student can learn first-hand about careers they are considering and get an incredible wealth of advice and guidance from their mentor. The Mentor Program is, in a sense, the passing on of real-world experience to those seeking their career path."

Mentoring has become one of the most powerful ways for college students to gain a true awareness of the rewards and challenges related to different educational and career aspirations. Since its inception, the Bio Sci Mentor Program has connected over 200 undergraduate students to Bio Sci alumni mentors from diverse levels of education and professional backgrounds. Students receive candid, 'real-world' career insights from mentors with similar interests, and mentorships range from simple e-mail exchanges, to regular meetings, job-shadowing and potential long-term internships.

Dr. Susan Hutchinson (middle) with student mentees, Christina Gonzales and Thuy-Chung (left) and Lesly Martinez (right) ▶

photo courtesy of Norma Colgan



If you would like to make a difference to a student's life by becoming their Mentor, please contact Alyssa Cruz at 949-824-4742 or alysyac@uci.edu.

UPCOMING EVENTS

School of Biological Sciences Mentor Program Midpoint Reception, February 2008

UC Irvine Career Center - Career Fest

- Month long series of panels on various industries and careers including medicine, law, finance, education, and more.
- Panels begin at 5:00 p.m.
- February 2008
- For more information, please contact Kathy Dotson at the UC Irvine Career Center at 949-824-4646 or kdotson@uci.edu.

2008 Homecoming Celebration

- 4:00 p.m., Saturday, March 1, 2008
- Join us to cheer on our UC Irvine Men's Basketball team as they take on the Matadors of Cal State Northridge; tip off time is 7:05 p.m.
- Bren Events Center

Allergan Lecture in Modern Biology featuring Gregory S. Hageman, Ph.D., Professor of Ophthalmology, University of Iowa

- 7:00 p.m. Lecture, March 19, 2008
- "Seeing more clearly: New Insights on Age-Related Macular Degeneration"
- Arnold and Mabel Beckman Center of the National Academies



UCIRVINE | SCHOOL OF BIOLOGICAL SCIENCES

5120 Natural Sciences II
Irvine, CA 92697-1450

PRESORTED
FIRST CLASS MAIL
PAID
SANTA ANA, CA
PERMIT NO. 1106

Please join us in helping to save the environment. If you would like to receive this newsletter via email, please forward your email address to [Jane Dawson at adawson@uci.edu](mailto:adawson@uci.edu). Thank you!